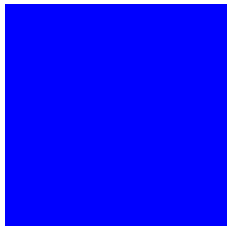

CIMS Lab, Inc.

CIMS Capacity Planner

Reference Guide

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Copyright Information

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Preface

As companies continue to integrate computer technology into their business operations, it becomes increasingly important to properly administer the IT function, particularly with respect to performance and cost. And the best way to control costs is to plan for them.

CIMS is a comprehensive, flexible software solution that consolidates a wide variety of data for multiple operating systems into a single file that may be accessed from either the mainframe or a workstation. Simply put, CIMS is an essential component of an effective management system.

The CIMS Capacity Planner is made up of several computer utilization and performance reporting subsystems. This product generates reports and graphs that deliver information necessary to evaluate the operation of a data center whose primary operating system is IBM OS/390.

Philosophy

CIMS is focused on meeting the financial, resource and capacity planner reporting requirements of Information Services Departments. CIMS has evolved with corporate IT management requirements. Focused commitment to client service and support sets CIMS apart from competing products. Our goal is to provide the best chargeback, resource reporting and capacity planning software in the world at the lowest possible cost to our customers.

The CIMS Lab strongly believes in and executes the concept of continuous product improvement. Customers have access to CIMS product development personnel to ensure that customer feedback and other critical issues are incorporated into the next release of the product.

Contacting the CIMS Lab

You can contact us with any questions or problems you have. Please use one of the methods below to contact us.

For product assistance or information, contact:

USA & Canada, toll free	(800) 283-4267
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About this Guide

The *CIMS Capacity Planner Reference Guide* consists of eight chapters of helpful reference information including User Exits, key phrases, Utility programs, and samples or the reports and graphs that are produced by each CIMS Capacity Planner subsystem.

This guide assumes that the appropriate *CIMS Capacity Planner* components have been installed at your site. The instructions for installing the product are in the *CIMS Capacity Planner Installation and Getting Started Guide*.

Ch. No.	Chapter Name	Content Description
1	CIMS Capacity Planner PARMLIB OVERVIEW	Provides an overview of all PARMLIB members.
2	CIMS Capacity Planner Utility Programs	Introduces you to the functions and features of the CIMS Capacity Planner Utility Programs.
3	CIMS Capacity Planner Graphs	Provides samples and descriptions of the color graphs produced by CIMS Capacity Planner.
4	CIMS Capacity Planner Reports	Provides samples and descriptions of the reports produced by the CIMS Capacity Planner.
5	CIMS Capacity Planner Return Codes	Provides listings of return codes and their meanings.
6	CIMS Capacity Planner Key Phrase Glossary	Provides a key phrase glossary.
7	CIMS Capacity Planner Messages	Provides a listing of error messages, their meanings, and possible resolutions.

Ch. No.	Chapter Name	Content Description
8	Options for Advanced Applications	Provides user exits.
	Index	

Conventions

Some or all of the following conventions appear in this guide:

Symbol or Type Style	Represents	Example
Bold	a new term	...called a **source object**.
alternate color	(online only) hotlinked cross-references to other sections in this guide; if you are viewing this guide online in PDF format, you can click the cross-reference to jump directly to its location	...see *Chapter 3, Data Migration*.
Italic	words that are emphasized	...the entry *after* the current entry...
	the titles of other documents	*CIMS Capacity Planner User Guide*
	syntax variables	`COPY filename`
`Monospace`	directories, file names, command names, computer code	`&HIGHLVL.SRCLIB`
	computer screen text, system responses, command line commands	`Copy file? Y/N`
`Monospace bold`	what a user types	...enter `RUN APP.EXE` in the Application field
< >	the name of a key on the keyboard	Press <Enter>.
▸	choosing a command from a cascading menu	File ▸ Import ▸ Object
`hi HighlightMVS`	character format used to callout screen text on MVS screens. (When viewed online, the screen text will be blue.)	Dataset.... Product.... Parmlib...

Related Publications

As you use this *CIMS Capacity Planner Reference Guide*, you might find it helpful to have these additional books available for reference:

- *CIMS Capacity Planner Installation Guide*
- *CIMS Capacity Planner User Guide*

1

CIMS Capacity Planner PARMLIB Overview

PARMLIB Member Naming Conventions

The members contained in the CIMS Capacity Planner Parmlib are used for a variety of purposes. Because they are members of a standard MVS PDS, their names must conform to the requirements for PDS member names. That is, they might not begin with a number, they must not contain embedded blanks or non-alphanumeric characters, and they can not be more than eight characters long.

CIMS Capacity Planner Parmlib members are usually associated with a specific SMF System ID (SID). The two exceptions to this rule are the member that contains parameters dealing with the entire CIMS Capacity Planner environment (named "GLOBAL") and the member that describes the DASD farm for the entire complex (named "DASDPOOL"). The naming convention selected, therefore, has been to use the SMF SID as the first four characters of the member name and a four character suffix that uniquely identifies the member as the last four characters. In the discussion below, this convention is depicted as, for example:

&sid CICR

where the &sid is the actual SMF SID and the CICR identified the characteristics of the member itself (in this case, response times for CICS)

A problem occurs, however, when the SMF SID is less than four characters long and/or begins with a number. For example:

123

is a perfectly legitimate SMF SID, whereas a PDS member cannot be named:

123 CICR

In this case, it is necessary to reconstruct the SMF SID slightly to force it into conformance with the PDS naming rules. The leading character must be translated to a legitimate character (0=A, 1=B, 2=C, 3=D, 4=E, 5=F, 6=G, 7=H, 8=I, 9=J) and the blank replaced with a legitimate alphanumeric character (#) to extend the SID to 4 characters so that the name becomes:

B23#CICR

which is a valid PDS member name.

PARMLIB Members used during Data Reduction and Reporting

Two members in the PARMLIB library are used to provide default parameters for the Data Reduction programs in the CIMS Capacity Planner system. The names of these members are:

- The "GLOBAL" member of the PARMLIB. By including data in the "GLOBAL" member, the data applies to each execution of any of the programs in the CIMS Capacity Planner System that include the CPPRPARM DD Statement. Global parameters override hard-coded default parameters in SSA1510.

- The LOCAL member with the same name as the SMF SID of the system being processed (e.g, CPPR). These parameters apply only when that specific system is being processed and the CPPRPARM DD Statement is included. Local parameters override SYSIN parameters, Global parameters and hard-coded defaults in SSA1510.

A sample GLOBAL member and a sample CPPR member are included in the distributed PARMLIB. Please refer to them for a model.

GLOBAL Parmlib Members

TITLE Parameter

The TITLE Parameter specifies the Title that is to appear at the top of all CIMS Capacity Planner System reports. The format of the Title Parameter is as follows:

TITLE= any combination of up to 60 characters including blanks

Weeks to Keep Online Parameter

The WEEKS TO KEEP ONLINE Parameter tells the Archive Program how many weeks of data to retain in the ONLINE Performance Data Base. This parameter is specified in the GLOBAL member of CPPRPARM. When the Archive program (See a description of SSA1ARCH in the Utilities section of this manual) is executed, it will off-load all detail tables earlier than the specified number of weeks to the HISTORY file. The format of the WEEKS TO KEEP ONLINE Parameter is as follows:

WEEKS TO KEEP ONLINE=nn (any number up to 255)

LOCAL (&sid) Parmlib Member

BATCHPGN Parameter

The BATCHPGN Parameter specifies the SRM Control Performance Group Numbers that are used to control Batch Jobs. The format of the BATCHPGN Parameter is as follows:

BATCHPGN=nn,nn,nn (up to 16 PGNs separated by commas)

BATCHTAG Parameter

The BATCHTAG Parameter specifies the label that is to be associated with Batch elements in the Summary Report and the Ratio Graphs. The format of the BATCHTAG Parameter is as follows:

BATCHTAG=label (up to 8 characters long)

TSOPGN Parameter

The TSOPGN Parameter specifies the SRM Control Performance Group Numbers that are used to control TSO Sessions. The format of the TSOPGN Parameter is as follows:

TSOPGN=nn,nn,nn (up to 16 PGNs separated by commas)

TSOTAG Parameter

The TSOTAG Parameter specifies the label that is to be associated with TSO elements in the Summary Report and the Ratio Graphs. The format of the TSOTAG Parameter is as follows:

TSOTAG=label (up to 8 characters long)

ONLINEPGN Parameter

The ONLINEPGN Parameter specifies the SRM Control Performance Group Numbers that are used to control Online Tasks such as CICS. The format of the ONLINEPGN Parameter is as follows:

ONLINEPGN=nn,nn,nn (up to 16 PGNs separated by commas)

ONLINETAG Parameter

The ONLINETAG Parameter specifies the label that is to be associated with Online elements in the Summary Report and the Ratio Graphs. The format of the ONLINETAG Parameter is as follows:

ONLINETAG—label (up to 8 characters long)

DATABASEPGN Parameter

The DATABASEPGN Parameter specifies the SRM Control Performance Group Numbers that are used to control Database Tasks such as IDMS. The format of the DATABASEPGN Parameter is as follows:

DATABASEPGN=nn,nn,nn (up to 16 PGNs separated by commas)

DATABASETAG Parameter

The DATABASETAG Parameter specifies the label that is to be associated with Database elements in the Summary Report and the Ratio Graphs. The format of the DATABASETAG Parameter is as follows:

DATABASETAG=label (up to 8 characters long)

NETWORKPGN Parameter

The NETWORKPGN Parameter specifies the SRM Control Performance Group Numbers that are used to control Networking Tasks such as VTAM. The format of the NETWORKPGN Parameter is as follows:

NETWORKPGN=nn,nn,nn (up to 16 PGNs separated by commas)

NETWORKTAG Parameter

The NETWORKTAG Parameter specifies the label that is to be associated with Networking elements in the Summary Report and the Ratio Graphs. The format of the NETWORKTAG Parameter is as follows:

NETWORKTAG=label (up to 8 characters long)

STCTAG Parameter

The STCTAG Parameter specifies the label that is to be associated with Started Task elements in the Summary Report and the Ratio Graphs. The format of the STCTAG Parameter is as follows:

STCTAG=label (up to 8 characters long)

O/STAG Parameter

The O/STAG Parameter specifies the label that is to be associated with Operating System elements in the Summary Report and the Ratio Graphs. The format of the O/STAG Parameter is as follows:

O/STAG=label (up to 8 characters long)

&sid.DSNX PARMLIB Member

The DASM report that associates the allocation of a dataset with a specific owner is driven by this PARMLIB member. The member tells SSA1DASM that levels of DSNAME qualification to ignore when determining dataset ownership. These members contain:

- The member name is made up of the 4 character SMF SID for the system to which the data pertains plus the characters "DSNX" (i.e, CPPRDSNX would contain DASM Dataset-to-ownership information for the CPPR system)
- Each member contains six separate entries in the following format:
  - There are a total of six levels of DSNAME qualification available
  - Within each level, specify:

  The number assigned to the category (1-6) must be located in column 1, followed immediately by a period. The level of qualification must follow immediately. No other data besides comments can be included on the first statement of a DASM level set.

  The DSNAME qualifiers to be ignored associated with that level, separated by commas. Wildcards can be used to describe generic qualifiers (AP* would include all qualifiers beginning with the characters AP). DASM level statements must not begin in column 1 (i.e, there must be a blank in column 1 of DASM level statements for a DASM level set).

  Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample CPPRDSNX member is included in the CIMS Capacity Planner PARMLIB. Please refer to it for a model.

&sid.RPGN PARMLIB Member

This PARMLIB member is used to eliminate Reporting Performance Group (RPGN) data from the MSO/IOC percentage calculations in processing the Workload Summary Report. Wildcards are not permitted in specifying the RPGNs. The RPGN specification consists of one pair of entries:

- RPGN LIST Designator

  This entry consists of the character "1" followed by a period, a space, and the characters "RPGN_LIST".

- List of RPGNs

  The list of reporting PGNs is specified beginning in column 1. Multiple RPGNs are separated by commas. The list can be continued to additional lines as required. Columns 72 and beyond are ignored.

A sample RPGN member, CPPRRPGN is provided in the CIMS Capacity Planner PARMLIB.

&sid.CICH PARMLIB Member

The `&sid.CICH PARMLIB` member is used to associate the various CICS Transaction types with the various user organizations in order to produce the CICS Rolling report (SSA1CICH). It is possible to specify up to 14 different organizations and their related transactions. Each entry consists of two or more lines as follows:

- Organization

  The first line of each entry consists of a two-digit group number followed by a period, a space, and the name of the organization (up to 8 characters).

- Transaction List

  The second line of each entry begins a list of the transactions that are to be associated with the organization. Each transaction in the list must be separated by a comma. If the list exceeds 72 characters, it must be resumed on the following line. Transaction types can not be continued between two lines. If a transaction type will not fit into a line, skip to a new line. There is no practical limit to the number of transaction types that can be entered for an organization. A wildcard character (*) is used to specify that all transactions beginning with a specified character string are to be associated with an organization by entering the character string followed immediately (no intervening space) by an asterisk.

A sample (CPPRCICH) member is provided in the CIMS Capacity Planner PARMLIB.

&sid.CnnH PARMLIB Member

This PARMLIB member is used to associate the selected CICS transaction types with the various user organizations where &sidCICH is to be over-ridden in the preparation of the CICS Rolling report due to the presence of multiple CICS regions. The organizations and their associated transaction types are specified in the same manner as they are in &sid CICH above.

A sample (&sidCnnH) member is provided in the CIMS Capacity Planner PARMLIB member CPPRC01H.

&sid.JGRP PARMLIB Member

The &sidJGRP PARMLIB member is used in Workload Reporting to associate specified Jobnames with organizations when the GENERIC ELEMENT MASK is set to "11111111". Whenever the GENERIC ELEMENT MASK is set to "11111111" in a report request, the KEY element in the particular table being processed in the Performance Data Base is changed based upon the substitutions specified in this PARMLIB member. For example, when the Job table is being processed, the transaction code is replaced by the organization specified in the JGRP member and all transaction activity is reported as though the organization name was the transaction type. This allows Job processing activity to be summarized by department.

Each entry consists of two or more lines as follows:

- Organization

  The first line of each entry consists of a two-digit group number followed by a period, a space, and the name of the organization (up to 8 characters).

- Transaction List

  The second line of each entry begins a list of the Jobnames that are to be associated with the organization. Each Jobname in the list must be separated by a comma. If the list exceeds 72 characters, it must be resumed on the following line. Transaction types can not be continued between two lines. If a Jobname will not fit into a line, skip to a new line. There is no practical limit to the number of Jobnames that can be entered for an organization. A wildcard character (*) can be used to specify that all Jobnames beginning with a specified character string are to be associated with an organization by entering the character string followed immediately (no intervening space) by an asterisk.

A sample (CPPRJGRP) member is provided in the CIMS Capacity Planner PARMLIB.

&sid.CICF PARMLIB Member

The `&sid.CICF PARMLIB` member is used in CICS Reporting to associate specified transaction types with organizations when the GENERIC ELEMENT MASK is set to "11111111". Whenever the GENERIC ELEMENT MASK is set to "11111111" in a report request, the KEY element in the particular table being processed in the Performance Data Base is changed based upon the substitutions specified in this PARMLIB member. For example, when the CICS Transaction table is being processed, the transaction code is replaced by the organization specified in the CICF member and all transaction activity is reported as though the organization name was the transaction type. This allows CICS transaction processing activity to be summarized by department.

Each entry consists of two or more lines as follows:

- Organization

  The first line of each entry consists of a two-digit group number followed by a period, a space, and the name of the organization (up to 8 characters).

- Transaction List

  The second line of each entry begins a list of the transactions that are to be associated with the organization. Each transaction in the list must be separated by a comma. If the list exceeds 72 characters, it must be resumed on the following line. Transaction types can not be continued between two lines. If a transaction type will not fit into a line, skip to a new line. There is no practical limit to the number of transaction types that can be entered for an organization. A wildcard character (*) can be used to specify that all transactions beginning with a specified character string are to be associated with an organization by entering the character string followed immediately (no intervening space) by an asterisk.

A sample (CPPRCICF) member is provided in the CIMS Capacity Planner PARMLIB.

&sid.IDMF PARMLIB Member

The `&sid.IDMF PARMLIB` member is used in IDMS Reporting to associate specified transaction types with organizations when the GENERIC ELEMENT MASK is set to "11111111". Whenever the GENERIC ELEMENT MASK is set to "11111111" in a report

request, the KEY element in the particular table being processed in the Performance Data Base is changed based upon the substitutions specified in this PARMLIB member. For example, when the IDMS Transaction table is being processed, the transaction code is replaced by the organization specified in the IDMF member and all transaction activity is reported as though the organization name was the transaction type. This allows IDMS transaction processing activity to be summarized by department.

Each entry consists of two or more lines as follows:

- Organization

  The first line of each entry consists of a two-digit group number followed by a period, a space, and the name of the organization (up to 8 characters).

- Transaction List

  The second line of each entry begins a list of the transactions that are to be associated with the organization. Each transaction in the list must be separated by a comma. If the list exceeds 72 characters, it must be resumed on the following line. Transaction types can not be continued between two lines. If a transaction type will not fit into a line, skip to a new line. There is no practical limit to the number of transaction types that can be entered for an organization. A wildcard character (*) can be used to specify that all transactions beginning with a specified character string are to be associated with an organization by entering the character string followed immediately (no intervening space) by an asterisk.

A sample (CPPRIDMF) member is provided in the CIMS Capacity Planner PARMLIB.

&sid.NETF PARMLIB Member

The `&sid.NETF PARMLIB` member is used in NETWORK Reporting to associate specified VTAM terminals with organizations when the GENERIC ELEMENT MASK is set to "11111111". Whenever the GENERIC ELEMENT MASK is set to "11111111" in a report request, the KEY element in the particular table being processed in the Performance Data Base is changed based upon the substitutions specified in this PARMLIB member. For example, when the VTAM terminal table is being processed, the terminal ID is replaced by the organization specified in the NETF member and all terminal activity is reported as though the organization name was the terminal ID. This allows terminal activity to be summarized by department.

Each entry consists of two or more lines as follows:

- Organization

  The first line of each entry consists of a two-digit group number followed by a period, a space, and the name of the organization (up to 8 characters).

- Transaction List

  The second line of each entry begins a list of the terminal ID's that are to be associated with the organization. Each terminal ID in the list must be separated by a comma. If the list exceeds 72 characters, it must be resumed on the following line. Terminal ID's can not be continued between two lines. If a terminal ID will not fit into a line, skip to a new line. There is no practical limit to the number of terminals that can be entered for an organization. A wildcard character (*) can be used to specify that all terminal ID's beginning with a specified character string are to be associated with an organization by entering the character string followed immediately (no intervening space) by an asterisk.

A sample (CPPRNETF) member is provided in the CIMS Capacity Planner PARMLIB.

&sid.204F PARMLIB Member

The `&sid.M204` PARMLIB member is used in M204 Reporting to associate specified transaction types with organizations when the GENERIC ELEMENT MASK is set to "11111111". Whenever the GENERIC ELEMENT MASK is set to "11111111" in a report request, the KEY element in the particular table being processed in the Performance Data Base is changed based upon the substitutions specified in this PARMLIB member. For example, when the M204 Transaction table is being processed, the transaction code is replaced by the organization specified in the 204F member and all transaction activity is reported as though the organization name was the transaction type. This allows M204 transaction processing activity to be summarized by department.

Each entry consists of two or more lines as follows:

- Organization

  The first line of each entry consists of a two-digit group number followed by a period, a space, and the name of the organization (up to 8 characters).

- Transaction List

  The second line of each entry begins a list of the transactions that are to be associated with the organization. Each transaction in the list must be separated by a comma. If the list exceeds 72 characters, it must be resumed on the following line. Transaction types can not be continued between two lines. If a transaction type will not fit into a line, skip to a new line. There is no practical limit to the number of transaction types that can be entered for an organization. A wildcard character (*) can be used to specify that all transactions beginning with a specified character string are to be associated with an organization by entering the character string followed immediately (no intervening space) by an asterisk.

A sample (CPPR204F) member is provided in the CIMS Capacity Planner PARMLIB.

&sid.CICR PARMLIB Member

The Distributed Response Table that is built by the data reduction module correlates CICS response time with user organization. It relies on a PARMLIB member to establish the frame of reference for the response times. These members contain:

- The member name is made up of the 4 character SMF SID for the system to which the data pertains plus the characters "CICR" (i.e, CPPRCICR would contain CICS Response time criteria for the CPPR system)
- Each member contains six separate entries in the following format:
  - There are a total of six generic categories available
  - Within each category, specify:

  The number assigned to the category (1-6) must be located in column 1, followed immediately by a period. The label for the response time must follow immediately. No other data besides comments can be included on the first statement of a CICS Response set.

  The upper limit for that response in .xx second format. CICS Response statements must not begin in column 1 (i.e, there must be a blank in column 1 of CICS Response statements for a CICR Pool set).

  Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample CPPRCICR member is included in the CIMS Capacity Planner PARMLIB.

&sid.IDMR PARMLIB Member

The `&sid.IDMR PARMLIB` Member is used to specify the six response time categories used in producing the IDMS Response Performance Report. A sample of this PARMLIB Member (CPPRIDMR) is provided in the CIMS Capacity Planner PARMLIB.

&sid.IMSR PARMLIB Member

The &sidIMSR PARMLIB Member is used to specify the six response time categories used in producing the IMS Response Performance Report. A sample of this PARMLIB Member (CPPRIMSR) is provided in the CIMS Capacity Planner PARMLIB.

&sid.DB2R PARMLIB Member

The `&sid.DB2R` PARMLIB Member is used to specify the six response time categories used in producing the DB2 Transit Time Performance Reports (Plan and Authid). A sample of this PARMLIB Member (CPPRDB2R) is provided in the CIMS Capacity Planner PARMLIB.

&sid.204R PARMLIB Member

The `&sid.204R PARMLIB` Member is used to specify the six response time categories used in producing the M204 Transaction Response Performance Report. A sample of this PARMLIB Member (CPPR204R) is provided in the CIMS Capacity Planner PARMLIB.

&sid.NETR PARMLIB Member

The Distributed Response Table that is built by the data reduction module correlates Network Terminal response time with a specific Line Group or VTAM Application relies on a PARMLIB member to establish the frame of reference for the response times. These members contain:

- The member name is made up of the 4 character SMF SID for the system to which the data pertains plus the characters "NETR" (i.e, CPPRNETR would contain VTAM Response time criteria for the CPPR system)
- Each member contains six separate entries in the following format:
  - There are a total of six generic categories available
  - Within each category, specify:

  The number assigned to the category (1-6) must be located in column 1, followed immediately by a period. The label for the response time must follow immediately. No other data besides comments can be included on the first statement of a Network Terminal Response set.

  The upper limit for that response in .xx second format. VTAM Response statements must not begin in column 1 (i.e, there must be a blank in column 1 of VTAM Response statements for a NETR Pool set).

  Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample CPPRNETR member is included in the CIMS Capacity Planner PARMLIB.

&sid.SVCL PARMLIB Member

This PARMLIB member is used to associate Service Class Names with pseudo-PGNs during Workload Data Reduction for MVS Release 5.1 and higher running in Goal Mode. The pseudo-PGNs are then placed in the Local member of PARMLIB in lieu of actual PGNs as described above.

Up to 64 individual pseudo-PGNs can be described with this member. A different pseudo-PGN is described in each entry. Each entry consists of two or more lines as follows:

- Pseudo-PGN

  The first line of each entry consists of a two-digit group number followed by a period, a space, and the 3 digit pseudo-PGN number.

- Service Class Name List

  The second line of each entry begins a list of the Service Class Names that are to be associated with the pseudo-PGN. Each Service Class Name in the list must be separated by a comma. If the list exceeds 72 characters, it must be resumed on the following line. Service Class Names can not be continued between two lines. If a Service Class Name will not fit into a line, skip to a new line. There is no practical limit to the number of Service Class Names that can be entered for a Pseudo-PGN entry. A wildcard character (*) can be used to specify that all Service Class Names beginning with a specified character string are to be associated with pseudo-PGN by entering the character string followed immediately (no intervening space) by an asterisk.

A sample SVCL member, CPPRSVCL is provided in the CIMS Capacity Planner PARMLIB.

PARMLIB Members used during Exception Analysis

The PARMLIB member named `&sid.XCPT` is used to specify reporting and discard thresholds for purposes of exception analysis. A reporting threshold tells the exception analysis program to ignore any element whose value falls below the specified threshold. A discard threshold tells the exception analysis program to drop any element whose value exceeds the discard value. Each line in the member consists of three values:

- A Keyword phrase identifying the element
- A reporting threshold
- A discard threshold

An "*" in column one of the line indicates that the entire line is a comment.

A sample CPPRXCPT member is included in the distributed PARMLIB.

Each of the individual parameters is described in detail below.

CPU % Busy Parameter

This parameter specifies reporting and discard thresholds for the Processor Exception Analysis. For any fifteen minute period, all CPUs whose percentage busy exceeds the reporting threshold but is less than the discard threshold will be listed on the report.

Paging Activity Parameter

This parameter specifies reporting and discard thresholds for the Processor Exception Analysis. For any fifteen minute period, any incident where the average pages per seconds value exceeds the reporting threshold but is less than the discard threshold is listed on the report.

DASD Queue Delay Parameter

This parameter specifies reporting and discard thresholds for the DASD Exception Analysis. For any one hour period, all DASD Devices whose average Queue delay value exceeds the reporting threshold but is less than the discard threshold are listed on the report.

DASD % Busy Parameter

This parameter specifies reporting and discard thresholds for the DASD Exception Analysis. For any one hour period, all DASD Devices whose average percentage busy value exceeds the reporting threshold but is less than the discard threshold are listed on the report.

DASD Service Time Parameter

This parameter specifies reporting and discard thresholds for the DASD Exception Analysis. For any one hour period, all DASD Devices whose average I/O Service Time value exceeds the reporting threshold but is less than the discard threshold are listed on the report.

Channel % Busy Parameter

This parameter specifies reporting and discard thresholds for the Channel Exception Analysis. For any one hour period, all Channels or CHPIDs whose average percentage busy value exceeds the reporting threshold but is less than the discard threshold are listed on the report.

CICS Transaction Response Parameter

This parameter specifies reporting and discard thresholds for the CICS Exception Analysis. For any fifteen minute period, all CICS Transactions whose average response value exceeds the reporting threshold but is less than the discard threshold are listed on the report. This value is also used for Model 204 and DB2 Transaction Response Thresholds.

CICS Terminal Response Parameter

This parameter specifies reporting and discard thresholds for the CICS Exception Analysis. For any fifteen minute period, all CICS Terminals whose average response value exceeds the reporting threshold but is less than the discard threshold are listed on the report. This value is also used for Model 204 and DB2 Transaction Response Thresholds.

IDMS Transaction Response Parameter

This parameter specifies reporting and discard thresholds for the IDMS Exception Analysis. For any fifteen minute period, all IDMS Transactions whose average response value exceeds the reporting threshold but is less than the discard threshold are listed on the report.

IDMS Terminal Response Parameter

This parameter specifies reporting and discard thresholds for the IDMS Exception Analysis. For any fifteen minute period, all IDMS Terminals whose average response value exceeds the reporting threshold but is less than the discard threshold are listed on the report.

IMS Transaction Response Parameter

This parameter specifies reporting and discard thresholds for the IMS Exception Analysis. For any fifteen minute period, all IMS Transactions whose average response value exceeds the reporting threshold but is less than the discard threshold are listed on the report.

IMS Terminal Response Parameter

This parameter specifies reporting and discard thresholds for the IMS Exception Analysis. For any fifteen minute period, all IMS Terminals whose average response value exceeds the reporting threshold but is less than the discard threshold are listed on the report.

Network Terminal Response Parameter

This parameter specifies reporting and discard thresholds for the Network Exception Analysis. For any fifteen minute period, all VTAM Terminals whose average response value exceeds the reporting threshold but is less than the discard threshold are listed on the report.

Physical Line % Busy Parameter

This parameter specifies reporting and discard thresholds for the Network Physical Exception Analysis. For any fifteen minute period, all VTAM Lines whose average percentage busy value exceeds the reporting threshold but is less than the discard threshold are listed on the report.

NCP % Busy Parameter

This parameter specifies reporting and discard thresholds for the Network Physical Exception Analysis. For any fifteen minute period, all NCPs whose average percentage busy value exceeds the reporting threshold but is less than the discard threshold are listed on the report.

PARMLIB Members used to Create HGDLIB Members

The Host-resident programs that are used to create the HGDLIB members use a variety of PARMLIB members to pass information to the process. The members themselves are described in detail below.

DASDPOOL PARMLIB Member

The Harvard Graphics micro-computer program is used to produce Pie Charts showing how the space within the DASD farm is distributed within generic sets of DASD Pools. These DASD Pools are formed by examining the Volume Serial Numbers of each individual DASD Device and assigning that device to a pool based on the makeup of a member in the CPPR PARMLIB named "DASDPOOL."

This DASDPOOL member is laid out as follows:

- There are a total of six generic pools available
- Within each pool, specify:

  The number assigned to the pool (1-6) must be located in column 1, followed immediately by a period. The label for the DASD Pool must follow immediately. No other data besides comments can be included on the first statement of a DASD Pool set.

  The Volume Serial number(s) assigned to that pool, separated by commas. Wild cards (*) can be used to designate generic classes of Volume Serial numbers. That is, the characters MVS* imply that all Volume Serial numbers beginning with the three characters "MVS" are to be assigned to this pool. Volume Serial number statements must not begin in column 1 (i.e, there must be a blank in column 1 of Volume Serial number statements for a DASD Pool set). Multiple Volume Serial number statements can be included with each DASD Pool set.

  Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample DASDPOOL member is included in the CIMS Capacity Planner PARMLIB. Please refer to it for a model.

&sid.JOBS PARMLIB Member

In order to preserve the granularity of specific Job Classes in depicting Job throughput and Job turnaround activity, a set of `&sid.JOBS` members is provided in the CPPR PARMLIB. These members contain:

- The member name is made up of the 4 character SMF SID for the system to which the data pertains plus the characters "JOBS" (i.e, CPPRJOBS would contain Job Category information for the CPPR system)

- Each member contains six separate entries in the following format:
  - There are a total of six generic categories available
  - Within each category, specify:

  The number assigned to the category (1-6) must be located in column 1, followed immediately by a period. The label for the JOB Category must follow immediately. No other data besides comments can be included on the first statement of a JOB Category set.

  The JOB Class(es) assigned to that category, separated by commas. JOB Category Class statements must not begin in column 1 (i.e, there must be a blank in column 1 of JOB Category Class statements for a JOBS Pool set). Multiple JOB Category Class statements can be included with each JOB Category set.

  Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample CPPRJOBS member is included in the CIMS Capacity Planner PARMLIB.

&sid.CPUV PARMLIB Member

The surface graph that depicts the number of hours per day that the CPU is x% busy requires that you specify the percentages used to frame the graph. Up to five separate percentage ranges can be specified. These members contain:

- The member name is made up of the 4 character SMF SID for the system to which the data pertains plus the characters "CPUV" (i.e, CPPRCPUV would contain CPU Percentage information for the CPPR system)
- Each member contains five separate entries in the following format:
  - There are a total of five generic categories available
  - Within each category, specify:

  The number assigned to the category (1-5) must be located in column 1, followed immediately by a period. The label for the CPU Percentage must follow immediately. No other data besides comments can be included on the first statement of a CPU Percentage set.

  The range of percentages assigned to that category, separated by dashes. CPU Percentage statements must not begin in column 1 (i.e, there must be a blank in column 1 of CPU Percentage statements for a CPUV Pool set).

  Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample CPPRCPUV member is included in the CIMS Capacity Planner PARMLIB.

&sid.CICF PARMLIB Member

Please reference the description of the &sid.CICF PARMLIB Member in &sid.CICF PARMLIB Member, on page 1-9 of this Appendix.

&sid.CICO PARMLIB Member

The bar graph that correlates CICS response time with user organization relies on a PARMLIB member to establish the relationship between specific CICS transactions and an organization. For example, it can be possible to associate all CICS transactions beginning with AP with the Accounting Department. These members contain:

- The member name is made up of the 4 character SMF SID for the system to which the data pertains plus the characters "CICO" (i.e, CPPRCICO would contain CICS Organization-to-transaction information for the CPPR system)
- Each member contains six separate entries in the following format:
  - There are a total of six generic categories available
  - Within each category, specify:

  The number assigned to the category (1-6) must be located in column 1, followed immediately by a period. The label for the Organization must follow immediately. No other data besides comments can be included on the first statement of a CICS Organization set.

  The transactions associated with that organization, separated by commas. Wildcards can be used to describe generic transactions (AP* would include all transactions beginning with the characters AP). CICS Organization statements must not begin in column 1 (i.e, there must be a blank in column 1 of CICS Organization statements for a CICO Pool set).

  Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample CPPRCICO member is included in the CIMS Capacity Planner PARMLIB.

&sid.CICR PARMLIB Member

The bar graph that correlates CICS response time with user organization relies on a PARMLIB member to establish the frame of reference for the response times. These members contain:

- The member name is made up of the 4 character SMF SID for the system to which the data pertains plus the characters "CICR" (i.e, CPPRCICR would contain CICS Response time criteria for the CPPR system)

- Each member contains six separate entries in the following format:
  - There are a total of six generic categories available
  - Within each category, specify:

  The number assigned to the category (1-6) must be located in column 1, followed immediately by a period. The label for the response time must follow immediately. No other data besides comments can be included on the first statement of a CICS Response set.

  The upper limit for that response in .xx second format. CICS Response statements must not begin in column 1 (i.e, there must be a blank in column 1 of CICS Response statements for a CICR Pool set).

  Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample CPPRCICR member is included in the CIMS Capacity Planner PARMLIB.

&sid.CICT PARMLIB Member

The surface graph that correlates CICS throughput with a category of CICS work relies on a PARMLIB member to establish the relationship between specific CICS transactions and a category of work. For example, it can be possible to associate all CICS transactions beginning with AP with the Accounts Payable category. These members contain:

- The member name is made up of the 4 character SMF SID for the system to which the data pertains plus the characters "CICT" (i.e, CPPRCICT would contain CICS Transaction-to-category information for the CPPR system)
- Each member contains six separate entries in the following format:
  - There are a total of six generic categories available
  - Within each category, specify:

  The number assigned to the category (1-6) must be located in column 1, followed immediately by a period. The label for the Category must follow immediately. No other data besides comments can be included on the first statement of a CICS Category set.

  The transactions associated with that category, separated by commas. Wildcards can be used to describe generic transactions (AP* would include all transactions beginning with the characters AP). CICS Category statements must not begin in column 1 (i.e, there must be a blank in column 1 of CICS Category statements for a CICT Pool set).

  Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample CPPRCICT member is included in the CIMS Capacity Planner PARMLIB.

&sid.IDMO PARMLIB Member

The bar graph that correlates IDMS response time with user organization relies on a PARMLIB member to establish the relationship between specific IDMS transactions and an organization. For example, it is possible to associate all IDMS transactions beginning with AP with the Accounting Department. These members contain:

- The member name is made up of the 4 character SMF SID for the system to which the data pertains plus the characters "IDMO" (i.e, CPPRIDMO would contain IDMS Organization-to-transaction information for the CPPR system)
- Each member contains six separate entries in the following format:
  - There are a total of six generic categories available
  - Within each category, specify:

  The number assigned to the category (1-6) must be located in column 1, followed immediately by a period. The label for the Organization must follow immediately. No other data besides comments can be included on the first statement of an IDMS Organization set.

  The transactions associated with that organization, separated by commas. Wildcards can be used to describe generic transactions (AP* would include all transactions beginning with the characters AP). IDMS Organization statements must not begin in column 1 (i.e, there must be a blank in column 1 of IDMS Organization statements for an IDMO Pool set).

  Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample CPPRIDMO member is included in the CIMS Capacity Planner PARMLIB.

&sid.IDMR PARMLIB Member

The bar graph that correlates IDMS response time with user organization relies on a PARMLIB member to establish the frame of reference for the response times. These members contain:

- The member name is made up of the 4 character SMF SID for the system to which the data pertains plus the characters "IDMR" (i.e, CPPRIDMR would contain IDMS Response time criteria for the CPPR system)
- Each member contains six separate entries in the following format:
  - There are a total of six generic categories available
  - Within each category, specify:

The number assigned to the category (1-6) must be located in column 1, followed immediately by a period. The label for the response time must follow immediately. No other data besides comments can be included on the first statement of an IDMS Response set.

The upper limit for that response in .xx second format. IDMS Response statements must not begin in column 1 (i.e, there must be a blank in column 1 of IDMS Response statements for an IDMR Pool set).

Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample CPPRIDMR member is included in the CIMS Capacity Planner PARMLIB.

&sid.IDMT PARMLIB Member

The surface graph that correlates IDMS throughput with a category of IDMS work relies on a PARMLIB member to establish the relationship between specific IDMS transactions and a category of work. For example, it is possible to associate all IDMS transactions beginning with AP with the Accounts Payable category. These members contain:

- The member name is made up of the 4 character SMF SID for the system to which the data pertains plus the characters "IDMT" (i.e, CPPRIDMT would contain IDMS Transaction-to-category information for the CPPR system)
- Each member contains six separate entries in the following format:
  - There are a total of six generic categories available
  - Within each category, specify:

  The number assigned to the category (1-6) must be located in column 1, followed immediately by a period. The label for the Category must follow immediately. No other data besides comments can be included on the first statement of an IDMS Category set.

  The transactions associated with that category, separated by commas. Wildcards can be used to describe generic transactions (AP* would include all transactions beginning with the characters AP). IDMS Category statements must not begin in column 1 (i.e, there must be a blank in column 1 of IDMS Category statements for an IDMT Pool set).

  Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample CPPRIDMT member is included in the CIMS Capacity Planner PARMLIB.

&sid.NETL PARMLIB Member

The extension graphs that portray relationships among various Line Groups within a specific SMF System utilize a PARMLIB member to specify the terminal names that are to be included in each of the six Line Groups. These members contain:

- The member name is made up of the 4 character SMF SID for the system to which the data pertains plus the characters "NETL" (i.e, CPPRNETL would contain Network Terminal-to-Line Group information for the CPPR system)
- Each member contains six separate entries in the following format:
  - There are a total of six generic categories available
  - Within each category, specify:

  The number assigned to the category (1-6) must be located in column 1, followed immediately by a period. The label for the Line Group must follow immediately. No other data besides comments can be included on the first statement of a Network Line Group set.

  The terminals associated with that Line Group, separated by commas. Wildcards can be used to describe generic terminal names (AP* would include all terminal names beginning with the characters AP). Network Line Group statements must not begin in column 1 (i.e, there must be a blank in column 1 of Network Line Group statements for a NETL Pool set).

  Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample CPPRNETL member is included in the CIMS Capacity Planner PARMLIB.

&sid.NETR PARMLIB Member

The bar graph that correlates Network Terminal response time with a specific Line Group or VTAM Application relies on a PARMLIB member to establish the frame of reference for the response times. These members contain:

- The member name is made up of the 4 character SMF SID for the system to which the data pertains plus the characters "NETR" (i.e, CPPRNETR would contain VTAM Response time criteria for the CPPR system)
- Each member contains six separate entries in the following format:
  - There are a total of six generic categories available
  - Within each category, specify:

  The number assigned to the category (1-6) must be located in column 1, followed immediately by a period. The label for the response time must follow immediately. No other data besides comments can be included on the first statement of a Network Terminal Response set.

The upper limit for that response in .xx second format. VTAM Response statements must not begin in column 1 (i.e, there must be a blank in column 1 of VTAM Response statements for a NETR Pool set).

Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample CPPRNETR member is included in the CIMS Capacity Planner PARMLIB.

&sid.NETN PARMLIB Member

The surface graphs that compare the activity and performance of various VTAM APPLIDs rely on a PARMLIB member to specify the names of those VTAM APPLIDs. These members contain:

- The member name is made up of the 4 character SMF SID for the system to which the data pertains plus the characters "NETN" (i.e, CPPRNETN would contain the names of the VTAM APPLIDs being compared for the CPPR system)
- Each member contains six separate entries in the following format:
  - There are a total of six generic categories available
  - Within each category, specify:

  The number assigned to the category (1-6) must be located in column 1, followed immediately by a period. The label for the Category must follow immediately. No other data besides comments can be included on the first statement of a VTAM Category set.

  The VTAM APPLIDs associated with that category, separated by commas. Wildcards can be used to describe generic transactions (AP* would include all VTAM APPLIDs beginning with the characters AP). VTAM Category statements must not begin in column 1 (i.e, there must be a blank in column 1 of VTAM Category statements for a NETN Pool set).

  Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample CPPRNETN member is included in the CIMS Capacity Planner PARMLIB.

&sid.LGRP PARMLIB Member

The surface graphs that show the activity on physical lines for a VTAM network configuration rely on a PARMLIB member to the lines that belong to a specific line group. These members contain:

- The member name is made up of the 4 character SMF SID for the system to which the data pertains plus the characters "LGRP" (i.e, CPPRLGRP would contain the names of the VTAM lines associated with up to 6 line groups for the CPPR system)

- Each member contains six separate entries in the following format:
  - There are a total of six generic categories available
  - Within each category, specify:

  The number assigned to the category (1-6) must be located in column 1, followed immediately by a period. The label for the Category must follow immediately. No other data besides comments can be included on the first statement of a VTAM Category set.

  The VTAM lines associated with that category, separated by commas. Wildcards can be used to describe generic transactions (L1* would include all VTAM lines beginning with the characters L1). VTAM Category statements must not begin in column 1 (i.e, there must be a blank in column 1 of VTAM Category statements for a LGRP Pool set).

  Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample CPPRLGRP member is included in the CIMS Capacity Planner PARMLIB.

&sid.NCPL PARMLIB Member

The graphs that depict the activity and performance of various VTAM NCPs rely on a PARMLIB member to specify the names of those VTAM NCPs. These members contain:

- The member name is made up of the 4 character SMF SID for the system to which the data pertains plus the characters "NCPL" (i.e, CPPRNCPL would contain the names of the VTAM NCPs for the CPPR system)
- Each member contains six separate entries in the following format:
  - There are a total of six generic categories available
  - Within each category, specify:

  The number assigned to the category (1-6) must be located in column 1, followed immediately by a period. The label for the Category must follow immediately. No other data besides comments can be included on the first statement of a VTAM Category set.

  The name of the VTAM NCP associated with that category. VTAM Category statements must not begin in column 1 (i.e, there must be a blank in column 1 of VTAM Category statements for a NCPL Pool set).

  Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample CPPRNCPL member is included in the CIMS Capacity Planner PARMLIB.

&sid.NCPV PARMLIB Member

The surface graph that depicts the number of hours per day that the NCP is x% busy requires that you specify the percentages used to frame the graph. Up to six separate percentage ranges can be specified. These members contain:

- The member name is made up of the 4 character SMF SID for the system to which the data pertains plus the characters "NCPV" (i.e, CPPRNCPV would contain NCP Percentage information for the CPPR system)
- Each member contains six separate entries in the following format:
  - There are a total of six generic categories available
  - Within each category, specify:

  The number assigned to the category (1-6) must be located in column 1, followed immediately by a period. The label for the NCP Percentage must follow immediately. No other data besides comments can be included on the first statement of a NCP Percentage set.

  The range of percentages assigned to that category, separated by dashes. NCP Percentage statements must not begin in column 1 (i.e, there must be a blank in column 1 of NCP Percentage statements for a NCPV Pool set).

  Comments anywhere you want. Should a comment fill the entire statement, place an asterisk (*) in column 1. Should a comment be elsewhere, indicate the beginning of the comment with the two characters /*.

A sample CPPRNCPV member is included in the CIMS Capacity Planner PARMLIB.

&sid.PGNS PARMLIB Member

The `&sid.PGNS` member is used to define the names of the various categories of CPU usage and the performance group numbers (PGNS) that make up each of the categories in support of generating the data points used in building the p1A-p1F graphs. Up to six categories of CPU usage can be defined.

Each category of CPU utilization data consists of a category, or group, name and one or more performance group numbers that are defined as follows:

- Category or Group Name

  The first line of the category consists of a single digit number of from one to six followed by a period, a space, and a name of up to 8 characters.

- Performance Group Numbers

  The second line of each category begins the list of the performance groups associated with the CPU utilization category. Multiple PGNs must be separated by commas.

A sample (CPPRPGNS) is included in the CIMS Capacity Planner PARMLIB.

&sid.PGNX PARMLIB Member

The `&sid.PGNX` member is used to define the names of the various categories of CPU usage and the performance group numbers (PGNs) that make up each of the categories in support of generating the data points used in building the p1G-p1L graphs. Up to sixty-four categories of CPU usage can be defined.

Each category of CPU utilization data consists of a category, or group, name and one or more performance group numbers that are defined as follows:

- Category or Group Name

  The first line of the category consists of a single digit number of from one to six followed by a period, a space, and a name of up to 8 characters.

- Performance Group Numbers

  The second line of each category begins the list of the performance groups associated with the CPU utilization category. Multiple PGNs must be separated by commas.

A sample (CPPRPGNX) is included in the CIMS Capacity Planner PARMLIB.

&sid.DASF PARMLIB Member

This member is used to group the various high-level qualifiers within the data set names to departments to be used by CIMS Capacity Planner in generating the data points required to produce the following graphs:

- p69—Space Allocated vs Space Wasted
- p6A—% Space Wasted
- p6B—Space Unreferenced in 30, 60, 90 Days

Up to 64 individual groups can be specified.

Each group of User ID data consists of a group, name and one or more User IDs that are defined as follows:

- Category or Group Name

  The first line of the category consists of a single digit number of from one to six followed by a period, a space, and a name of up to 8 characters.

- User IDs

  The second line of each group begins the list of High-Level Qualifiers associated with the group. Multiple PGNs must be separated by commas. If the list of high-level qualifiers will not fit into a single line, multiple lines can be used. All data entered past column 72 is ignored.

A sample (CPPRDASF) is included in the CIMS Capacity Planner PARMLIB.

&sid.CICF PARMLIB Member

The `&sid.CICF` PARMLIB member is used in the CICS Reporting to associate specified transaction types with organizations in generating data points to be used in producing the CICS pC0-pC4 graphs.

Each entry consists of two or more lines as follows:

- Organization

  The first line of each entry consists of a two-digit group number followed by a period, a space, and the name of the organization (up to 8 characters).

- Transaction List

  The second line of each entry begins a list of the transactions that are to be associated with the organization. Each transaction in the list must be separated by a comma. If the list exceeds 72 characters, it must be resumed on the following line. Transaction types can not be continued between two lines. If a transaction type will not fit into a line, skip to a new line. There is no practical limit to the number of transaction types that can be entered for an organization. A wildcard character (*) can be used to specify that all transactions beginning with a specified character string are to be associated with an organization by entering the character string followed immediately (no intervening space) by an asterisk.

A sample (CPPRCICF) member is provided in the CIMS Capacity Planner PARMLIB

&sid.IMSO PARMLIB Member

The `&sid.IMSO` PARMLIB Member is used to associate IMS transactions with Organizations in generating data points to be used in producing the IMS p9B graph. Up to six organizations can be specified. Each organization entry consists of two or more lines as follows:

- Organization

  The first line of each entry consists of a two-digit group number followed by a period, a space, and the name of the organization (up to 8 characters).

- Transaction List

  The second line of each entry begins a list of the transactions that are to be associated with the organization. Each transaction in the list must be separated by a comma. If the list exceeds 72 characters, it must be resumed on the following line. Transaction types can not be continued between two lines. If a transaction type will not fit into a line, skip to a new line. There is no practical limit to the number of transaction types that can be entered for an organization. A wildcard character (*) can be used to specify that all transactions beginning with a specified character string are to be associated with an organization by entering the character string followed immediately (no intervening space) by an asterisk.

A sample (CPPRIMSO) member is provided in the CIMS Capacity Planner PARMLIB.

&sid.IMSR PARMLIB Member

The `&sid.IMSR` PARMLIB Member is used to specify the six response time categories used in producing the IMS p9B and p9D graphs.

A sample (CPPRIDMR) is provided in the CIMS Capacity Planner PARMLIB.

&sid.IMST PARMLIB Member

The `&sid.IMST` PARMLIB Member is used to associate IMS transactions with applications in generating data points to be used in producing the IMS p9C graph. Up to six applications can be specified. Each application entry consists of two or more lines as follows:

- Application

  The first line of each entry consists of a one-digit application number followed by a period, a space, and the name of the application (up to 8 characters).

- Transaction List

  The second line of each entry begins a list of the transactions that are to be associated with the application. Each transaction in the list must be separated by a comma. If the list exceeds 72 characters, it must be resumed on the following line. Transaction types can not be continued between two lines. If a transaction type will not fit into a line, skip to a new line. There is no practical limit to the number of transaction types that can be entered for an application. A wildcard character (*) can be used to specify that all transactions beginning with a specified character string are to be associated with an application by entering the character string followed immediately (no intervening space) by an asterisk.

A sample (CPPRIMST) member is provided in the CIMS Capacity Planner PARMLIB.

&sid.2040 PARMLIB Member

The `&sid.2040` PARMLIB Member is used to associate M204 transactions with Organizations in generating data points to be used in producing the M204 pMB graph. Up to six organizations can be specified. Each organization entry consists of two or more lines as follows:

- Organization

  The first line of each entry consists of a two-digit group number followed by a period, a space, and the name of the organization (up to 8 characters).

- Transaction List

  The second line of each entry begins a list of the transactions that are to be associated with the organization. Each transaction in the list must be separated by a comma. If the list exceeds 72 characters, it must be resumed on the following line. Transaction types can not be continued between two lines. If a transaction type will not fit into a line, skip to a new line. There is no practical limit to the number of transaction types that can be entered for an organization. A wildcard character (*) can be used to specify that all transactions beginning with a specified character string are to be associated with an organization by entering the character string followed immediately (no intervening space) by an asterisk.

A sample (CPPR204O) member is provided in the CIMS Capacity Planner PARMLIB.

&sid.204R PARMLIB Member

The `&sid.204R` PARMLIB Member is used to specify the six response time categories used in producing the M204 pMD graph.

A sample (CPPR204R) is provided in the CIMS Capacity Planner PARMLIB.

&sid.204T PARMLIB Member

The `&sid.204T` PARMLIB Member is used to associate M204 transactions with applications in generating data points to be used in producing the M204 pMC graph. Up to six applications can be specified. Each application entry consists of two or more lines as follows:

- Application

  The first line of each entry consists of a one-digit application number followed by a period, a space, and the name of the application (up to 8 characters).

- Transaction List

  The second line of each entry begins a list of the transactions that are to be associated with the application. Each transaction in the list must be separated by a comma. If the list exceeds 72 characters, it must be resumed on the following line. Transaction types can not be continued between two lines. If a transaction type will not fit into a line, skip to a new line. There is no practical limit to the number of transaction types that can be entered for an application. A wildcard character (*) can be used to specify that all transactions beginning with a specified character string are to be associated with an application by entering the character string followed immediately (no intervening space) by an asterisk.

A sample (CPPR204T) member is provided in the CIMS Capacity Planner PARMLIB.

PARMLIB Members Used to Generate LNGVLIB Data

&sid.DASL PARMLIB Member

The `&sid.DASL` PARMLIB Member is used to associate disk volumes with up to 64 separate DASD Pools in generating LongView data points. Each DASD Pool entry consists of two or more lines as follows:

- DASD Pool

  The first line of each entry consists of a two-digit DASD Pool number followed by a period, a space, and the name of the Pool (up to 8 characters).

- Volume List

  The second line of each entry begins a list of the volumes that are to be associated with the DASD Pool. Each volume in the list must be separated by a comma. If the list exceeds 72 characters, it must be resumed on the following line. Volumes can not be continued between two lines. If a transaction type will not fit into a line, skip to a new line. There is no practical limit to the number of volumes that can be entered for an DASD Pool. A wildcard character (*) can be used to specify that all volumes beginning with a specified character string are to be associated with a DASD Pool by entering the character string followed immediately (no intervening space) by an asterisk.

A sample (CPPRDASL) member is provided in the CIMS Capacity Planner PARMLIB.

&sid.LNGV PARMLIB Member

This member is used to specify transaction and terminal response times to be used as performance objectives in generating LongView data. The member provides for specifying the objectives, expressed in the percentage (nnn.nn) of the cases where the specified response time is to be met, and the response times, in seconds (to two decimal places).

These values are specified for CICS, IDMS, M204, DB2, and IMS.

A sample (CPPRLNGV) member is provided in the CIMS Capacity Planner PARMLIB.

2

CIMS Capacity Planner Utility Programs

Introduction

Several CIMS Capacity Planner Utility programs provide a set of functions that make the system easier to use and maintain. These utilities include:

- A utility (SSA1PDBV) that allows you to list all the tables in a specified Integrated Performance Data Base. The list is produced in chronological order by table type, thereby allowing you to determine whether or not all required tables are present in the data base.
- A utility (SSA1PDBD) that allows you to remove a specific table or range of tables from the Integrated Performance Data Base.
- A utility (SSA1INDX) that allows you to rebuild the index to the Integrated Performance Data Base. This capability supports the physical concatenation of multiple separate Performance Data Bases into a single Integrated Performance Data Base.
- A utility (SSA1SUMM) that allows you to build summary tables in the Integrated Performance Data Base.
- A utility (SSA1ARC) that allows you to archive aged detail records out of the Integrated Performance Data Base to an off-line history file.
- A utility (SSA1LOAD) that allows you to load a composite Performance Data Base from a set of PDB Pools or from archived history.
- A utility (SSA1DCFP) that allows you to list the contents of the CPPRERT file.
- A utility (SSA1TDBS) that allows you to produce a listing of the statistics for all the tables related to a specified SID in the Performance Data Base.
- A utility (SSA1TBLX) that allows you to extract table and field-related data from the Integrated Performance Data Base for processing by locally written programs.
- A utility (SSA1HGDF) that allows you to print a selected set of HGDLIB Members.
- A utility (SSA1GAPS) that allows you to check for unprocessed intervals in the Performance Database.
- A utility (SSA1TBLU) that allows you to update selected tables in the Performance Database.
- A utility (SSA1LIBX) that allows you to group selected library members into a sequential file for subsequent down load to a PC.
- A utility (SSA1LIBM) that allows you to merge columns of data from selected library members into a newly created member

CIMS Capacity Planner Tables

The Integrated Performance Data Base contains a number of types of tables that are referenced by the CIMS Capacity Planner application and utility programs. The following table itemizes each type of CIMS Capacity Planner table:

CIMS Capacity Planner TABLE TYPES		
CPPR Table Number	*******	**Table Description**
1		Device Activity Table
2		Dataset Name Activity Table
3	Q	CPU Percent Busy Cell Table (Weekly)
4		Paging Activity Cell Table (Weekly)
5		TSO User Activity Cell Table (Weekly)
6		ESA Storage Activity Table
7		Printer Statistics Table
8		CPU/Paging Component Ratio Table
9		Workload Analysis Scratch Pad Table
10		Channel Percent Busy Table
11		JOB Statistics Table
12		Program Statistics Table
13		TSO User Statistics Table
14		TSO Command Statistics Table
15		Workload Analysis Element Registration Table
16	Q	CICS/IDMS Element Registration Table
17	Q	CICS Transaction Activity Table
18	Q	CICS Terminal Activity Table
19	Q	CICS Response Table
20	Q	CICS Scratch Pad Table
20	Q	IDMS Transaction Activity Table
21	Q	IDMS Terminal Activity Table
22	Q	IMS Module Name Table

CIMS Capacity Planner TABLE TYPES		
CPPR Table Number	***	**Table Description**
23	Q	IMS Transaction Table
24	Q	IMS Terminal Activity Table
25	Q	IMS CPU/Paging/EXCP Table
26	Q	IMS Log Checkpoint Table
27	Q	IMS User Checkpoint Table
28	Q	IMS Log Checkpoint Misc Table
29	Q	IMS I/O Activity Table
30	Q	IMS Registration Table
31	Q	IDMS Scratch Pad Table
32		DASM Allocation Table
33		DASM Volume Table
34		DASM Wasted Space Table
35		DASM Space Un-referenced Table
36		Expanded DASD Statistics Table
37		Model 204 Transaction Table
38		Model 204 Terminal Table
39		DASM Storage Group Names
40		PR/SM CPU Activity Table
41		JOBNAME:CPU Hourly Table
42		DASD Scratch Pad Table (TMON/MVS)
43		PGN Service Unit Table
48		Network Element Registration Table
49	Q	Network Terminal Table
50	Q	Network Scratch Pad Table
51	Q	Network Supplemental Table
52		VTAM NCP Table

CIMS Capacity Planner TABLE TYPES		
CPPR Table Number	*******	**Table Description**
53		VTAM Line Table
54	Q	VTAM Terminal Scratch Pad Table
55		VTAM CCU Statistics Table
56	Q	VTAM CCU Response by APPLID Table
57		VTAM CCU Availability Table
58	Q	Net Lookup Table
59		VTAM CCU State Table
60		VTAM CCU Overall Response Table
61	Q	IMS Terminal Response
65		Shift Turnover Report Statistics Table
66		Tape OWNERID Statistics
67		Tape Unit Statistics
68		Tape Volume Summary
69		Mainframe Storage Mapping Table
70		Service Class Statistics Table
103		TSO Performance Table
118	Q	Batch JOB Performance Table
122		Resource Usage Statistics
123		Resource Usage Scratch Pad
128-159		Reserved for Generic User Tables
176		DB2 User Registration Table
177	Q	DB2 System Wide Table
178	Q	DB2 APPLID Plan Table
179	Q	DB2 APPLID AUTH-ID Table
180	Q	DB2 Plan Lookup Table
181	Q	DB2 AUTH-ID Lookup Table

CIMS Capacity Planner TABLE TYPES		
CPPR Table Number	***	**Table Description**
182	Q	DB2 System Wide Scratch Table
183		DB2 System Wide Registration Table
192		Unix System Statistics
193		Unix Memory Statistics
194		Unix Disk Statistics
195		Unix Buffer Statistics
196		Unix System Calls
197		Unix tty Statistics
198		Unix Table Statistics
199		Unix rfs Ops Statistics
200		Unix rfs Activity
208		AS/400 Job Statistics
209		AS/400 JOB User Statistics
210		AS/400 Subsystem Statistics
211		AS/400 System Statistics
212		AS/400 Local Workstation Statistics
213		AS/400 Workload Category Statistics
214		AS/400 Disk Statistics
215		AS/400 Disk Capacity Statistics
216		AS/400 Storage Pool Statistics
223		AS/400 Configuration
224		WKLD Monthly Summary Table
225	Q	CICS Monthly Summary Table
226	Q	DB2 Monthly Summary Table
238		Unix Summary
239		Model 204 Summary Table

CIMS Capacity Planner TABLE TYPES		
CPPR Table Number	***	**Table Description**
240		Workload Analysis Summary Table (Weekly)
241		DASM Summary Table (Weekly)
242	Q	CICS Summary Table (Weekly)
243	Q	IDMS Summary Table (Weekly)
244	Q	IMS Summary Table (Weekly)
245	Q	Network Summary Table (Weekly)
246		Network Line Summary Table (Weekly)
247		Network NCP Summary Table (Weekly)
248		ESA PR/SM Summary Table (Weekly)
249	Q	DB2 System Wide Summary Table (Weekly)
250	Q	DB2 Connect Name Summary Table (Weekly)

*** Q = the Qualifier is used to differentiate among multiple tables for any given date for this table type

Utility Program Operation

Listing the contents of the PDB (SSA1PDBV)

The CIMS Capacity Planner System Performance Database is comprised of a number of individual tables, each uniquely identified by a key made up of the following elements:

- A 1 byte Table ID
- A 4 byte SMF System Identifier
- A 4 byte Julian date
- A 1 byte qualifier

Periodically it is useful to list the tables that reside in the Performance Database (PDB). This is particularly advantageous when a problem has occurred that might have compromised the integrity of the PDB. The Performance Database Validate utility, SSA1PDBV, might be used for this purpose. The utility produces an inventory of all tables in the PDB in chronological order. For each date, a complete list of all tables is provided.

The Table ID field is formatted and printed by SSA1PDBV when the tables that are resident in the Performance Database are listed. The correspondence between the Table ID and the type of table is shown below. In addition, an indicator (Q) shows whether or not the qualifier field is used by a particular table type.

The qualifier field is used in the following situations:

- When a CPU is dyadic, to identify the individual engines
- For Batch Performance tables, to identify a specific Job Class
- For CICS, to identify a specific CICS Region (VTAM APPLID)
- For IMS, to identify a specific IMS Region (VTAM APPLID)
- For IDMS, to identify a specific IDMS Region (VTAM APPLID)
- For Network, to identify a specific VTAM APPLID
- For DB2, to identify a DB2 subsystem
- For DB2, to identify a DB2 Connect Name

Parameters

No parameters are required to execute this program.

JCL

Use the following sample set of JCL as a set model JCL to execute the SSA1PDBV program. This model is found in machine readable form in member DUTLVALD in the `&PREFIX.CPPR.Vnnn.CNTL` library.

```
//CPPRPDBV JOB (...),'SSA',CLASS=A,MSGCLASS=X
/*JOBPARM  S=*
//ST1 EXEC PGM=SSA1PDBV,REGION=5000K,TIME=60
//STEPLIB  DD DSN=&PREFIX.CPPR.Vnnn.LOADLIB,DISP=SHR
//SYSNAP   DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//INDEX    DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.INDEX.xxxx
//ONLINE   DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.ONLINE.xxxx
//CPPRERT  DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.CPPRERT
//CIMSPASS DD DISP=SHR,DSN=&PREFIX.CPPR.V530.CNTL(CIMSNUM)
//SYSPRINT DD SYSOUT=*
//SYSMSGS  DD SYSOUT=*
//SYSIN    DD DUMMY
```

Deleting a PDB Table (SSA1PDBD)

This utility allows you to delete a specific table or range of tables from the Performance Data Base.

Parameters

One or more of the following parameters can be specified:

_ SELECTED SYSTEM=

Specifying a specific system identifier will limit the tables to be deleted to a specific system.

_ FILTER=

By using the FILTER parameter, you can limit the types of tables deleted to those specified in the FILTER statement. Up to eight table types can be specified through the use of the FILTER parameter. Multiple table types must be separated by commas.

_ BEGIN DATE=

The use of the BEGIN DATE parameter will limit the deletions to tables that are dated on or after the specified date. If no BEGIN DATE is specified, the default BEGIN DATE is used.

_ END DATE=

The use of the END DATE parameter will limit the deletions to tables that are dated on or prior to the specified date.

If no END DATE is specified, the default END DATE is used.

_ Application Name

If a CICSNAME=applid (or IDMSNAME or VTAMNAME or DB2NAME) is specified, the deletions are limited to tables related to the specified region. If none of the above parameters are specified, then all tables are deleted.

JCL

The following JCL is used as a model to invoke the SSA1PDBD program. It is available in machine readable form in member DUTLDELT in the `&PREFIX.CPPR.Vnnn.CNTL` library.

```
//DUTLDELT JOB (...),'SSA',CLASS=A,MSGCLASS=X
/*JOBPARM  S=*
//ST1 EXEC PGM=SSA1PDBD,REGION=5000K,TIME=60
//STEPLIB  DD DSN=&PREFIX.CPPR.Vnnn.LOADLIB,DISP=SHR
//SYSNAP   DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//INDEX    DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.INDEX.xxxx
```

```
//ONLINE   DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.ONLINE.xxxx
//CPPRERT  DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.CPPRERT
//CIMSPASS DD DISP=SHR,DSN=&PREFIX.CPPR.V530.CNTL(CIMSNUM)
//SYSPRINT DD SYSOUT=*
//SYSMSGS  DD SYSOUT=*
//SYSIN    DD *
*  THE FOLLOWING CARD LIMITS THE SCOPE OF THE DELETE TO THE
*  SYSTEM ON WHICH THIS JOB IS EXECUTED.
SELECTED SYSTEM=*
*  THE FOLLOWING CARD LIMITS THE CAUSES THE DELETION OF THE
*  DSNAME TABLE (01).
FILTER=01
*  THE FOLLOWING CARDS LIMIT THE DELETION TO THE 23RD OF
*  JANUARY.
BEGIN DATE=01/23/97
END DATE=01/23/97
```

Deleting Elements from a Table

In order to enhance the flexibility of this utility, several changes have been made which allow you to delete selected elements from a specific table. The example used here is for Table 036 (the Expanded DASD Statistics Table), although the approach applies equally to any keyed table.

The table number is still identified through the FILTER keyword, as are the date range and the SMF SID(s). If an INCLUDE or EXCLUDE DD Statement is present, this signals the presence of an element list to be either included or excluded.

The INCLUDE/EXCLUDE facility presumes a key of 8 bytes comprised entirely of alphanumeric characters, and the comparison argument always begins with the leftmost character of the key. An enhancement to the INCLUDE/EXCLUDE facility allows you to designate the position within the key field at which the comparison begins, the length of the comparison and whether the comparison result is equal, less than, greater than, and so forth. Plus the argument may be provided in hex (X' ') format.

The specification of the enhanced format of an entry in the INCLUDE/EXCLUDE list is as follows:

- The first non-blank character in the entry is a '+'
- The next character string is a numeric value representing the offset from the beginning of the key field where the comparison is to begin
- The next character is a left parenthesis '('
- The next character string is the length of the comparison
- The next character is a right parenthesis ')'

- The next character is a comparator (=,<,>). Up to 3 comparators may be specified. That is, if you wanted a "less than or equal" comparison, you would specify '=<' or '<='
- The next character string is the value to be compared to. If the value is a hexadecimal value, it must be preceded by "X'" and followed by a "'"

Thus, if you wanted to delete all elements from Table 036 for IPO1 during 2/26-2/27 whose device addresses ranged from 5300 to 53FF, you could do so in the following way:

```
//STEP  EXEC  PGM=SSA1PDBD
//**********************
//SYSIN DD *
FILTER=036
SELECTED SYSTEM=IPO1
BEGIN DATE=02/26/2002
END DATE=02/27/2002
//EXCLUDE DD *
  +00(01)=X'53'
```

Indexing an Integrated PDB (SSA1INDX)

The Performance Database is a large BSAM repository for the tables used by the CIMS Capacity Planner system. During the data reduction process the entire PDB is spooled out to the SYSUT3 file prior to updating. Updates are applied to the SYSUT3 file and, at the successful conclusion of the update procedure, the SYSUT3 file is committed back to the ONLINE file. While this provides a measure of integrity with respect to the ONLINE file, the approach has some implications that must be taken into consideration. The first is that updates to the PDB must be serialized. That is, only a single task applies updates to the PDB at any given time. Otherwise, the updates applied by one task would not be reflected in the SYSUT3 file of the others and so forth.

The second consideration is that the entire PDB is spooled to the SYSUT3 file, regardless of the table types being processed. In the case of a very large PDB, this might prove somewhat inefficient as tables that are not involved in a specific update might be spooled out and back unnecessarily.

An installation that has several subsystems and/or several SIDs for which data is being gathered might choose to maintain several individual PDBs, one for each related set of tables. This approach effectively subdivides the PDB into PDB Pools. One advantage to this approach is that several Data Reduction tasks can be executing concurrently, each updating a discrete PDB without interfering with the others. The second advantage is that the size of the ONLINE file spooled to the SYSUT3 file in each case is smaller and the process is consequently more efficient.

In order to process reports efficiently, however, it is useful to gather the PDB Pools back into an Integrated PDB at the conclusion of the data reduction processing. This is done simply by using an IEBGENER Job, concatenating all the PDB Pools in SYSUT1 and specifying the Integrated repository as SYSUT2. In this case, a second step is required that builds the index to the Integrated PDB in order to streamline processing.

The PDB Index program (SSA1INDX) is used for this purpose. The SSA1INDX program scans any PDB and builds an index file for that PDB. Alternatively, you might want to reload archived detail tables (see below) and concatenate them with a set of other tables. The resultant PDB should also be indexed. Although the Index file is an optional adjunct to the PDB, if it is absent, the index to the PDB is built dynamically by the reporting programs and the process can be very time consuming.

Parameters

No parameters are required to execute this program.

JCL

Use the following JCL as a model for constructing a JOB to execute SSA1INDX. This JCL is found in machine readable form in member DUTLINDX in the `&PREFIX.CPPR.Vnnn.CNTL` library.

```
//DUTLINDX JOB (...),'SSA',CLASS=A,MSGCLASS=X
/*JOBPARM  S=*
//ST1 EXEC PGM=SSA1INDX
//STEPLIB  DD DSN=&PREFIX.CPPR.Vnnn.LOADLIB,DISP=SHR
//ONLINE   DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.ONLINE.xxxx
//CPPRERT  DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.CPPRERT
//CIMSPASS DD DISP=SHR,DSN=&PREFIX.CPPR.V530.CNTL(CIMSNUM)
//INDEX    DD DSN=&PREFIX.CPPR.Vnnn.INDEX.xxxx,
//            DISP=(,CATLG),UNIT=SYSDA,SPACE=(TRK,(1,1))
//SYSPRINT DD SYSOUT=*
//SYSMSGS  DD SYSOUT=*
//SYSNAP   DD SYSOUT=*
```

Building Summary Tables (SSA1SUMM)

The process of reducing raw data into the PDB results in the creation of detail tables that are then used to produce reports and graphs. These detail tables can be further reduced into summary tables. There are several advantages to maintaining summary tables:

- Many trends analysis processes dynamically summarize the detail tables for reporting purposes. Having summary tables readily available streamlines this process.
- Summary tables require remarkably little space in the PDB. They are therefore retained in the PDB even after the detail tables from which they were constructed have been sent to the archived history file.
- Summary tables are maintained in average hourly buckets by week. This allows you to re-specify PRIME SHIFT delineations even after the detail tables have been archived.

The PDB Summary program (SSA1SUMM) produces these summary tables. If you maintain separate PDB Pools, each PDB Pool must be individually summarized. The summary program only creates summary tables for periods that have not already been summarized. Therefore no date specification is necessary in order to delimit the period being summarized. Furthermore, the summary program processes all possible detail table types. You need not specify the table types for which summarization is to take place.

The SSA1SUMM program should be run weekly or monthly for optimum efficiency. If you want to produce graphs that provide monthly statistics, monthly summary tables provide more accurate data than weekly summary tables provide. For more information about monthly summary tables, see **Using Monthly Summary Tables,** on page 2-14.

If you want to produce weekly and monthly summary tables, you need to run the SSA1SUMM program separately for each table type.

Parameters

If you want to produce a weekly summary table, no parameters are required. If you want to produce a monthly summary table, you need to include the following parameter in SYSIN:

SUMMARIZATION PERIOD=MONTHLY

The optional //INCLUDE DD and //EXCLUDE DD statements are supported to either exclude certain elements of data or to limit the elements to a selected set specified by the exclude list.

JCL

Use the following JCL as a model for constructing a JOB to execute SSA1SUMM. This JCL is found in machine readable form in member DUTLSUMM in the &PREFIX.CPPR.Vnnn.CNTL library.

```
//DUTLSUMM JOB (...),'SSA',CLASS=A,MSGCLASS=X
/*JOBPARM  S=*
//ST1 EXEC PGM=SSA1SUMM,REGION=5000K,TIME=60
//STEPLIB  DD DSN=&PREFIX.CPPR.Vnnn.LOADLIB,DISP=SHR
//SYSNAP   DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//INDEX    DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.INDEX.xxxx
//ONLINE   DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.ONLINE.xxxx
//CPPRERT  DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.CPPRERT
//CPPRPARM DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.PARMLIB
//CIMSPASS DD DISP=SHR,DSN=&PREFIX.CPPR.V530.CNTL(CIMSNUM)
//SYSUT3   DD SPACE=(CYL,(30,8)),UNIT=SYSDA,DISP=(,PASS)
//SYSPRINT DD SYSOUT=*
//SYSMSGS  DD SYSOUT=*
//SYSIN    DD *
*          IF YOU WISH TO CREATE MONTHLY SUMMARY TABLES INSTEAD OF
*           WEEKLY SUMMARY TABLES, UNCOMMENT THE FOLLOWING:
*  SUMMARIZATION PERIOD=MONTHLY
```

Using Monthly Summary Tables

Monthly summary tables are available for the WKLD, the CICS, and DB2 PDBs. DASD and tape device statistics are included in the WKLD Monthly Summary Table.

The graph programs that access these PDBs recognize monthly summary tables and use them in place of weekly or detail tables. These graph programs are:

- SSA1TGRF (Workload Graphs)
- SSA1TGRU (PRSM Graphs)
- SSA1TGRX (Storage Graphs)
- SSA1TAUG (Tape Unit Graphs)
- SSA1CICG (CICS Region Graphs)
- SSA1CICA (CICS Multi-Region Graphs)
- SSA1DB2H (DB2 Connect Name Graphs)

Archiving Aged Online Records (SSA1ARC)

In time, the PDB will become full if nothing is done to off load the data to an archive file. A parameter is available in the Local Option Tailoring Module (SSA1510) that tells the archive program how many weeks worth of online data to save in the PDB. The distributed default is set to 4 (retain 4 weeks worth of information in the PDB following an Archival operation). This parameter is changed in one of the following ways:

- By adding the WEEKS TO KEEP ONLINE= parameter to the GLOBAL member of the CPPR PARMLIB
- By including the WEEKS TO KEEP ONLINE= parameter to the SYSIN stream

The archive program should be run once per month, to ensure that Data Gathering is optimized, and to prevent the PDB from becoming full. If you maintain multiple PDB Pools, each individual PDB Pool must be archived.

The history file of detail records is a BSAM flat file. After the initial creation of the History file, it should be treated as a "DISP=MOD" file so that subsequent archive operations add to the end of the file. The history file can be associated with a single PDB Pool, or it might consist of a collection of all PDB Pools. You can further choose to maintain the History files on a yearly basis in order to optimize the process of reloading the detail tables from a specific chronological period.

To reload the History archives

1. Use SSA1LOAD to load the file back to DASD as a historical PDB. **Don't use the real PDB as the repository, as this will contaminate the current PDB.**
2. Treat the resultant historical PDB as you would any other PDB for reporting purposes. **Bear in mind that the history file has no summary tables.** This might elongate reporting tasks. You might want to summarize the resultant historical PDB if many reporting tasks are to be executed.
3. Delete the historical PDB from DASD when you have finished.

Parameters

No parameters are required to execute this program.

JCL

Use the following JCL as a model for constructing a JOB to execute SSA1ARC. This JCL is found in machine readable form in member DUTLARCH in the &PREFIX.CPPR.Vnnn.CNTL library.

```
//DUTLARCH JOB (...),'SSA',CLASS=A,MSGCLASS=X
/*JOBPARM  S=*
//ST1 EXEC PGM=SSA1ARC,REGION=5000K,TIME=60
//STEPLIB  DD DSN=&PREFIX.CPPR.Vnnn.LOADLIB,DISP=SHR
//SYSNAP   DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//INDEX    DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.INDEX.xxxx
//ONLINE   DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.ONLINE.xxxx
//CPPRPARM DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.PARMLIB
//CIMSPASS DD DISP=SHR,DSN=&PREFIX.CPPR.V530.CNTL(CIMSNUM)
//HISTORY  DD DUMMY
//*HISTORY DD DSN=&PREFIX.CPPR.Vnnn.HISTORY,DISP=MOD
//SYSUT3   DD SPACE=(CYL,(30,8)),UNIT=SYSDA,DISP=(,PASS)
//SYSPRINT DD SYSOUT=*
//SYSMSGS  DD SYSOUT=*
//SYSIN    DD DUMMY
```

Load a Performance Data Base (SSA1LOAD)

The SSA1LOAD program is used to load a composite data base from a set of PDB Pools or from History.

Parameters

A number of User-specified parameters control the operation of the SSA1LOAD program.

_ BEGIN DATE and END DATE

The BEGIN DATE= and END DATE= parameters restrict the range of tables considered for loading into the specified composite data base.

_ SELECTED SYSTEM

The SELECTED SYSTEM= Parameter limits the SIDs selected for loading into the composite data base as follows:

- If no SMF SID is specified, the parameter defaults to SELECTED SYSTEM=* (the SID for the system running the SSA1LOAD program).
- If a single SMF SID is specified, only that SID will be selected. The exception is a value of ####, which specifies that all SIDs will be selected.
- If more than one SMF SID is specified (maximum of five), all SIDs will be selected. Multiple SIDs must be separated by commas (e.g., SELECTED SYSTEM= IPO1,IPO2,IPO3).

_ CICSNAME, IDMSNAME,....

Selection of tables for selected APPLIDs for CICS, IDMS, etc., can be limited by specifying CICSNAME=, IDMSNAME=, and so forth.

_ SELECTED TABLES

The types of tables selected for inclusion into the composite data base can be limited to specific tables by specifying the tables to be included through the use of the SELECTED TABLES= parameter. The numbers of the tables to be included in the selection are specified using the SELECTED TABLES= parameter. In the event that multiple table types are to be included, the table types must be separated by commas.

JCL

Use the following JCL as a model for constructing a JOB to execute SSA1LOAD. This JCL is found in machine readable form in member DUTLLOAD in the `&PREFIX.CPPR.Vnnn.CNTL` library.

```
//DUTLLOAD JOB (...),'SSA',CLASS=A,MSGCLASS=X
/*JOBPARM  S=*
//*  THIS JOB LOADS A PDB SELECTIVELY FROM THE PDB POOL
//*   OR HISTORY DATA SET(S) SPECIFIED BY SYSUT1
```

```
//*  SYSUT1, A BSAM FILE, MAY REPRESENT SEVERAL PDB POOLS OR
//*   A HISTORY FILE WHICH HAS BEEN ARCHIVED, OR EVEN AN
//*   IEBGENER COPY OF ONE OR MORE ONLINE FILES.
//ST1 EXEC PGM=SSA1LOAD,REGION=5000K,TIME=60
//STEPLIB  DD DSN=&PREFIX.CPPR.Vnnn.LOADLIB,DISP=SHR
//SYSNAP   DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//SYSUT1   DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.ONLINE.WKLD
//         DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.ONLINE.CICS
//         DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.ONLINE.NETWORK
//ONLINE   DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.ONLINE.OVERALL
//CPPRERT  DD DISP=SHR,DISP=&PREFIX.CPPR.Vnnn.CPPRERT
//CIMSPASS DD DISP=SHR,DSN=&PREFIX.CPPR.V530.CNTL(CIMSNUM)
//INDEX    DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.INDEX.OVERALL
//SYSPRINT DD SYSOUT=*
//SYSMSGS  DD SYSOUT=*
//SYSIN    DD DUMMY
SELECTED SYSTEM=*
BEGIN DATE=02/04/97
END DATE=02/09/97
*  IF NO "SELECTED TABLES=" STATEMENTS ARE PRESENT, THEN ALL
*   TABLES ARE LOADED PROVIDING THE OTHER SELECTION CRITERIA
*    ARE MET.
*  NOTE THAT MULTIPLE SELECTED TABLES STATEMENTS ARE
*   PERMITTED
*  A SINGLE "SELECTED TABLES" STATEMENT MAY CONTAIN AS MANY
*   AS 16 ENTRIES
*  THE FOLLOWING TWO STATEMENTS SELECT WORKLOAD TABLES
SELECTED TABLES=1,3,4,5,6,7,8,9,10,11,12,13,14,15
SELECTED TABLES=40,41,42,65,103,118,240,248
THE FOLLOWING STATEMENT SELECTS DASM TABLES
SELECTED SYSTEM=2,32,33,34,35,241
*  THE FOLLOWING STATEMENT SELECTS CICS TABLES
SELECTED SYSTEM=16,17,18,19,20,242
*  THE FOLLOWING STATEMENT SELECTS NETWORK TABLES
SELECTED SYSTEM=48,49,50,51,58,245,246,247
*  THE FOLLOWING STATEMENT SELECTS IMS TABLES
SELECTED SYSTEM=22,23,24,25,26,27,28,29,243
```

```
*  THE FOLLOWING STATEMENT SELECTS DB2 TABLES
SELECTED SYSTEM=176,177,178,179,180,181,182,183,249,250
*  THE FOLLOWING STATEMENT SELECTS MODEL 204 TABLES
SELECTED SYSTEM=37,38,239
```

List CPPRERT File (SSA1DCFP)

This program lists the contents of the CPPRERT file. The entire file can be listed or the listing can be restricted to specified SIDs.

Parameters

SELECTED SYSTEM

The SELECTED SYSTEM= parameter is the only parameter supported by the SSA1DCFP utility. Multiple SIDs are specified by separating them with commas.

JCL

Use the following JCL as a model for constructing a JOB to execute SSA1DCFP. This JCL is found in machine readable form in member DUTLDCFP in the `&PREFIX.CPPR.Vnnn.CNTL` library.

```
//DUTLDCFP JOB (...),'SSA',CLASS=A,MSGCLASS=X
/*JOBPARM  S=*
//ST1 EXEC PGM=SSA1DCFP,REGION=4096K,TIME=60
//STEPLIB  DD DSN=&PREFIX.CPPR.Vnnn.LOADLIB,DISP=SHR
//CPPRERT  DD DISP=SHR,DISP=&PREFIX.CPPR.Vnnn.CPPRERT
//CIMSPASS DD DISP=SHR,DSN=&PREFIX.CPPR.V530.CNTL(CIMSNUM)
//SYSPRINT DD SYSOUT=*
//SYSMSGS  DD SYSOUT=*
//SYSNAP   DD SYSOUT=*
//SYSIN    DD DUMMY
SELECTED SYSTEM=*,IPO2,IPO3
```

List Data Base Statistics (SSA1TDBS)

This utility produces a listing of the statistics for all the tables in a specified Performance Data Base. The types of statistics that are reported are the tables, subsystems, beginning and ending dates, the number of bytes consumed, and, if requested, the degree of compression.

Parameters

FORCE DETAIL TABLE PROCESSING

The parameter FORCE DETAIL TABLE PROCESSING=YES will cause the table compression statistics to be printed.

JCL

The following JCL is used as a model for constructing a JOB to execute SSA1TDBS. This JCL is found in machine readable form in member DUTLTDBS in the &PREFIX.CPPR.Vnnn.CNTL library.

```
//DUTLTDBS JOB (...),'SSA',CLASS=A,MSGCLASS=X
/*JOBPARM  S=*
//ST1 EXEC PGM=SSA1TDBS,REGION=5000K,TIME=60
//STEPLIB  DD DSN=&PREFIX.CPPR.Vnnn.LOADLIB,DISP=SHR
//SYSNAP   DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//INDEX    DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.INDEX.xxxx
//ONLINE   DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.ONLINE.xxxx
//CPPRERT  DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.CPPRERT
//CIMSPASS DD DISP=SHR,DSN=&PREFIX.CPPR.V530.CNTL(CIMSNUM)
//SYSPRINT DD SYSOUT=*
//SYSMSGS  DD SYSOUT=*
//SYSIN    DD *
SELECTED SYSTEM=*  /* ONLY ONE SID AT A TIME MAY BE PROC.
*  THE FOLLOWING STATEMENT CAUSES THE COMPRESSION STATISTICS
*  TO BE GATHERED AND DISPLAYED FOR ALL TABLES IN THE ONLINE
*  FILE.
FORCE DETAIL TABLE PROCESSING=YES
```

Extracting Data from the Performance Data Base (SSA1TBLX)

There might be occasions when it becomes necessary to extract data from the Integrated Performance Data Base in order to construct reports that are not provided by the CIMS Capacity Planner system. The Table Extract program is provided for this purpose.

Specify the selection criteria such as the beginning and ending dates and times, the SIDs, and the region names, etc. through the SYSIN statement. This allows you to focus the extraction efforts on a date/time range for a given SID.

Element level selection capability is available for selected tables. The elements selected for inclusion or exclusion are specified through the use of the INCLUDE/EXCLUDE DD statements. This allows you to select a subset of the elements within a given table.

Table and Field selection criteria are provided through the TBLXIN DD statement. The format of the input is as follows:

- TnnnSnnnFnnn, where Tnnn specifies the Table number as listed above, Snnn specifies the Suffix for that table (in the case of qualified tables, such as CICS or VTAM) and Fnnn specifies the field to be extracted.

If the Snnn is not specified (TnnnFnnn) the extract program presumes either no suffix or suffix 000. If the Fnnn is not specified (Tnnn or TnnnSnnn) the extract program presumes that all fields in the table are to be extracted. Multiple extraction requests are specified on a single statement, separated by commas. If several field requests are specified for the same table, and the requests are contiguous (T010F002,T010F001,T010F003) the output record that results are a single record with the cell values arranged in the order of input (Header followed by value2, value1, value3).

For example, if you wanted to extract CPU Activity data from the CPU Activity Table for CPU(0) or for a U/P processor, you could specify the following in the TBLXIN file:

```
T003F001
```

or

```
T003S000F001
```

The SSA1TBLX program writes the extracted data to the SYSUT2 file. The format of the output record consists of a header and one or more value fields, depending on the Field selection criteria. The format of the output record for all tables except the DSNAME Table is shown below.

- A four byte VLR Green Word (LLbb)
- A four character SMF SID
- A five character Julian Date (YYDDD)
- A four character time field (HHMM)
- A one byte filler field (blank)
- A three character table number (NNN)

- A three character table suffix (NNN)
- An eight character element name field
- One or more four byte values in hexadecimal depending on the specific fields that were selected, in the order in which they were specified

The format of the output record for the DSNAME Table is shown below.

- A four byte VLR Green Word (LLbb)
- A four character SMF SID
- A five character Julian Date (YYDDD)
- A four character time field (HHMM)
- A one byte filler field (blank)
- A three character table number (NNN)
- A three character table suffix (NNN)
- An eight character element name field (VOLSER + 2 blanks)
- A forty four character dataset name field, left justified and padded with blanks
- One four byte value representing the EXCP Count

Parameters

No parameters are required to execute this program. All parameters are optional.

Data Extraction

Elements that are extracted from various tables in the Integrated PDB are listed in the following sections.

Extracting Data From Monthly Summary Tables

Because the Monthly Summary Tables are complex, they are divided into segments. To specify the segment that you want to extract data from, specify the segment in the SYSIN parameter SEGMENT NUMBER=n.

The default value for this parameter, 1, is required for the CICS and DB2 Monthly Summary Tables. Because the default value is 1, you can remove this parameter statement entirely for these table types.

A value of 1 to 4 is required for the WKLD Monthly Summary Table.

The following sections show the segments, fields, and corresponding metrics in the WKLD, CICS, and DB2 Monthly Summary Tables, respectively.

All metrics are stored in the tables in hourly buckets. Each hourly bucket represents the daily average value for that hour for that metric. In addition, the values represent either weekday or all day averages depending on whether you specify the parameter SELECTED DAYS=WEEKDAYS or SELECTED DAYS=ALL DAYS in SYSIN. You must include one of these parameters.

WKLD Monthly Summary Table (224)

Extract the following elements from the table:

SEGMENT	FIELD	METRIC	DESCRIPTION
001	001	O0CPUTOT	Total CPU % Busy
001	002	O0CPUTSO	TSO Category CPU % Busy
001	003	O0CPUIMS	IMS Category CPU % Busy
001	004	O0CPUNET	Network Category CPU % Busy
001	005	O0CPUONL	Online Category CPU % Busy
001	006	O0CPUOPS	Overhead CPU % Busy
001	007	O0PAGTOT	Total Pages Per Second
001	008	O0PAGTSO	TSO Category Pages Per Second
001	009	O0PAGIMS	IMS Category Pages Per Second
001	010	O0PAGNET	Network Category Pages Per Second
001	011	O0PAGONL	Online Category Pages Per Second
001	012	O0TSORSP	TSO Response Time .xx Seconds
001	013	O0TSOLOG	TSO Sessions
001	014	O0TSOXCT	TSO Transactions
001	015	O0JOBTOT	Total Batch Jobs Processed

SEGMENT	FIELD	METRIC	DESCRIPTION
001	016	O0JOBRSP	Average Job Batch Turnaround
001	017	O0JOBCL1	Total Batch Jobs Category 1
001	018	O0JOBCL2	Total Batch Jobs Category 2
001	019	O0JOBCL3	Total Batch Jobs Category 3
001	020	O0JOBCL4	Total Batch Jobs Category 4
001	021	O0JOBCL5	Total Batch Jobs Category 5
001	022	O0JOBCL6	Total Batch Jobs Category 6
001	023	O0JOBRS1	Avg. Job Turnaround Category 1
001	024	O0JOBRS2	Avg. Job Turnaround Category 2
001	025	O0JOBRS3	Avg. Job Turnaround Category 3
001	026	O0JOBRS4	Avg. Job Turnaround Category 4
001	027	O0JOBRS5	Avg. Job Turnaround Category 5
001	028	O0JOBRS6	Avg. Job Turnaround Category 6
001	029	O0CHABSY	Average Channel Busy
001	030	O0CPUSTC	CPU % Busy STC Category
002	001	O0DASBSY	Average DASD % Busy
002	002	O0DASQDL	Avg. Queue Delay Time in .xx Milliseconds
002	003	O0DASSVC	Avg. I/O Service Time in .xx Milliseconds
002	004	O0DASSTR	Average SIO/SSCH
002	005	O0DASSSC	Total SIO/SSCH
002	006	O0DASCNN	Avg. Connect Time in .xx Milliseconds
002	007	O0DASPEN	Avg. Pending Time in .xx Milliseconds
002	008	O0DASATV	Avg. Active Time in .xx Milliseconds
002	009	O0DASDIS	Avg. Disconnect Time in .xx Milliseconds
002	010	O0DASQUE	Avg. Queue Delay Time in .xx Milliseconds

SEGMENT	FIELD	METRIC	DESCRIPTION
003	001	O0TAPSSC	Total SSCH/EXCP Count
003	002	O0TAPMNT	Total Mounts
003	003	O0TAPERR	Total Errors
003	004	O0TAPALO	Avg. % Allocated
003	005	O0TAPACT	Avg. % Active
003	006	O0TAPMTP	Avg. % Mount Pending
003	007	O0TAPDAL	Average Devices Allocated Concurrently
003	008	O0TAPDVC	Maximum Devices Encountered
004	N/A	PRSM	Metrics Not Accessible

CICS Monthly Summary Table (225)

Extract the following elements from the table:

SEGMENT	FIELD	METRIC	DESCRIPTION
Unfiltered Values (Disregarding INCLUDE/EXCLUDE Statements)			
001	001	O1XACTNU	Total CICS Transactions
001	002	O1TERMSU	Total Terminals Active
001	003	O1EXCPSU	Total FCT Calls
001	004	O1XWAITU	Avg. Transaction Wait Time in .xx Seconds
001	005	O1XCPUTU	Avg. Transaction CPU Time in .xx Seconds
001	006	O1XRSPTU	Avg. Terminal Response Time in .xx Seconds
001	007	O1XRESPU	Avg. Transaction Response Time in .xx Seconds
001	008	O1XCPUXU	Total Transaction CPU Time in .xx Seconds
001	009	O1SCPUTU	Total Region CPU Time in .xx Seconds
001	010	O1XCNTTU	Transactions Per Hour

SEGMENT	FIELD	METRIC	DESCRIPTION
001	011	O1TRMX#U	Terminal Transactions Per Hour
Filtered Values (Considering INCLUDE/EXCLUDE Statements)			
001	012	O1XACTNF	Total CICS Transactions
001	013	O1TERMSF	Total Terminals Active
001	014	O1EXCPSF	Total FCT Calls
001	015	O1XWAITF	Avg. Transaction Wait Time in .xx Seconds
001	016	O1XCPUTF	Avg. Transaction CPU Time in .xx Seconds
001	017	O1XRSPTF	Avg. Terminal Response Time in .xx Seconds
001	018	O1XRESPF	Avg. Transaction Response Time in .xx Seconds
001	019	O1XCPUXF	Total Transaction CPU Time in .xx Seconds
001	020	O1SCPUTF	Total Region CPU Time in .xx Seconds
001	021	O1XCNTTF	Transactions Per Hour
001	022	O1TRMX#F	Terminal Transactions Per Hour

DB2 Monthly Summary Table (226)

Extract the following elements from the table:

SEGMENT	FIELD	METRIC	DESCRIPTION
Unfiltered Values (Disregarding INCLUDE/EXCLUDE Statements)			
001	001	O2THRDSU	Total DB2 Threads
001	002	O2COMITU	Total DB2 Commits
001	003	O2SQLCIU	Total SQL Inserts
001	004	O2SQLCSU	Total SQL Selects
001	005	O2SQLCUU	Total SQL Updates
001	006	O2SQLCDU	Total SQL Deletes
001	007	O2SQLCFU	Total SQL Fetches
001	008	O2SQLCOU	Total SQL Other
001	009	O2TRANSU	Avg. Transit Time Per Thread in .xx Seconds
001	010	O2CPUTMU	DB2 CPU Time in .xx Seconds
Filtered Values (Considering INCLUDE/EXCLUDE Statements)			
001	011	OSTHRDSF	Total DB2 Threads
001	012	O2COMITF	Total DB2 Commits
001	013	O2SQLCIF	Total SQL Inserts
001	014	O2SQLCSF	Total SQL Selects
001	015	O2SQLCUF	Total SQL Updates
001	016	O2SQLCDF	Total SQL Deletes
001	017	O2SQLCFF	Total SQL Fetches
001	018	O2SQLCOF	Total SQL Other
001	019	O2TRANSF	Avg. Transit Time Per Thread in .xx Seconds
001	020	O2CPUTMF	DB2 CPU Time in .xx Seconds

Extracting Data from Table001

TABLE001 is the DASD Device Activity Table.

The Suffix field is zeroes or can be omitted.

INCLUDE/EXCLUDE filtering statements pertain to the device volume serial number.

Extract the following elements from the table:

```
T001S000F001 003  SSCH Count
T001S000F002 001  Number Of Percents
T001S000F003 001  Average Percent Busy
T001S000F004 001  Average Queue Length
```

Extracting Data from Table002

TABLE002 is the DSNAME Activity Table.

The suffix field is zeroes or can be omitted.

INCLUDE/EXCLUDE filtering statements pertain to the device volume serial number and can be further limited by specifying DSNAME in the SYSIN file.

Extract the following elements from the table:

```
T002S000F001 004  EXCP Count For The Day
```

Extracting Data from Table003

TABLE003 is the CPU Activity Table.

The suffix number is the M/P engine number or blank (for a U/P).

INCLUDE/EXCLUDE filtering is not used.

Extract the following element from the table:

```
T003SnnnF001 004  .XX Seconds Busy During 15 Minute Period
```

Extracting Data from Table004

TABLE004 is the Paging Activity Table.

The Suffix field is zeroes or can be omitted.

INCLUDE/EXCLUDE filtering is not used.

Extract the following element from the table:

```
T004S000F001 004  Pages During 15 Minute Period
```

Extracting Data from Table005

TABLE005 is specified for the TSO Activity Table.

The Suffix field is zeroes or can be omitted.

INCLUDE/EXCLUDE filtering is not used.

Extract the following element from the table:

```
T005S000F001 004  Number Of Users Active During 15 Minute Period
```

Extracting Data from Table006

TABLE006 is the ESA Storage Table.

The Suffix field is zeroes or can be omitted.

INCLUDE/EXCLUDE filtering is not used.

Extract the following elements from the table:

```
T006S000F001 004      HIPER (ES=>CS)
T006S000F002 004      HIPER (CS=>ES)
T006S000F003 004      HIPER (ES=>AUX)
T006S000F004 004      VIO (ES=>CS)
T006S000F005 004      VIO (CS=>ES)
T006S000F006 004      VIO (ES=>AUX)
T006S000F007 004      Private (ES=>CS)
T006S000F008 004      Private (CS=>ES)
T006S000F009 004      Private (ES=>AUX)
T006S000F010 004      Page-Ins (AUX=>CS)
T006S000F011 004      Page-Outs (CS=>AUX)
```

Extracting Data from Table007

TABLE007 is the Printer Statistics Table

The Suffix field is zeroes or can be omitted

The pertains to the JES Printer name

Extract the following elements from the table:

```
T007S000F001 004      Number Of Lines
T007S000F002 004      Number Of Pages
T007S000F003 004      Number Of Datasets
```

Extracting Data from Table008

TABLE008 is specified for the Ratio Table.

The Suffix field is zeroes or can be omitted.

INCLUDE/EXCLUDE filtering is not used.

Extract the following elements from the table:

```
T008S000F001 004      CPU Cell Category 1
T008S000F002 004      CPU Cell Category 2
T008S000F003 004      CPU Cell Category 3
T008S000F004 004      CPU Cell Category 4
T008S000F005 004      CPU Cell Category 5
T008S000F006 004      CPU Cell Category 6
T008S000F007 004      Paging Cell Category 1
T008S000F008 004      Paging Cell Category 2
T008S000F009 004      Paging Cell Category 3
T008S000F010 004      Paging Cell Category 4
T008S000F011 004      Paging Cell Category 5
T008S000F012 004      Paging Cell Category 6
```

Extracting Data from Table009

TABLE009 is the Workload Scratch Pad Table.

The Suffix field is zeroes or can be omitted.

INCLUDE/EXCLUDE filtering is not used.

Extract the following elements from the table:

```
T009S000F001 001      Tape Indicator Flag
T009S000F002 003      Largest Region
T009S000F003 004      Cumulative Cpu Time
T009S000F004 004      Cumulative EXCP Count
T009S000F005 004      Time Stamp
T009S000F006 004      Date Stamp
T009S000F007 001      Subtype (Interval)
```

Extracting Data from Table010

TABLE010 is the Channel Activity Table.

The Suffix field is zeroes or can be omitted.

INCLUDE/EXCLUDE filtering is not used.

Extract the following elements from the table:

```
T010S000F001 004      Channel Sample Count
T010S000F002 004      Channel Sample Busy
```

Extracting Data from Table011

TABLE011 is the Job Statistics Table.

The suffix is zeroes or can be omitted.

INCLUDE/EXCLUDE Filtering statements pertain to the JOB name.

Extract the following elements from the table:

```
T011S000F001 004      Elapsed Time
T011S000F002 004      Frequency
T011S000F003 004      CPU Time
FIELD001 DS    XL4      JOB elapsed time
FIELD002 DS    XL4      JOB CPU time
FIELD003 DS    XL4      JOB frequency
```

Extracting Data from Table012

TABLE012 is the Program Statistics Table.

The suffix is zeroes or can be omitted.

INCLUDE/EXCLUDE Filtering statements pertain to the Program name.

Extract the following elements from the table:

```
T012S000F001 004      Elapsed Time
T012S000F002 004      Frequency
T012S000F003 004      CPU Time
FIELD001 DS    XL4      Program Elapsed Time
FIELD002 DS    XL4      Program CPU Time
FIELD003 DS    XL4      Program Frequency
```

Extracting Data from Table013

TABLE013 is the TSO USERID Statistics Table.

The Subsystem Name field is blank.

INCLUDE/EXCLUDE Filtering statements pertain to the TSO USERID.

Extract the following elements from the table:

```
T013S000F001 004      Elapsed Time
T013S000F002 004      Frequency
T013S000F003 004      Cpu Time
FIELD001 DS    XL4      User Elapsed Time
FIELD002 DS    XL4      User CPU Time
FIELD003 DS    XL4      User Commands Issued
```

Extracting Data from Table014

TABLE014 is the TSO Command Table.

The Suffix is zeroes or can be omitted.

INCLUDE/EXCLUDE Filtering statements pertain to the TSO command name.

Extract the following elements from the table:

```
T014S000F001 004      Elapsed Time
T014S000F002 004      Frequency
T014S000F003 004      Cpu Time
```

Extracting Data from Table015

TABLE015 is the CPU Registration Table.

The Suffix is zeroes or can be omitted.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
T015S000F001 002      CPU Model Number
T015S000F002 001      CPU Version Number
T015S000F003 003      CPU Serial Number
T015S000F004 004      CPU Service Unit Factor
```

Extracting Data from Table016

TABLE016 is the CICS Registration Table.

The Suffix is zeroes or can be omitted.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
T016S000F001 001      Suffix Number
T016S000F002 001      Flag
```

Extracting Data from Table017

TABLE017 is the CICS Transaction Table.

The Suffix is the number from the CPPRERT file for the CICS Region name.

INCLUDE/EXCLUDE Filtering statements pertain to the CICS Transaction name.

Extract the following elements from the table:

```
T017SnnnF001 003      Number Of Transactions
T017SnnnF002 003      Total Response Time
T017SnnnF003 003      CPU Time
T017SnnnF004 003      WAIT Time
T017SnnnF005 003      JARS System CPU Time
T017SnnnF006 003      Suspend Time
T017SnnnF007 003      Paging Activity
T017SnnnF008 003      High Water Mark In Storage
T017SnnnF009 003      FCT Calls
T017SnnnF010 003      Access Method Calls
T017SnnnF011 003      Transient Data Requests
T017SnnnF012 003      Temporary Storage Gets
T017SnnnF013 003      Temporary Storage Puts/Auxiliary
T017SnnnF014 003      Temporary Storage Puts/Main
T017SnnnF015 003      JCT Calls
```

Extracting Data from Table018

TABLE018 is the CICS Terminal Table.

The Suffix is the number from the CPPRERT file for the CICS Region name.

INCLUDE/EXCLUDE Filtering statements pertain to the CICS Terminal name.

Extract the following elements from the table:

```
T018SnnnF001 004      Transaction Count This Terminal
T018SnnnF002 004      Total Response This Period
```

Extracting Data from Table019

TABLE019 is the CICS Distributed Response Table.

The Suffix corresponds to the CICS Region.

INCLUDE/EXCLUDE Filtering statements pertain to the CICS Transaction name.

Extract the following elements from the table:

```
T019SnnnF001 004      Transactions Less Than Threshold # 1
T019SnnnF002 004      Transactions Less Than Threshold # 2
T019SnnnF003 004      Transactions Less Than Threshold # 3
T019SnnnF004 004      Transactions Less Than Threshold # 4
T019SnnnF005 004      Transactions Less Than Threshold # 5
T019SnnnF006 004      Transactions Less Than Threshold # 6
T019SnnnF007 004      Reserved
T019SnnnF008 004      Reserved
```

Extracting Data from Table020

TABLE020 is the IDMS Transaction Table.

The Suffix is the number from the CPPRERT file for the IDMS Region name.

INCLUDE/EXCLUDE Filtering statements pertain to the IDMS Transaction name.

Extract the following elements from the table:

```
T020SnnnF001 003      Number Of Transactions
T020SnnnF002 003      Total Response Time
T020SnnnF003 003      Task Mode CPU Time
T020SnnnF004 003      WAIT Time
T020SnnnF005 003      System Mode CPU Time
T020SnnnF006 003      Records Current Of Run Unit
T020SnnnF007 003      Paging Activity
T020SnnnF008 003      High Water Mark In Storage
T020SnnnF009 003      Record Requests
T020SnnnF010 003      I/O Requests
T020SnnnF011 003      Transient Data Requests
T020SnnnF012 003      Temporary Storage Gets
T020SnnnF013 003      Temporary Storage Puts/Auxiliary
T020SnnnF014 003      Terminal Reads
T020SnnnF015 003      Terminal Writes
```

Extracting Data from Table021

TABLE021 is the IDMS Terminal Table.

The Suffix is the number from the CPPRERT file for the IDMS Region name.

INCLUDE/EXCLUDE Filtering statements pertain to the IDMS Terminal name.

Extract the following elements from the table:

```
T021SnnnF001 004      Transaction Count This Terminal
T021SnnnF002 004      Total Response This Period
```

Extracting Data from Table022

TABLE022 is the IMS Module Name Table.

The Suffix is the number from the CPPRERT file for the IMS Region name.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
T022SnnnF001 001      Flag
```

Extracting Data from Table023

TABLE023 is the IMS Transaction Table.

The Suffix is the number from the CPPRERT file for the IMS Region name.

INCLUDE/EXCLUDE Filtering statements pertain to the IMS Transaction name.

Extract the following elements from the table:

```
T023SnnnF001 003      Number Of Transactions
T023SnnnF002 004      Earliest Transaction Entry Time This Period
T023SnnnF003 004      Average Entry Time
T023SnnnF004 003      Number Of Responses
T023SnnnF005 004      Average Response Time .00 Seconds
T023SnnnF006 004      Cumulative CPU Time
T023SnnnF007 003      Database Calls: GU
T023SnnnF008 003                              GN
T023SnnnF009 003                              GNP
T023SnnnF010 003                              GHU
T023SnnnF011 003                              GHN
T023SnnnF012 003                              GHNP
T023SnnnF013 003      Records: ADDED
T023SnnnF014 003                      DELETED
T023SnnnF015 003                      REPLACED
```

Extracting Data from Table024

TABLE024 is the IMS Terminal Activity Table.

The Suffix is the number from the CPPRERT file for the IMS Region name.

INCLUDE/EXCLUDE Filtering statements pertain to the IMS Terminal name.

Extract the following elements from the table:

```
T024SnnnF001 003      Connect Time
T024SnnnF002 002      Transaction Count
```

Extracting Data from Table025

TABLE025 is the IMS CPU/EXCP/Paging Table.

The Suffix is the number from the CPPRERT file for the IMS Region name.

INCLUDE/EXCLUDE Filtering statements pertain to the IMS Region/Step name.

Extract the following elements from the table:

```
T025SnnnF001 003       CPU Time
T025SnnnF002 003       Page Requests
T025SnnnF003 003       EXCP Count
```

Extracting Data from Table026

TABLE026 is an IMS Log Checkpoint Table.

Data Extraction is not supported, as this is an internal table.

Extracting Data from Table027

TABLE027 is an IMS User Checkpoint Table.

Data Extraction is not supported, as this is an internal table.

Extracting Data from Table028

TABLE028 is an IMS Log Checkpoint Miscellaneous Table.

Data Extraction is not supported, as this is an internal table.

Extracting Data from Table029

TABLE029 is the IMS I/O Activity Table.

The Suffix is the number from the CPPRERT file for the IMS Region name.

INCLUDE/EXCLUDE Filtering statements pertain to the DD name.

Extract the following element from the table:

```
T029SnnnF001 004       EXCP Count
```

Extracting Data from Table030

TABLE030 is the IMS Registration Table.

The Suffix is zeroes or can be omitted.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
T030S000F001 001      Binary Index
T030S000F002 001      Flag
```

Extracting Data from Table031

TABLE031 is an IDMS Scratch Pad Table.

Data Extraction is not supported, as this is an internal table.

Extracting Data from Table032

TABLE032 is a DASM Allocation Table.

The suffix is zeroes.

INCLUDE/EXCLUDE Filtering statements pertain to the OWNERID.

Extract the following elements from the table:

```
T032S000F001 006      Volume Serial Number
T032S000F002 002      Device Type
T032S000F003 004      Tracks Allocated
```

Extracting Data from Table033

TABLE033 is a DASM Volume Allocation Table.

The suffix is zeroes.

INCLUDE/EXCLUDE Filtering statements pertain to the VOLSER.

Extract the following elements from the table:

```
T033S000F001 002      Device Type
T033S000F002 004      Tracks Allocated
```

Extracting Data from Table034

TABLE034 is a DASM Used Space Table.

The suffix is zeroes.

INCLUDE/EXCLUDE Filtering statements pertain to the OWNERID.

Extract the following elements from the table:

```
T034S000F001 006      Volume Serial Number
T034S000F002 002      Device Type
T034S000F003 004      Tracks Used
T034S000F004 004      Tracks Unreferenced 30 Days
T034S000F005 004      Tracks Unreferenced 60 Days
T034S000F006 004      Tracks Unreferenced 90 Days
```

Extracting Data from Table035

TABLE035 is a DASM Volume Used Space Table.

The suffix is zeroes.

INCLUDE/EXCLUDE Filtering statements pertain to the VOLSER.

Extract the following elements from the table:

```
T035S000F001 002      Device Type
T035S000F002 004      Tracks Used
T035S000F003 004      Tracks Unreferenced 30 Days
T035S000F004 004      Tracks Unreferenced 60 Days
T035S000F005 004      Tracks Unreferenced 90 Days
```

Extracting Data from Table036

TABELE036 is an Expanded DASD Statistics Table

The suffix is zeroes

The key to the Expanded DASD Statistics Table is complex, consisting of several individual components. In order to select an element based on one or more of those components the new version of the INCLUDE/EXCLUDE parameter statement must be used. The components in an element key are as follows:

```
2 byte hexadecimal Device Address
6 byte character VOLSER
1 byte hexadecimal device type from the UCB
1 byte Logical Control Unit value
8 byte character SMS Storage Group Name
8 byte character Device Name
```

The new format of the INCLUDE/EXCLUDE parameter statement is as follows:

```
+nn(ll)=value
```

where the:

+ indicates the new format
nn is the offset relative to zero from the beginning of the key
ll is the length of the value to compare to
= is the comparison to be made (may be =, <, >)
value is the value to be compared to (if hexadecimal, must be X'xx' format)

For example, if you wanted to EXCLUDE all elements whose VOLSER began with the characters XX the statement would read:

```
+2(2)=XX
```

Extract the following elements from the table:

```
T036S00F001  004   SSCH/EXCP Count
T036S00F002  004   Connect time in milliseconds
T036S00F003  004   Pending time in milliseconds
T036S00F004  004   Active time in milliseconds
T036S00F005  004   Disconnect time in milliseconds
T036S00F006  004   Control unit busy delay time in milliseconds
T036S00F007  004   Device busy delay time in milliseconds
T036S00F008  004   Elapsed time in milliseconds
T036S00F009  004   Director Port busy time in milliseconds
T036S00F010  004   Measurement Event Count
T036S00F011  004   Total Queue Delay time in milliseconds
T036S00F012  004   Total number of allocations
```

Extracting Data from Table037

TABLE037 is the Model 204 Transaction Table.

The Suffix is zeroes

INCLUDE/EXCLUDE Filtering statements pertain to the Model 204 Transaction name.

Extract the following elements from the table:

```
T037S000F001 003      Number Of Transactions
T037S000F002 003      Total Response Time
T037S000F003 003      CPU Time
T037S000F004 003      FIND Requests
T037S000F005 003      Terminal I/O Requests
T037S000F006 003      Record Reads
T037S000F007 003      Direct Searches
T037S000F008 003      non-M204 EXCPs
T037S000F009 003      M204 Disk EXCPs
T037S000F010 003      Record Adds
T037S000F011 003      Record Deletes
T037S000F012 003      Maximum Server Size
T037S000F013 003      Server Reads
T037S000F014 003      Server Writes
T037S000F015 003      Records Sorted
```

Extracting Data from Table038

TABLE038 is the Model 204 Terminal Table.

The Suffix is zeroes.

INCLUDE/EXCLUDE Filtering statements pertain to the Model 204 Terminal name.

Extract the following elements from the table:

```
T038S000F001 004      Transaction Count This Terminal
T038S000F002 004      Total Response This Period
```

Extracting Data from Table039

TABLE039 is a scratch pad table that maintains a correspondence between DASD Volume Serial Number and Storage Group Name.

The suffix is zeroes.

Because this is a scratch pad table, the BEGIN DATE and END DATE must be specified as 99442.

INCLUDE/EXCLUDE statements pertain to the VOLSER.

Extract the following element from the table:

```
T039            Storage Group Name
```

Extracting Data from Table040

TABLE040 is a PR/SM CPU Activity Table.

The suffix is zeroes.

INCLUDE/EXCLUDE Filtering statements pertain to the LPAR.

Extract the following elements from the table:

```
T040S000F001 004      .XX CPU Seconds Active
```

Extracting Data from Table041

TABLE041 is a JOBNAME:CPU Activity Table.

The suffix is zeroes.

INCLUDE/EXCLUDE Filtering statements pertain to the JOBNAME.

Extract the following elements from the table:

```
T041S000F001 001      Elapsed Time In Minutes
T041S000F002 002      .XX CPU Seconds Active
```

Extracting Data from Table042

TABLE042 is a DASM Scratch Pad Table.

Data Extraction is not supported, as this is an internal table.

Extracting Data from Table043

TABLE043 is a PGN Service Unit Table.

The suffix is zeroes.

INCLUDE/EXCLUDE Filtering statements pertain to the PGN.

Extract the following elements from the table:

```
T043S000F001 004      CPU Service Units
T043S000F002 004      MSO Service Units
T043S000F003 004      IOC Service Units
T043S000F004 004      Page In Activity
```

Extracting Data from Table048

TABLE048 is the VTAM Registration Table.

The Suffix is zeroes or can be omitted.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
T048S000F001 001      Binary Index
T048S000F002 001      Flag
```

Extracting Data from Table049

TABLE049 is the Network Terminal Table.

The Suffix is the number from the CPPRERT file for the VTAM Region name.

INCLUDE/EXCLUDE Filtering statements pertain to the VTAM Terminal name.

Extract the following elements from the table:

```
T049SnnnF001 004      Input Transaction Count
T049SnnnF002 004      Output Transaction Count
T049SnnnF003 004      Host Response Time (Avg)
T049SnnnF004 004      Network Response Time (Avg)
T049SnnnF005 004      Input Message Size (Avg)
T049SnnnF006 004      Output Message Size (Avg)
```

Extracting Data from Table050

TABLE050 is a VTAM Scratch Pad Table.

Data Extraction is not supported, as this is an internal table.

Extracting Data from Table051

TABLE051 is the VTAM Supplemental Table.

The Suffix is the number from the CPPRERT file for the VTAM Region name.

INCLUDE/EXCLUDE Filtering statements pertain to the VTAM Terminal name.

Extract the following element from the table:

```
T051SnnnF001 002      Transaction Count
```

Extracting Data from Table052

TABLE052 is the VTAM NCP Table.

The Suffix is zeroes or can be omitted.

INCLUDE/EXCLUDE Filtering statements pertain to the VTAM NCP name.

Extract the following elements from the table:

```
T052S000F001   002      # Of .1 Secs Busy
T052S000F002   002      Slowdown Time Count
T052S000F003   002      Free Buffer High Water Mark
T052S000F004   002      Free Buffer Low Water Mark
T052S000F005   002      Free Buffers Available
T052S000F006   002      Free Buffere Queue Length
```

Extracting Data from Table053

TABLE053 is the VTAM Line Table.

The Suffix is zeroes or can be omitted.

INCLUDE/EXCLUDE Filtering statements pertain to the VTAM Line name.

Extract the following elements from the table:

```
T053S000F001   002      Count Of Inbound Messages
T053S000F002   002      Average Inbound Message Size
T053S000F003   002      Count Of Outbound Messages
T053S000F004   002      Average Outbound Message Size
T053S000F005   002      Count Of Retransmitted Messages
T053S000F006   002      Average Retransmitted Message Size
```

Extracting Data from Table054

TABLE054 is a VTAM Scratch Pad Table.

Data Extraction is not supported, as this is an internal table.

Extracting Data from Table055

TABLE055 is a VTAM PUNAME Statistics Table.

The suffix corresponds to the VTAM region.

INCLUDE/EXCLUDE Filtering statements pertain to the VTAM PU name.

Extract the following elements from the table:

```
T055S000F001    002      Inbound Message Count
T055S000F002    002      Inbound Average Message Size
T055S000F003    002      Outbound Message Count
T055S000F004    002      Outbound Average Message Size
T055S000F005    002      Retransmitted Message Count
T055S000F006    002      Retransmitted Average Message Size
```

Extracting Data from Table056

TABLE056 is a VTAM PUNAME Distributed Response Table.

The suffix corresponds to the VTAM region.

INCLUDE/EXCLUDE Filtering statements pertain to the VTAM PU name.

Extract the following elements from the table:

```
T056S000F001    004      Count Of Inbound Messages
T056S000F002    004      Average Inbound Message Size
T056S000F003    004      Count Of Outbound Messages
T056S000F004    004      Average Outbound Message Size
T056S000F005    004      Count Of Retransmitted Messages
T056S000F006    004      Average Retransmitted Message Size
T056S000F007    004      Count Of Retransmitted Messages
T056S000F008    004      Count Of Retransmitted Messages
```

Extracting Data from Table057

TABLE057 is a VTAM CCU Availability Table.

Data Extraction is not supported, as this is an internal table.

Extracting Data from Table058

TABLE058 is a VTAM Scratch Pad Table.

Data Extraction is not supported, as this is an internal table.

Extracting Data from Table059

TABLE059 is a VTAM Scratch Pad Table.

Data Extraction is not supported, as this is an internal table.

Extracting Data from Table060

TABLE060 is a VTAM PUNAME Distributed Response Table.

The Suffix is zeroes (all regions are included).

INCLUDE/EXCLUDE Filtering statements pertain to the VTAM PU name.

Extract the following elements from the table:

```
T060SnnnF001 004    Transactions Less Than Threshold # 1
T060SnnnF002 004    Transactions Less Than Threshold # 2
T060SnnnF003 004    Transactions Less Than Threshold # 3
T060SnnnF004 004    Transactions Less Than Threshold # 4
T060SnnnF005 004    Transactions Less Than Threshold # 5
T060SnnnF006 004    Transactions Less Than Threshold # 6
T060SnnnF007 004    Reserved
T060SnnnF008 004    Reserved
```

Extracting Data from Table065

TABLE065 is a Shift Turnover Statistics Table.

The suffix is zeroes.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
T065S000F001 004     .xx Seconds Step Start ( Step End
T065S000F002 004    .xx Seconds Job Initiation ( Job End
T065S000F003 004    .xx Seconds CPU time
T065S000F004 004     Number of JOBs started
T065S000F005 004     .xxx Page Seconds
T065S000F006 004     Count of ABENDs
T065S000F007 004     .xx Seconds Elapsed Time ABENDs
T065S000F008 004     Specific Tape Mounts
T065S000F009 004     Non-Specific Tape Mounts
```

```
T065S000F010 004     TSO LOGON Count
T065S000F011 004      .xx Seconds TSO Connect Time
T065S000F012 004      .xx Seconds TSO CPU Time
T065S000F013 004      .xx Seconds TSO Response Time
T065S000F014 004      Number of TSO Transactions
T065S000F015 004      ..xx Seconds Processor Available
T065S000F016 004      .xx Seconds Processor Active
T065S000F017 004      .xx Seconds Total CPU Time
T065S000F018 004      .xx Seconds Wait Time
T065S000F019 004      IPL Count
T065S000F020 004     Page ins + Page Outs
T065S000F021 004     Number of Printer Pages
```

Extracting Data from Table066

TABLE066 is a Tape OWNERID Statistics Table

The suffix is zeroes.

INCLUDE/EXCLUDE Filtering statements pertain to the OWNERID

Extract the following elements from the table:

```
T066S000F001 004      Unused
T066S000F002 004      Unused
T066S000F003 004      Megabytes Used
T066S000F004 004      Megabytes Available
T066S000F005 004      Megabytes Un-referenced 60 Days
T066S000F006 004      Megabytes Un-referenced 120 Days
T066S000F007 004      Megabytes Un-referenced 240 Days
T066S000F008 004      Volume Count
```

Extracting Data from Table067

TABLE067 is a Tape Drive Statistics Table

The suffix is zeroes.

INCLUDE/EXCLUDE Filtering statements pertain to the Tape Drive Address

Extract the following elements from the table:

```
T067S000F001 004      SSCH\EXCP Count
T067S000F002 004      .xx Seconds Mount Pending Time
T067S000F003 004      .xx Seconds Allocated Time
T067S000F004 004      .xx Seconds Active Time
T067S000F005 004      Mount Count
T067S000F006 004     Error Count
```

Extracting Data from Table068

TABLE068 is a Tape Volume Statistics Table

The suffix is zeroes.

INCLUDE/EXCLUDE Filtering statements do not apply

Extract the following elements from the table:

```
T068S000F001 004      Volume Count
T068S000F002 004      Scratch Count
T068S000F003 004      Bad Tape Count
T068S000F004 004      Inactive Volume Count
T068S000F005 004      Off Site Count
T068S000F006 004      Reel Count
T068S000F007 004      3480 Cartridge Count
T068S000F008 004      3490 Cartridge Count
T068S000F009 004      Volumes > Clean Threshold
T068S000F010 004      Volumes > Permanent Error Threshold
T068S000F011 004     Volumes > Temporary Error Threshold
T068S000F012 004      Volumes < 01 % Used
T068S000F013 004      Volumes < 05 % Used
T068S000F014 004      Volumes < 10 % Used
T068S000F015 004      Volumes < 25 % Used
T068S000F016 004      Volumes < 50 % Used
T068S000F017 004      Volumes < 75% Used
T068S000F018 004      Volumes > 75 % Used
T068S000F019 004      Block Size < 01 K
```

```
T068S000F020 004      Block Size < 04 K
T068S000F021 004      Block Size < 08 K
T068S000F022 004      Block Size < 16 K
T068S000F023 004     Average Age in days since Last Reference
T068S000F024 004      Volumes with 1 data set
T068S000F025 004      Volumes with 2 data sets
T068S000F026 004      Volumes with 3 data sets
T068S000F027 004      Volumes with > 3 data sets
```

Extracting Data from Table069

TABLE069 is a Page Frame Statistics Table.

The suffix is zeroes.

INCLUDE/EXCLUDE Filtering statements do not apply.

Extract the following elements from the table:

```
T069S000F001 004      Expanded Storage Frames
T069S000F002 004      Central Storage Frames
T069S000F003 004       Nucleus Frames
T069S000F004 004      Central Storage Private Frames
T069S000F005 004     Expanded Storage Private Frames
T069S000F006 004      Central Storage SQA Frames
T069S000F007004       Expanded Storage SQA Frames
T069S000F008 004      Central Storage LPA Frames
T069S000F009 004      Expanded Storage LPA Frames
T069S000F010 004      Central Storage CSA Frames
T069S000F011 004      Expanded Storage CSA Frames
T069S000F012 004      Central Storage LSQA Frames
T069S000F013 004      Expanded Storage LSQA Frames
T069S000F014 004      Average UIC
T069S000F015 004      Average Migration Age
T069S000F016 004      Average Unused Local Page Slots
```

Extracting Data from Table070

TABLE070 is a Service Class Name Service Unit Table.

The suffix is zeroes.

INCLUDE/EXCLUDE Filtering statements pertain to the Service Class Name.

Extract the following elements from the table:

```
T070S000F001 004      CPU Service Units
T070S000F002 004      MSO Service Units
T070S000F003 004      IOC Service Units
T070S000F004 004      PAGE In Activity
```

Extracting Data from Table103

TABLE103 is the TSO Performance Table.

The Suffix is zeroes or can be omitted.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
T103S000F001 003    XACTN Count: PGN(1),Period(S),Response(1)
T103S000F002 003    XACTN Count: PGN(1),Period(S),Response(2)
T103S000F003 003    XACTN Count: PGN(1),Period(S),Response(3)
T103S000F004 003    XACTN count: PGN(1),Period(S),Response(4)
T103S000F005 003    XACTN Count: PGN(1),Period(S),Response(5)
T103S000F006 003    XACTN Count: PGN(1),Period(S),Response(6)
T103S000F007 003    XACTN Count: PGN(1),Period(S),Response(7)
T103S000F008 003    XACTN Count: PGN(1),Period(M),Response(1)
T103S000F009 003    XACTN Count: PGN(1),Period(M),Response(2)
T103S000F010 003    XACTN Count: PGN(1),Period(M),Response(3)

T103S000F011 003    XACTN Count: PGN(1),Period(M),Response(4)
T103S000F012 003    XACTN Count: PGN(1),Period(M),Response(5)
T103S000F013 003    XACTN Count: PGN(1),Period(M),Response(6)
T103S000F014 003    XACTN Count: PGN(1),Period(M),Response(7)
T103S000F015 003    XACTN Count: PGN(1),Period(L),Response(1)
T103S000F016 003    XACTN Count: PGN(1),Period(L),Response(2)
T103S000F017 003    XACTN Count: PGN(1),Period(L),Response(3)
T103S000F018 003    XACTN Count: PGN(1),Period(L),Response(4)
T103S000F019 003    XACTN Count: PGN(1),Period(L),Response(5)
T103S000F020 003    XACTN Count: PGN(1),Period(L),Response(6)
```

```
T103S000F021 003    XACTN Count: PGN(1),Period(L),Response(7)
T103S000F022 003    XACTN Count: PGN(1),Period(X),Response(1)
T103S000F023 003    XACTN Count: PGN(1),Period(X),Response(2)
T103S000F024 003    XACTN Count: PGN(1),Period(X),Response(3)
T103S000F025 003    XACTN Count: PGN(1),Period(X),Response(4)
T103S000F026 003    XACTN Count: PGN(1),Period(X),Response(5)
T103S000F027 003    XACTN Count: PGN(1),Period(X),Response(6)
T103S000F028 003    XACTN Count: PGN(1),Period(X),Response(7)
T103S000F029 003    XACTN Count: PGN(2),Period(S),Response(1)
T103S000F030 003    XACTN Count: PGN(2),Period(S),Response(2)

T103S000F031 003    XACTN Count: PGN(2),Period(S),Response(3)
T103S000F032 003    XACTN Count: PGN(2),Period(S),Response(4)
T103S000F033 003    XACTN Count: PGN(2),Period(S),Response(5)
T103S000F034 003    XACTN Count: PGN(2),Period(S),Response(6)
T103S000F035 003    XACTN Count: PGN(2),Period(S),Response(7)
T103S000F036 003    XACTN Count: PGN(2),Period(M),Response(1)
T103S000F037 003    XACTN Count: PGN(2),Period(M),Response(2)
T103S000F038 003    XACTN Count: PGN(2),Period(M),Response(3)
T103S000F039 003    XACTN Count: PGN(2),Period(M),Response(4)
T103S000F040 003    XACTN Count: PGN(2),Period(M),Response(5)

T103S000F041 003    XACTN Count: PGN(2),Period(M),Response(6)
T103S000F042 003    XACTN Count: PGN(2),Period(M),Response(7)
T103S000F043 003    XACTN Count: PGN(2),Period(L),Response(1)
T103S000F044 003    XACTN Count: PGN(2),Period(L),Response(2)
T103S000F045 003    XACTN Count: PGN(2),Period(L),Response(3)
T103S000F046 003    XACTN Count: PGN(2),Period(L),Response(4)
T103S000F047 003    XACTN Count: PGN(2),Period(L),Response(5)
T103S000F048 003    XACTN Count: PGN(2),Period(L),Response(6)
T103S000F049 003    XACTN Count: PGN(2),Period(L),Response(7)
T103S000F050 003    XACTN Count: PGN(2),Period(X),Response(1)

T103S000F051 003    XACTN Count: PGN(2),Period(X),Response(2)
T103S000F052 003    XACTN Count: PGN(2),Period(X),Response(3)
T103S000F053 003    XACTN Count: PGN(2),Period(X),Response(4)
T103S000F054 003    XACTN Count: PGN(2),Period(X),Response(5)
```

```
T103S000F055 003    XACTN Count: PGN(2),Period(X),Response(6)
T103S000F056 003    XACTN Count: PGN(2),Period(X),Response(7)
T103S000F057 003    XACTN Count: PGN(3),Period(S),Response(1)
T103S000F058 003    XACTN Count: PGN(3),Period(S),Response(2)
T103S000F059 003    XACTN Count: PGN(3),Period(S),Response(3)
T103S000F060 003    XACTN Count: PGN(3),Period(S),Response(4)

T103S000F061 003    XACTN Count: PGN(3),Period(S),Response(5)
T103S000F062 003    XACTN Count: PGN(3),Period(S),Response(6)
T103S000F063 003    XACTN Count: PGN(3),Period(S),Response(7)
T103S000F064 003    XACTN Count: PGN(3),Period(M),Response(1)
T103S000F065 003    XACTN Count: PGN(3),Period(M),Response(2)
T103S000F066 003    XACTN Count: PGN(3),Period(M),Response(3)
T103S000F067 003    XACTN Count: PGN(3),Period(M),Response(4)
T103S000F068 003    XACTN Count: PGN(3),Period(M),Response(5)
T103S000F069 003    XACTN Count: PGN(3),Period(M),Response(6)
T103S000F070 003    XACTN Count: PGN(3),Period(M),Response(7)

T103S000F071 003    XACTN Count: PGN(3),Period(L),Response(1)
T103S000F072 003    XACTN Count: PGN(3),Period(L),Response(2)
T103S000F073 003    XACTN Count: PGN(3),Period(L),Response(3)
T103S000F074 003    XACTN Count: PGN(3),Period(L),Response(4)
T103S000F075 003    XACTN Count: PGN(3),Period(L),Response(5)
T103S000F076 003    XACTN Count: PGN(3),Period(L),Response(6)
T103S000F077 003    XACTN Count: PGN(3),Period(L),Response(7)
T103S000F078 003    XACTN Count: PGN(3),Period(X),Response(1)
T103S000F079 003    XACTN Count: PGN(3),Period(X),Response(2)
T103S000F080 003    XACTN Count: PGN(3),Period(X),Response(3)

T103S000F081 003    XACTN Count: PGN(3),Period(X),Response(4)
T103S000F082 003    XACTN Count: PGN(3),Period(X),Response(5)
T103S000F083 003    XACTN Count: PGN(3),Period(X),Response(6)
T103S000F084 003    XACTN Count: PGN(3),Period(X),Response(7)
T103S000F085 003    XACTN Count: PGN(4),Period(S),Response(1)
T103S000F086 003    XACTN Count: PGN(4),Period(S),Response(2)
T103S000F087 003    XACTN Count: PGN(4),Period(S),Response(3)
T103S000F088 003    XACTN Count: PGN(4),Period(S),Response(4)
T103S000F089 003    XACTN Count: PGN(4),Period(S),Response(5)
```

```
T103S000F090 003    XACTN Count: PGN(4),Period(S),Response(6)

T103S000F091 003    XACTN Count: PGN(4),Period(S),Response(7)
T103S000F092 003    XACTN Count: PGN(4),Period(M),Response(1)
T103S000F093 003    XACTN Count: PGN(4),Period(M),Response(2)
T103S000F094 003    XACTN Count: PGN(4),Period(M),Response(3)
T103S000F095 003    XACTN Count: PGN(4),Period(M),Response(4)
T103S000F096 003    XACTN Count: PGN(4),Period(M),Response(5)
T103S000F097 003    XACTN Count: PGN(4),Period(M),Response(6)
T103S000F098 003    XACTN Count: PGN(4),Period(M),Response(7)
T103S000F099 003    XACTN Count: PGN(4),Period(L),Response(1)
T103S000F100 003    XACTN Count: PGN(4),Period(L),Response(2)

T103S000F101 003    XACTN Count: PGN(4),Period(L),Response(3)
T103S000F102 003    XACTN Count: PGN(4),Period(L),Response(4)
T103S000F103 003    XACTN Count: PGN(4),Period(L),Response(5)
T103S000F104 003    XACTN Count: PGN(4),Period(L),Response(6)
T103S000F105 003    XACTN Count: PGN(4),Period(L),Response(7)
T103S000F106 003    XACTN Count: PGN(4),Period(X),Response(1)
T103S000F107 003    XACTN Count: PGN(4),Period(X),Response(2)
T103S000F108 003    XACTN Count: PGN(4),Period(X),Response(3)
T103S000F109 003    XACTN Count: PGN(4),Period(X),Response(4)
T103S000F110 003    XACTN Count: PGN(4),Period(X),Response(5)

T103S000F111 003    XACTN Count: PGN(4),Period(X),Response(6)
T103S000F112 003    XACTN Count: PGN(4),Period(X),Response(7)
```

Extracting Data from Table118

TABLE118 is the Batch Performance Table.

The Suffix is the decimal equivalent of the Initiator Job Class. For example, Job Class A (x'C1') would be specified as suffix number 193.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
T118SnnnF001 002    CPU(1),TAPE(Y),EXCP(1),REGION(1),ELAPSE(1)
T118SnnnF002 002    CPU(1),TAPE(Y),EXCP(1),REGION(1),ELAPSE(2)
T118SnnnF003 002    CPU(1),TAPE(Y),EXCP(1),REGION(1),ELAPSE(3)
T118SnnnF004 002    CPU(1),TAPE(Y),EXCP(1),REGION(1),ELAPSE(4)
T118SnnnF005 002    CPU(1),TAPE(Y),EXCP(1),REGION(1),ELAPSE(5)
T118SnnnF006 002    CPU(1),TAPE(Y),EXCP(1),REGION(1),ELAPSE(6)
T118SnnnF007 002    CPU(1),TAPE(Y),EXCP(1),REGION(1),ELAPSE(7)
T118SnnnF008 002    CPU(1),TAPE(Y),EXCP(1),REGION(2),ELAPSE(1)
T118SnnnF009 002    CPU(1),TAPE(Y),EXCP(1),REGION(2),ELAPSE(2)
T118SnnnF010 002    CPU(1),TAPE(Y),EXCP(1),REGION(2),ELAPSE(3)

T118SnnnF011 002    CPU(1),TAPE(Y),EXCP(1),REGION(2),ELAPSE(4)
T118SnnnF012 002    CPU(1),TAPE(Y),EXCP(1),REGION(2),ELAPSE(5)
T118SnnnF013 002    CPU(1),TAPE(Y),EXCP(1),REGION(2),ELAPSE(6)
T118SnnnF014 002    CPU(1),TAPE(Y),EXCP(1),REGION(2),ELAPSE(7)
T118SnnnF015 002    CPU(1),TAPE(Y),EXCP(2),REGION(1),ELAPSE(1)
T118SnnnF016 002    CPU(1),TAPE(Y),EXCP(2),REGION(1),ELAPSE(2)
T118SnnnF017 002    CPU(1),TAPE(Y),EXCP(2),REGION(1),ELAPSE(3)
T118SnnnF018 002    CPU(1),TAPE(Y),EXCP(2),REGION(1),ELAPSE(4)
T118SnnnF019 002    CPU(1),TAPE(Y),EXCP(2),REGION(1),ELAPSE(5)
T118SnnnF020 002    CPU(1),TAPE(Y),EXCP(2),REGION(1),ELAPSE(6)

T118SnnnF021 002    CPU(1),TAPE(Y),EXCP(2),REGION(1),ELAPSE(7)
T118SnnnF022 002    CPU(1),TAPE(Y),EXCP(2),REGION(2),ELAPSE(1)
T118SnnnF023 002    CPU(1),TAPE(Y),EXCP(2),REGION(2),ELAPSE(2)
T118SnnnF024 002    CPU(1),TAPE(Y),EXCP(2),REGION(2),ELAPSE(3)
T118SnnnF025 002    CPU(1),TAPE(Y),EXCP(2),REGION(2),ELAPSE(4)
T118SnnnF026 002    CPU(1),TAPE(Y),EXCP(2),REGION(2),ELAPSE(5)
T118SnnnF027 002    CPU(1),TAPE(Y),EXCP(2),REGION(2),ELAPSE(6)
T118SnnnF028 002    CPU(1),TAPE(Y),EXCP(2),REGION(2),ELAPSE(7)
T118SnnnF029 002    CPU(1),TAPE(N),EXCP(1),REGION(1),ELAPSE(1)
```

```
T118SnnnF030 002    CPU(1),TAPE(N),EXCP(1),REGION(1),ELAPSE(2)

T118SnnnF031 002    CPU(1),TAPE(N),EXCP(1),REGION(1),ELAPSE(3)
T118SnnnF032 002    CPU(1),TAPE(N),EXCP(1),REGION(1),ELAPSE(4)
T118SnnnF033 002    CPU(1),TAPE(N),EXCP(1),REGION(1),ELAPSE(5)
T118SnnnF034 002    CPU(1),TAPE(N),EXCP(1),REGION(1),ELAPSE(6)
T118SnnnF035 002    CPU(1),TAPE(N),EXCP(1),REGION(1),ELAPSE(7)
T118SnnnF036 002    CPU(1),TAPE(N),EXCP(1),REGION(2),ELAPSE(1)
T118SnnnF037 002    CPU(1),TAPE(N),EXCP(1),REGION(2),ELAPSE(2)
T118SnnnF038 002    CPU(1),TAPE(N),EXCP(1),REGION(2),ELAPSE(3)
T118SnnnF039 002    CPU(1),TAPE(N),EXCP(1),REGION(2),ELAPSE(4)
T118SnnnF040 002    CPU(1),TAPE(N),EXCP(1),REGION(2),ELAPSE(5)

T118SnnnF041 002    CPU(1),TAPE(N),EXCP(1),REGION(2),ELAPSE(6)
T118SnnnF042 002    CPU(1),TAPE(N),EXCP(1),REGION(2),ELAPSE(7)
T118SnnnF043 002    CPU(1),TAPE(N),EXCP(2),REGION(1),ELAPSE(1)
T118SnnnF044 002    CPU(1),TAPE(N),EXCP(2),REGION(1),ELAPSE(2)
T118SnnnF045 002    CPU(1),TAPE(N),EXCP(2),REGION(1),ELAPSE(3)
T118SnnnF046 002    CPU(1),TAPE(N),EXCP(2),REGION(1),ELAPSE(4)
T118SnnnF047 002    CPU(1),TAPE(N),EXCP(2),REGION(1),ELAPSE(5)
T118SnnnF048 002    CPU(1),TAPE(N),EXCP(2),REGION(1),ELAPSE(6)
T118SnnnF049 002    CPU(1),TAPE(N),EXCP(2),REGION(1),ELAPSE(7)
T118SnnnF050 002    CPU(1),TAPE(N),EXCP(2),REGION(2),ELAPSE(1)

T118SnnnF051 002    CPU(1),TAPE(N),EXCP(2),REGION(2),ELAPSE(2)
T118SnnnF052 002    CPU(1),TAPE(N),EXCP(2),REGION(2),ELAPSE(3)
T118SnnnF053 002    CPU(1),TAPE(N),EXCP(2),REGION(2),ELAPSE(4)
T118SnnnF054 002    CPU(1),TAPE(N),EXCP(2),REGION(2),ELAPSE(5)
T118SnnnF055 002    CPU(1),TAPE(N),EXCP(2),REGION(2),ELAPSE(6)
T118SnnnF056 002    CPU(1),TAPE(N),EXCP(2),REGION(2),ELAPSE(7)
T118SnnnF057 002    CPU(2),TAPE(Y),EXCP(1),REGION(1),ELAPSE(1)
T118SnnnF058 002    CPU(2),TAPE(Y),EXCP(1),REGION(1),ELAPSE(2)
T118SnnnF059 002    CPU(2),TAPE(Y),EXCP(1),REGION(1),ELAPSE(3)
T118SnnnF060 002    CPU(2),TAPE(Y),EXCP(1),REGION(1),ELAPSE(4)

T118SnnnF061 002    CPU(2),TAPE(Y),EXCP(1),REGION(1),ELAPSE(5)
T118SnnnF062 002    CPU(2),TAPE(Y),EXCP(1),REGION(1),ELAPSE(6)
T118SnnnF063 002    CPU(2),TAPE(Y),EXCP(1),REGION(1),ELAPSE(7)
```

```
T118SnnnF064 002    CPU(2),TAPE(Y),EXCP(1),REGION(2),ELAPSE(1)
T118SnnnF065 002    CPU(2),TAPE(Y),EXCP(1),REGION(2),ELAPSE(2)
T118SnnnF066 002    CPU(2),TAPE(Y),EXCP(1),REGION(2),ELAPSE(3)
T118SnnnF067 002    CPU(2),TAPE(Y),EXCP(1),REGION(2),ELAPSE(4)
T118SnnnF068 002    CPU(2),TAPE(Y),EXCP(1),REGION(2),ELAPSE(5)
T118SnnnF069 002    CPU(2),TAPE(Y),EXCP(1),REGION(2),ELAPSE(6)
T118SnnnF070 002    CPU(2),TAPE(Y),EXCP(1),REGION(2),ELAPSE(7)

T118SnnnF071 002    CPU(2),TAPE(Y),EXCP(2),REGION(1),ELAPSE(1)
T118SnnnF072 002    CPU(2),TAPE(Y),EXCP(2),REGION(1),ELAPSE(2)
T118SnnnF073 002    CPU(2),TAPE(Y),EXCP(2),REGION(1),ELAPSE(3)
T118SnnnF074 002    CPU(2),TAPE(Y),EXCP(2),REGION(1),ELAPSE(4)
T118SnnnF075 002    CPU(2),TAPE(Y),EXCP(2),REGION(1),ELAPSE(5)
T118SnnnF076 002    CPU(2),TAPE(Y),EXCP(2),REGION(1),ELAPSE(6)
T118SnnnF077 002    CPU(2),TAPE(Y),EXCP(2),REGION(1),ELAPSE(7)
T118SnnnF078 002    CPU(2),TAPE(Y),EXCP(2),REGION(2),ELAPSE(1)
T118SnnnF079 002    CPU(2),TAPE(Y),EXCP(2),REGION(2),ELAPSE(2)
T118SnnnF080 002    CPU(2),TAPE(Y),EXCP(2),REGION(2),ELAPSE(3)

T118SnnnF081 002    CPU(2),TAPE(Y),EXCP(2),REGION(2),ELAPSE(4)
T118SnnnF082 002    CPU(2),TAPE(Y),EXCP(2),REGION(2),ELAPSE(5)
T118SnnnF083 002    CPU(2),TAPE(Y),EXCP(2),REGION(2),ELAPSE(6)
T118SnnnF084 002    CPU(2),TAPE(Y),EXCP(2),REGION(2),ELAPSE(7)
T118SnnnF085 002    CPU(2),TAPE(N),EXCP(1),REGION(1),ELAPSE(1)
T118SnnnF086 002    CPU(2),TAPE(N),EXCP(1),REGION(1),ELAPSE(2)
T118SnnnF087 002    CPU(2),TAPE(N),EXCP(1),REGION(1),ELAPSE(3)
T118SnnnF088 002    CPU(2),TAPE(N),EXCP(1),REGION(1),ELAPSE(4)
T118SnnnF089 002    CPU(2),TAPE(N),EXCP(1),REGION(1),ELAPSE(5)
T118SnnnF090 002    CPU(2),TAPE(N),EXCP(1),REGION(1),ELAPSE(6)

T118SnnnF091 002    CPU(2),TAPE(N),EXCP(1),REGION(1),ELAPSE(7)
T118SnnnF092 002    CPU(2),TAPE(N),EXCP(1),REGION(2),ELAPSE(1)
T118SnnnF093 002    CPU(2),TAPE(N),EXCP(1),REGION(2),ELAPSE(2)
T118SnnnF094 002    CPU(2),TAPE(N),EXCP(1),REGION(2),ELAPSE(3)
T118SnnnF095 002    CPU(2),TAPE(N),EXCP(1),REGION(2),ELAPSE(4)
T118SnnnF096 002    CPU(2),TAPE(N),EXCP(1),REGION(2),ELAPSE(5)
T118SnnnF097 002    CPU(2),TAPE(N),EXCP(1),REGION(2),ELAPSE(6)
T118SnnnF098 002    CPU(2),TAPE(N),EXCP(1),REGION(2),ELAPSE(7)
```

```
T118SnnnF099 002    CPU(2),TAPE(N),EXCP(2),REGION(1),ELAPSE(1)
T118SnnnF100 002    CPU(2),TAPE(N),EXCP(2),REGION(1),ELAPSE(2)

T118SnnnF101 002    CPU(2),TAPE(N),EXCP(2),REGION(1),ELAPSE(3)
T118SnnnF102 002    CPU(2),TAPE(N),EXCP(2),REGION(1),ELAPSE(4)
T118SnnnF103 002    CPU(2),TAPE(N),EXCP(2),REGION(1),ELAPSE(5)
T118SnnnF104 002    CPU(2),TAPE(N),EXCP(2),REGION(1),ELAPSE(6)
T118SnnnF105 002    CPU(2),TAPE(N),EXCP(2),REGION(1),ELAPSE(7)
T118SnnnF106 002    CPU(2),TAPE(N),EXCP(2),REGION(2),ELAPSE(1)
T118SnnnF107 002    CPU(2),TAPE(N),EXCP(2),REGION(2),ELAPSE(2)
T118SnnnF108 002    CPU(2),TAPE(N),EXCP(2),REGION(2),ELAPSE(3)
T118SnnnF109 002    CPU(2),TAPE(N),EXCP(2),REGION(2),ELAPSE(4)
T118SnnnF110 002    CPU(2),TAPE(N),EXCP(2),REGION(2),ELAPSE(5)

T118SnnnF111 002    CPU(2),TAPE(N),EXCP(2),REGION(2),ELAPSE(6)
T118SnnnF112 002    CPU(2),TAPE(N),EXCP(2),REGION(2),ELAPSE(7)
T118SnnnF113 002    CPU(3),TAPE(Y),EXCP(1),REGION(1),ELAPSE(1)
T118SnnnF114 002    CPU(3),TAPE(Y),EXCP(1),REGION(1),ELAPSE(2)
T118SnnnF115 002    CPU(3),TAPE(Y),EXCP(1),REGION(1),ELAPSE(3)
T118SnnnF116 002    CPU(3),TAPE(Y),EXCP(1),REGION(1),ELAPSE(4)
T118SnnnF117 002    CPU(3),TAPE(Y),EXCP(1),REGION(1),ELAPSE(5)
T118SnnnF118 002    CPU(3),TAPE(Y),EXCP(1),REGION(1),ELAPSE(6)
T118SnnnF119 002    CPU(3),TAPE(Y),EXCP(1),REGION(1),ELAPSE(7)
T118SnnnF120 002    CPU(3),TAPE(Y),EXCP(1),REGION(2),ELAPSE(1)

T118SnnnF121 002    CPU(3),TAPE(Y),EXCP(1),REGION(2),ELAPSE(2)
T118SnnnF122 002    CPU(3),TAPE(Y),EXCP(1),REGION(2),ELAPSE(3)
T118SnnnF123 002    CPU(3),TAPE(Y),EXCP(1),REGION(2),ELAPSE(4)
T118SnnnF124 002    CPU(3),TAPE(Y),EXCP(1),REGION(2),ELAPSE(5)
T118SnnnF125 002    CPU(3),TAPE(Y),EXCP(1),REGION(2),ELAPSE(6)
T118SnnnF126 002    CPU(3),TAPE(Y),EXCP(1),REGION(2),ELAPSE(7)
T118SnnnF127 002    CPU(3),TAPE(Y),EXCP(2),REGION(1),ELAPSE(1)
T118SnnnF128 002    CPU(3),TAPE(Y),EXCP(2),REGION(1),ELAPSE(2)
T118SnnnF129 002    CPU(3),TAPE(Y),EXCP(2),REGION(1),ELAPSE(3)
T118SnnnF130 002    CPU(3),TAPE(Y),EXCP(2),REGION(1),ELAPSE(4)

T118SnnnF131 002    CPU(3),TAPE(Y),EXCP(2),REGION(1),ELAPSE(5)
T118SnnnF132 002    CPU(3),TAPE(Y),EXCP(2),REGION(1),ELAPSE(6)
```

```
T118SnnnF133 002    CPU(3),TAPE(Y),EXCP(2),REGION(1),ELAPSE(7)
T118SnnnF134 002    CPU(3),TAPE(Y),EXCP(2),REGION(2),ELAPSE(1)
T118SnnnF135 002    CPU(3),TAPE(Y),EXCP(2),REGION(2),ELAPSE(2)
T118SnnnF136 002    CPU(3),TAPE(Y),EXCP(2),REGION(2),ELAPSE(3)
T118SnnnF137 002    CPU(3),TAPE(Y),EXCP(2),REGION(2),ELAPSE(4)
T118SnnnF138 002    CPU(3),TAPE(Y),EXCP(2),REGION(2),ELAPSE(5)
T118SnnnF139 002    CPU(3),TAPE(Y),EXCP(2),REGION(2),ELAPSE(6)
T118SnnnF140 002    CPU(3),TAPE(Y),EXCP(2),REGION(2),ELAPSE(7)

T118SnnnF141 002    CPU(3),TAPE(N),EXCP(1),REGION(1),ELAPSE(1)
T118SnnnF142 002    CPU(3),TAPE(N),EXCP(1),REGION(1),ELAPSE(2)
T118SnnnF143 002    CPU(3),TAPE(N),EXCP(1),REGION(1),ELAPSE(3)
T118SnnnF144 002    CPU(3),TAPE(N),EXCP(1),REGION(1),ELAPSE(4)
T118SnnnF145 002    CPU(3),TAPE(N),EXCP(1),REGION(1),ELAPSE(5)
T118SnnnF146 002    CPU(3),TAPE(N),EXCP(1),REGION(1),ELAPSE(6)
T118SnnnF147 002    CPU(3),TAPE(N),EXCP(1),REGION(1),ELAPSE(7)
T118SnnnF148 002    CPU(3),TAPE(N),EXCP(1),REGION(2),ELAPSE(1)
T118SnnnF149 002    CPU(3),TAPE(N),EXCP(1),REGION(2),ELAPSE(2)
T118SnnnF150 002    CPU(3),TAPE(N),EXCP(1),REGION(2),ELAPSE(3)

T118SnnnF151 002    CPU(3),TAPE(N),EXCP(1),REGION(2),ELAPSE(4)
T118SnnnF152 002    CPU(3),TAPE(N),EXCP(1),REGION(2),ELAPSE(5)
T118SnnnF153 002    CPU(3),TAPE(N),EXCP(1),REGION(2),ELAPSE(6)
T118SnnnF154 002    CPU(3),TAPE(N),EXCP(1),REGION(2),ELAPSE(7)
T118SnnnF155 002    CPU(3),TAPE(N),EXCP(2),REGION(1),ELAPSE(1)
T118SnnnF156 002    CPU(3),TAPE(N),EXCP(2),REGION(1),ELAPSE(2)
T118SnnnF157 002    CPU(3),TAPE(N),EXCP(2),REGION(1),ELAPSE(3)
T118SnnnF158 002    CPU(3),TAPE(N),EXCP(2),REGION(1),ELAPSE(4)
T118SnnnF159 002    CPU(3),TAPE(N),EXCP(2),REGION(1),ELAPSE(5)
T118SnnnF160 002    CPU(3),TAPE(N),EXCP(2),REGION(1),ELAPSE(6)

T118SnnnF161 002    CPU(3),TAPE(N),EXCP(2),REGION(1),ELAPSE(7)
T118SnnnF162 002    CPU(3),TAPE(N),EXCP(2),REGION(2),ELAPSE(1)
T118SnnnF163 002    CPU(3),TAPE(N),EXCP(2),REGION(2),ELAPSE(2)
T118SnnnF164 002    CPU(3),TAPE(N),EXCP(2),REGION(2),ELAPSE(3)
T118SnnnF165 002    CPU(3),TAPE(N),EXCP(2),REGION(2),ELAPSE(4)
T118SnnnF166 002    CPU(3),TAPE(N),EXCP(2),REGION(2),ELAPSE(5)
T118SnnnF167 002    CPU(3),TAPE(N),EXCP(2),REGION(2),ELAPSE(6)
```

```
T118SnnnF168 002    CPU(3),TAPE(N),EXCP(2),REGION(2),ELAPSE(7)
```

Extracting Data from Table122

TABLE122 is a Resource Usage Statistics Table.

The suffix is zeroes.

INCLUDE/EXCLUDE Filtering statements pertain to the Account Number.

Extract the following elements from the table:

```
T122S000F001 004      .xx Hours CPU Time
T122S000F002 004      DASD EXCPs
T122S000F003 004      Tape EXCPs
T122S000F004 004      .xx Megabytes DASD Storage
T122S000F005 004      Tape Mounts
T122S000F006 004      Print Lines
T122S000F007 004      TSO Transactions
T122S000F008 004      CICS Transactions
T122S000F009 004      Other Online Transactions
T122S000F010 004      Batch JOBs
T122S000F011 004      .xx Gigabytes Tape Storage
```

Extracting Data from Table176

TABLE176 is the DB2 User Registration Table.

The Suffix is zeroes or can be omitted.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
T176S000F001 001      Binary Suffix
T176S000F002 001     Flag
```

Extracting Data from Table177

TABLE177 is the DB2 System Wide Table.

The Suffix is the number from the CPPRERT file for the DB2 System name.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
T177SnnnF001 004        # Create Threads
T177SnnnF002 004        # Create Threads Queued
T177SnnnF003 004        # Commits
T177SnnnF004 004        # Signons
```

```
T177SnnnF005 004        # Lock Suspensions
T177SnnnF006 004        # Short On Storage
T177SnnnF007 004        # BFR Pool Expansions
T177SnnnF008 004        # Write Active Log BFRS
T177SnnnF009 004        DBAS CPU
T177SnnnF010 004        SSAS CPU

T177SnnnF011 004        ILRM CPU
T177SnnnF012 004        SQL Inserts
T177SnnnF013 004        SQL Selects
T177SnnnF014 004        SQL Deletes
T177SnnnF015 004        SQL Updates
T177SnnnF016 004        SQL Fetches
T177SnnnF017 004        SQL Other
T177SnnnF018 004        Get Page Requests
T177SnnnF019 004        Physical Reads
T177SnnnF020 004        SEQ Prefetch

T177SnnnF021 004        PREFETCH Disabled
T177SnnnF022 004        System Pages Updated
T177SnnnF023 004        Physical Updates
T177SnnnF024 004        Physical Writes
T177SnnnF025 004        Deferred Write Threshold
T177SnnnF026 004        DMGT Critical
T177SnnnF027 004        EDM Request CT
T177SnnnF028 004        EDM Load CT
T177SnnnF029 004        EDM Request DBD
T177SnnnF030 004        EDM Load DBD

T177SnnnF031 004        EDM Pool Pages
T177SnnnF032 004        EDM Free Pages
```

Extracting Data from Table178

TABLE178 is the DB2 APPLID Plan Table.

The Suffix is the number from the CPPRERT file for the DB2 Connect name.

INCLUDE/EXCLUDE Filtering statements pertain to the DB2 Plan name.

Extract the following elements from the table:

```
T178SnnnF001 003        #
T178SnnnF002 003        # Commits
T178SnnnF003 003        Elapsed Time (.XXX SECS)
T178SnnnF004 003        CPU Time (.XXX SECS)
T178SnnnF005 003        SQL Inserts
T178SnnnF006 003        SQL Selects
T178SnnnF007 003        SQL Deletes
T178SnnnF008 003        SQL Updates
T178SnnnF009 003        SQL Fetches
T178SnnnF010 003        SQL Other
T178SnnnF011 002        Buffer Pool Expansions
T178SnnnF012 002        Threads Terminated
T178SnnnF013 001        Page Locks Held
```

Extracting Data from Table179

TABLE179 is the DB2 APPLID AUTH-ID Table.

The Suffix is the number from the CPPRERT file for the DB2 Connect name.

INCLUDE/EXCLUDE Filtering statements pertain to the DB2 AUTH-ID name.

Extract the following elements from the table:

```
T179SnnnF001 003        # Signons
T179SnnnF002 003        # Commits
T179SnnnF003 003        Elapsed Time (.XXX SECS)
T179SnnnF004 003        CPU Time (.XXX SECS)
T179SnnnF005 003        SQL Inserts
T179SnnnF006 003        SQL Selects
T179SnnnF007 003        SQL Deletes
T179SnnnF008 003        SQL Updates
T179SnnnF009 003        SQL Fetches
T179SnnnF010 003        SQL Other
T179SnnnF011 002        Buffer Pool Expansions
T179SnnnF012 002        Threads Terminated
T179SnnnF013 001       Page Locks Held
```

Extracting Data from Table180

TABLE180 is a DB2 Scratch Pad Table.

Data Extraction is not supported, as this is an internal table.

Extracting Data from Table181

TABLE181 is a DB2 Scratch Pad Table.

Data Extraction is not supported, as this is an internal table.

Extracting Data from Table182

TABLE182 is a DB2 Scratch Pad Table.

Data Extraction is not supported, as this is an internal table.

Extracting Data from Table183

TABLE183 is the DB2 System Wide RMID Registration Table.

The Suffix is the zeroes or can be omitted.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
T183S000F001 001        Binary Suffix
T183S000F002 001        Flag
```

Extracting Data from Table192

Table192 is the unix system statistics table

The Suffix is zeroes or can be omitted

INCLUDE/EXCLUDE Filtering statements are not used

Extract the following elements from the table:

```
T192SnnnF001 binary(4)User cpu Time (.01 secs)
T192SnnnF002 binary(4)System Local cpu Time (.01 secs)
T192SnnnF003 binary(4)System Remote cpu Time (.01 secs)
T192SnnnF004 binary(4)Wait Time (.01 secs)
T192SnnnF005 binary(4)Idle Time (.01 secs)
T192SnnnF006 binary(4)Run Queue Size
T192SnnnF007 binary(4)% Time Run Queue Occupied
T192SnnnF008 binary(4)Swap Ins
T192SnnnF009 binary(4)512 Byte Units Swapped In
T192SnnnF010 binary(4)Swap Outs
T192SnnnF011 binary(4)512 Byte Units Swapped Out
T192SnnnF012 binary(4)Process Switches
T192SnnnF013 binary(4)Igets
T192SnnnF014 binary(4)Nameis
T192SnnnF015 binary(4)Dirblks
```

Extracting Data from Table193

Table193 is the unix memory statistics table

The Suffix is zeroes or can be omitted

INCLUDE/EXCLUDE Filtering statements are not used

Extract the following elements from the table:

```
T193SnnnF001 binary(4)Reclaims
T193SnnnF002 binary(4)Page In Requests
T193SnnnF003 binary(4)Page In Operations
T193SnnnF004 binary(4)Protect Page Faults
T193SnnnF005 binary(4)Virtual Page Faults
T193SnnnF006 binary(4)Software Lock Faults
T193SnnnF007 binary(4)Page Out Requests
T193SnnnF008 binary(4)Page Out Operations
T193SnnnF009 binary(4)Pages Freed
T193SnnnF010 binary(4)Pages Scanned
T193SnnnF011 binary(4)% Pages Flushed
T193SnnnF012 binary(4)Free Memory Pages (avg)
T193SnnnF013 binary(4)Free Disk Pages (avg)
T193SnnnF014 binary(4)Small Memory: Pool Size
T193SnnnF015 binary(4)    Allocated
T193SnnnF016 binary(4)    Failure Count
T193SnnnF017 binary(4)Large Memory: Pool Size
T193SnnnF018 binary(4)    Allocated
T193SnnnF019 binary(4)    Failure Count
T193SnnnF020 binary(4)Ovsze Memory: Allocated
T193SnnnF021 binary(4)    Failure Count
```

Extracting Data from Table194

Table194 is the unix disk statistics table

The Suffix is zeroes or can be omitted

INCLUDE/EXCLUDE Filtering applies to the disk name

Extract the following elements from the table:

```
T194SnnnF001 binary(4)Busy Time (.01 secs)
T194SnnnF002 binary(4)Queue Time (.01 secs)
T194SnnnF003 binary(4)Reads + Writes
T194SnnnF004 binary(4)Blocks Transferred
T194SnnnF005 binary(4)Wait Time (.01 secs)
T194SnnnF006 binary(4)Service Time (.01 secs)
```

Extracting Data from Table195

Table195 is the unix buffer statistics table

The Suffix is zeroes or can be omitted

INCLUDE/EXCLUDE Filtering statements are not used

Extract the following elements from the table:

```
T195SnnnF001 binary(4)Bread/s
T195SnnnF002 binary(4)lread/s
T195SnnnF003 binary(4)%Rcache
T195SnnnF004 binary(4)bwrit/s
T195SnnnF005 binary(4)lwrit/s
T195SnnnF006 binary(4)%wcache
T195SnnnF007 binary(4)pread/s
T195SnnnF008 binary(4)pwrit/s
```

Extracting Data from Table196

Table196 is the unix local workstation response

The Suffix is zeroes or can be omitted

INCLUDE/EXCLUDE Filtering statements are not used

Extract the following elements from the table:

```
T196SnnnF001 binary(4)System Calls: Totals
T196SnnnF002 binary(4)                    Sread/s
T196SnnnF003 binary(4)                    Swrite/s
T196SnnnF004 binary(4)                    Fork/s
```

```
T196SnnnF005 binary(4)                    Exec/s
T196SnnnF006 binary(4)                    Readchar/s
T196SnnnF007 binary(4)                    Writechar/s
```

Extracting Data from Table197

Table197 is the unix tty statistics table

The Suffix is zeroes or canare be omitted

INCLUDE/EXCLUDE Filtering statements are not used

Extract the following elements from the table:

```
T197SnnnF001 binary(4)Input Character Count
T197SnnnF002 binary(4)Canon Character Count
T197SnnnF003 binary(4)Output Character Count
T197SnnnF004 binary(4)Receive Count
T197SnnnF005 binary(4)Transmit Count
T197SnnnF006 binary(4)Modem Interrupt Count
```

Extracting Data from Table198

Table198 is the unix table statistics table

The Suffix is zeroes or can be omitted

INCLUDE/EXCLUDE Filtering statements are not used

Extract the following elements from the table:

```
T198SnnnF001 binary(4)Process Table: Entries
T198SnnnF002 binary(4)                      Size
T198SnnnF003 binary(4)                      Overflow Count
T198SnnnF004 binary(4)Inode   Table: Entries
T198SnnnF005 binary(4)                     Size
T198SnnnF006 binary(4)                    Overflow Count
T198SnnnF007 binary(4)File    Table: Entries
T198SnnnF008 binary(4)                    Size
T198SnnnF009 binary(4)                    Overflow Count
T198SnnnF010 binary(4)Lock    Table: Entries
T198SnnnF011 binary(4)                     Size
T198SnnnF012 binary(4)                     Overflow Count
```

Extracting Data from Table199

Table199 is the unix rfs operations statistics table

The Suffix is zeroes or can be omitted

INCLUDE/EXCLUDE Filtering statements are not used

Extract the following elements from the table:

```
T199SnnnF001 binary(4)Opens
T199SnnnF002 binary(4)Creates
T199SnnnF003 binary(4)Lookups
T199SnnnF004 binary(4)Read Directories
T199SnnnF005 binary(4)Get Pages
T199SnnnF006 binary(4)Put Pages
T199SnnnF007 binary(4)Others
```

Extracting Data from Table200

Table200 is the unix rfs activity statistics table

The Suffix is zeroes or can be omitted

INCLUDE/EXCLUDE Filtering statements are not used

Extract the following elements from the table:

```
T200SnnnF001 binary(4)Average Servers On The System
T200SnnnF002 binary(4)Request Queue % Busy
T200SnnnF003 binary(4)Request Queue Avg Length
T200SnnnF004 binary(4)Server % Available
T200SnnnF005 binary(4)Server Average Available
T200SnnnF006 binary(4)Invalidation Msgs Sent
T200SnnnF007 binary(4)Outgoing Rfs Msgs
T200SnnnF008 binary(4)Invalidation Msgs Received
T200SnnnF009 binary(4)Incoming Rfs Messages
T200SnnnF010 binary(4)Invalidation Penalty
T200SnnnF011 binary(4)# Pages Removed By Invalidation
```

Extracting Data from Table224

See Extracting Data From Monthly Summary Tables, on page 2-23.

Extracting Data from Table225

See Extracting Data From Monthly Summary Tables, on page 2-23.

Extracting Data from Table226

See Extracting Data From Monthly Summary Tables, on page 2-23.

Extracting Data from Table238

Table238 is the unix general summary table

The Suffix is zeroes or can be omitted

INCLUDE/EXCLUDE Filtering statements are not used

Extract the following elements from the table:

```
T238SnnnF001 binary(4)    Server % Busy:User
T238SnnnF002 binary(4)    Server % Busy:Local
T238SnnnF003 binary(4)    Server % Busy:Remote
T238SnnnF004 binary(4)    Server % Busy:Wait I/O
T238SnnnF005 binary(4)    Server % Busy:Idle
T238SnnnF006 binary(4)    Overall Inventory Count
T238SnnnF007 binary(4)    Overall Run Queue Length
T238SnnnF008 binary(4)    Overall Run Queue % Occupied
T238SnnnF009 binary(4)    Swap In Ops
T238SnnnF010 binary(4)    Swap Out Ops
T238SnnnF011 binary(4)    Process Switches
T238SnnnF012 binary(4)    Page In Ops
T238SnnnF013 binary(4)    Page Out Ops
T238SnnnF014 binary(4)    Disk % Busy
T238SnnnF015 binary(4)    Disk % Queued
T238SnnnF016 binary(4)    Disk Blocks Transferred
T238SnnnF017 binary(4)    Disk I/O Service Time
T238SnnnF018 binary(4)    Read Cache Hit Ratio
T238SnnnF019 binary(4)    Write Cache Hit Ratio
T238SnnnF020 binary(4)    System Calls:S/Reads
T238SnnnF021 binary(4)    System Calls:S/Writes
T238SnnnF022 binary(4)    System Calls:Forks
T238SnnnF023 binary(4)    System Calls:Execs
T238SnnnF024 binary(4)    System Calls:Readchars
```

```
T238SnnnF025 binary(4)    System Calls:Writechars
T238SnnnF026 binary(4)    TTY Messages Received
T238SnnnF027 binary(4)    TTY Messages Sent
```

Extracting Data from Table240

TABLE240 is the Workload Summary Table

The Suffix number is zeroes or can be omitted.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
         CPU%AGE hourly buckets
T240S000F001 004          CPU Busy Total
T240S000F002 004          CPU Busy TSO
T240S000F003 004          CPU Busy Database
T240S000F004 004          CPU Busy Network
T240S000F005 004          CPU Busy Online
T240S000F006 004          CPU Busy O/S
         Paging activity hourly buckets
T240S000F007 004          Paging Total
T240S000F008 004          Paging TSO
T240S000F009 004          Paging Database
T240S000F010 004          Paging Network
T240S000F011 004          Paging Online
         TSO Summary numbers
T240S000F012 004          TSO Trivial Response Time
T240S000F013 004          TSO Active Users
T240S000F014 004          TSO Transaction Count
         JOB Summary numbers
T240S000F015 004          TOTAL Jobs Per Day
         DASD Summary numbers
T240S000F016 004          % Busy
T240S000F017 004          Queue Delay
T240S000F018 004          Service Time
T240S000F019 004          String Busy
         CHANNEL Summary numbers
T240S000F020 004          % Busy
         JOB Summary numbers
T240S000F021 004          JOB TURNAROUND AVERAGE
```

```
        JOB Summary numbers by generic class
T240S000F022 004          TOTAL Jobs Per Day
T240S000F023 004          TOTAL Jobs Per Day
T240S000F024 004          TOTAL Jobs Per Day
T240S000F025 004          TOTAL Jobs Per Day
T240S000F026 004          TOTAL Jobs Per Day
T240S000F027 004          TOTAL Jobs Per Day
T240S000F028 004          Turnaround Average
T240S000F029 004          Turnaround Average
T240S000F030 004          Turnaround Average
T240S000F031 004          Turnaround Average
T240S000F032 004          Turnaround Average
T240S000F033 004          Turnaround Average
T240S000F034 004          Reserved
T240S000F035 004          Reserved
T240S000F036 004          Reserved
```

Extracting Data from Table241

TABLE241 is the DASM Summary Table

The Suffix number is zeroes or can be omitted.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
T241S000F001 004          DASD Pool 1 Total Allocated
T241S000F002 004          DASD Pool 1 Total Available
T241S000F003 004          DASD Pool 2 Total Allocated
T241S000F004 004          DASD Pool 2 Total Available
T241S000F005 004          DASD Pool 3 Total Allocated
T241S000F006 004          DASD Pool 3 Total Available
T241S000F007 004          DASD Pool 4 Total Allocated
T241S000F008 004          DASD Pool 4 Total Available
T241S000F009 004          DASD Pool 5 Total Allocated
T241S000F010 004          DASD Pool 5 Total Available
T241S000F011 004          DASD Pool 6 Total Allocated
T241S000F012 004          DASD Pool 6 Total Available
```

Extracting Data from Table242

TABLE242 is the CICS Summary Table.

The Suffix is the number from the CPPRERT file for the CICS Region name.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
         Unfiltered averages
T242SnnnF001 004         Average Transactions/Minute/Hour
T242SnnnF002 004         Average Active Terminals/Hour
T242SnnnF003 004         Average Hourly EXCPS/Second
T242SnnnF004 004   .XX   Average Transaction Wait Time
T242SnnnF005 004   .XXX  Average Transaction Cpu Time
T242SnnnF006 004   .XX   Average Transaction P/Fetch Time
T242SnnnF007 004   .XX   Average Transaction Response Time
T242SnnnF008 004   .XXX  Average Transaction CPU Time/Hour
T242SnnnF009 004   .XXX  Average System CPU Time/Hour
T242SnnnF010 004         Average Transactions/Hour
T242SnnnF011 004         Minutes This Hour
         Filtered averages
T242SnnnF012 004         Average Transactions/Minute/Hour
T242SnnnF013 004         Average Active Terminals/Hour
T242SnnnF014 004         Average Hourly EXCPS/Second
T242SnnnF015 004   .XX   Average Transaction Wait Time
T242SnnnF016 004   .XXX  Average Transaction CPU Time
T242SnnnF017 004   .XX   Average Transaction P/Fetch Time
T242SnnnF018 004   .XX   Average Transaction Response Time
T242SnnnF019 004   .XXX  Average Transaction CPU Time/Hour
T242SnnnF020 004   .XXX  Average System CPU Time/Hour
T242SnnnF021 004         Average Transactions/Hour
T242SnnnF022 004         Minutes This Hour
```

Extracting Data from Table243

TABLE243 is the IMS Summary Table.

The Suffix is the number from the CPPRERT file for the IMS Region name.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
         Unfiltered averages
T243SnnnF001 004         Average Transactions/Minute/Hour
T243SnnnF002 004         Average Active Terminals/Hour
T243SnnnF003 004         Average Hourly EXCPS/Second
T243SnnnF004 004   .XX   Average Transaction Wait Time
T243SnnnF005 004   .XXX  Average Transactions CPU Time
T243SnnnF006 004         Average Number Of Terminal Writes
T243SnnnF007 004   .XX   Average Transaction Elapsed Time
T243SnnnF008 004   .XX   Average Transaction Response Time
T243SnnnF009 004   .XXX  Average Transaction CPU Time/Hour
T243SnnnF010 004   .XXX  Average System CPU Time/Hour
T243SnnnF011 004         Average Transactions/Hour
T243SnnnF012 004         Minutes This Hour
         Filtered averages
T243SnnnF013 004         Average Transactions/Minute/Hour
T243SnnnF014 004         Average Active Terminals/Hour
T243SnnnF015 004         Average Hourly EXCPS/Second
T243SnnnF016 004   .XX   Average Transaction Wait Time
T243SnnnF017 004   .XXX  Average Transaction CPU Time
T243SnnnF018 004         Average Number Of Terminal Writes
T243SnnnF019 004   .XX   Average Transaction Elapsed Time
T243SnnnF020 004   .XX   Average Transaction Response Time
T243SnnnF021 004   .XXX  Average Transaction CPUTime/Hour
T243SnnnF022 004   .XXX  Average System CPU Time/Hour
T243SnnnF023 004         Average Transactions/Hour
T243SnnnF024 004         Minutes This Hour
```

Extracting Data from Table244

TABLE244 is the IDMS Summary Table.

The Suffix is the number from the CPPRERT file for the IDMS Region name.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
         Unfiltered averages
T244SnnnF001 004         Average Transactions/Minute/Hour
T244SnnnF002 004         Average Active Terminals/Hour
T244SnnnF003 004         Average Hourly EXCPS/Second
T244SnnnF004 004   .XXX  Average Transaction CPU Time
T244SnnnF005 004   .XX   Average Transaction Response Time
T244SnnnF006 004   .XXX  Average Transaction CPU Time/Hour
T244SnnnF007 004         Average Transactions/Hour
T244SnnnF008 004         Minutes This Hour
         Filtered averages
T244SnnnF009 004         Average Transactions/Minute/Hour
T244SnnnF010 004         Average Active Terminals/Hour
T244SnnnF011 004         Average Hourly EXCPS/Second
T244SnnnF012 004   .XXX  Average Transaction CPU Time
T244SnnnF013 004   .XX   Average Transaction Response Time
T244SnnnF014 004   .XXX  Average Transaction CPU Time/Hour
T244SnnnF015 004         Average Transactions/Hour
T244SnnnF016 004         Minutes This Hour
```

Extracting Data from Table245

TABLE245 is the Network Session Summary Table.

The Suffix is the number from the CPPRERT file for the VTAM Region name.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
         Unfiltered averages
T245SnnnF001 004         Average Transactions/Minute/Hour
T245SnnnF002 004   .XX   Average Active Terminals/Hour
T245SnnnF003 004   .XX   Average Host Response Time
T245SnnnF004 004   .XX   Average Network Response Time
T245SnnnF005 004         Average Hourly Input MSG Length
T245SnnnF006 004         Average Hourly Output MSG Length
T245SnnnF007 004         Transactions In
T245SnnnF008 004         Messages Out
T245SnnnF009 004         Messages:Output Only Devices
T245SnnnF010 004         Minutes This Hour
         Filtered averages
T245SnnnF011 004         Average Transactions/Minute/Hour
T245SnnnF012 004   .XX   Average Active Terminals/Hour
T245SnnnF013 004   .XX   Average Host Response Time
T245SnnnF014 004   .XX   Average Network Response Time
T245SnnnF015 004         Average Hourly Input MSG Length
T245SnnnF016 004         Average Hourly Output MSG Length
T245SnnnF017 004         Transactions In
T245SnnnF018 004         Messages Out
T245SnnnF019 004         Messages:Output Only Devices
T245SnnnF020 004         Minutes This Hour
```

Extracting Data from Table246

TABLE246 is the VTAM Line Summary Table.

The Suffix number is zeroes or can be omitted.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
         All Lines
T246S000F001 004   .XX   Line Busy %
T246S000F002 004         Line Traffic Inbound Kilobytes
T246S000F003 004         Line Traffic Outbound Kilobytes
T246S000F004 004   .XX   Line Traffic Retransmitted Kilobytes
         Line Group 1
T246S000F005 004   .XX   Line Busy %
T246S000F006 004         Line Traffic Inbound Kilobytes
T246S000F007 004         Line Traffic Outbound Kilobytes
T246S000F008 004   .XX   Line Traffic Retransmitted Kilobytes
         Line Group 2
T246S000F009 004   .XX   Line Busy %
T246S000F010 004         Line Traffic Inbound Kilobytes
T246S000F011 004         Line Traffic Outbound Kilobytes
T246S000F012 004   .XX   Line Traffic Retransmitted Kilobytes
         Line Group 3
T246S000F013 004   .XX   Line Busy %
T246S000F014 004         Line Traffic Inbound Kilobytes
T246S000F015 004         Line Traffic Outbound Kilobytes
T246S000F016 004   .XX   Line Traffic Retransmitted Kilobytes
         Line Group 4
T246S000F017 004   .XX   Line Busy %
T246S000F018 004         Line Traffic Inbound Kilobytes
T246S000F019 004         Line Traffic Outbound Kilobytes
T246S000F020 004   .XX   Line Traffic Retransmitted Kilobytes
         Line Group 5
T246S000F021 004   .XX   Line Busy %
T246S000F022 004         Line Traffic Inbound Kilobytes
T246S000F023 004         Line Traffic Outbound Kilobytes
T246S000F024 004   .XX   Line Traffic Retransmitted Kilobytes
         Line Group 6
T246S000F025 004   .XX   Line Busy %
```

```
T246S000F026 004         Line Traffic Inbound Kilobytes
T246S000F027 004         Line Traffic Outbound Kilobytes
T246S000F028 004   .XX   Line Traffic Retransmitted Kilobytes
```

Extracting Data from Table247

TABLE247 is the VTAM NCP Summary Table.

The Suffix number is zeroes or can be omitted.

INCLUDE/EXCLUDE Filtering statements are not used.

Extract the following elements from the table:

```
*   1ST NCP numbers
T247S000F001 004    .XX   NCP Average Percent Busy
T247S000F002 004    .XX   NCP Busy At Percentage 1
T247S000F003 004    .XX   NCP Busy At Percentage 2
T247S000F004 004    .XX   NCP Busy At Percentage 3
T247S000F005 004    .XX   NCP Busy At Percentage 4
T247S000F006 004    .XX   NCP Busy At Percentage 5
T247S000F007 004    .XX   NCP Buffers Available
T247S000F008 004    .XX   NCP Free Buffer High Water Mark
T247S000F009 004    .XX   NCP Free Buffer Low Water Mark
*   2ND NCP numbers
T247S000F010 004    .XX   NCP Average Percent Busy
T247S000F011 004    .XX   NCP Busy At Percentage 1
T247S000F012 004    .XX   NCP Busy At Percentage 2
T247S000F013 004    .XX   NCP Busy At Percentage 3
T247S000F014 004    .XX   NCP Busy At Percentage 4
T247S000F015 004    .XX   NCP Busy At Percentage 5
T247S000F016 004    .XX   NCP Buffers Available
T247S000F017 004    .XX   NCP Free Buffer High Water Mark
T247S000F018 004    .XX   NCP Free Buffer Low Water Mark
*   3RD NCP numbers
T247S000F019 004    .XX   NCP Average Percent Busy
T247S000F020 004    .XX   NCP Busy At Percentage 1
T247S000F021 004    .XX   NCP Busy At Percentage 2
T247S000F022 004    .XX   NCP Busy At Percentage 3
T247S000F023 004    .XX   NCP Busy At Percentage 4
T247S000F024 004    .XX   NCP Busy At Percentage 5
T247S000F025 004    .XX   NCP Buffers Available
```

```
T247S000F026 004    .XX   NCP Free Buffer High Water Mark
T247S000F027 004    .XX   NCP Free Buffer Low Water Mark
*   4TH NCP numbers
T247S000F028 004    .XX   NCP Average Percent Busy
T247S000F029 004    .XX   NCP Busy At Percentage 1
T247S000F030 004    .XX   NCP Busy At Percentage 2
T247S000F031 004    .XX   NCP Busy At Percentage 3
T247S000F032 004    .XX   NCP Busy At Percentage 4
T247S000F033 004    .XX   NCP Busy At Percentage 5
T247S000F034 004    .XX   NCP Buffers Available
T247S000F035 004    .XX   NCP Free Buffer High Water Mark
T247S000F036 004    .XX   NCP Free Buffer Low Water Mark
*   5TH NCP numbers
T247S000F037 004    .XX   NCP Average Percent Busy
T247S000F038 004    .XX   NCP Busy At Percentage 1
T247S000F039 004    .XX   NCP Busy At Percentage 2
T247S000F040 004    .XX   NCP Busy At Percentage 3
T247S000F041 004    .XX   NCP Busy At Percentage 4
T247S000F042 004    .XX   NCP Busy At Percentage 5
T247S000F043 004    .XX   NCP Buffers Available
T247S000F044 004    .XX   NCP Free Buffer High Water Mark
T247S000F045 004    .XX   NCP Free Buffer Low Water Mark
*   6TH NCP numbers
T247S000F046 004    .XX   NCP Average Percent Busy
T247S000F047 004    .XX   NCP Busy At Percentage 1
T247S000F048 004    .XX   NCP Busy At Percentage 2
T247S000F049 004    .XX   NCP Busy At Percentage 3
T247S000F050 004    .XX   NCP Busy At Percentage 4
T247S000F051 004    .XX   NCP Busy At Percentage 5
T247S000F052 004    .XX   NCP Buffers Available
T247S000F053 004    .XX   NCP Free Buffer High Water Mark
T247S000F054 004    .XX   NCP Free Buffer Low Water Mark
```

Extracting Data from Table248

TABLE248 is an ESA PR/SM Summary Table.

Data Extraction is not supported, as this is an internal table.

Extracting Data from Table249

TABLE249 is a DB2 System Wide Summary Table.

Data Extraction is not supported, as this is an internal table.

Extracting Data from Table250

TABLE250 is a DB2 Connect Name Summary Table.

Data Extraction is not supported, as this is an internal table.

JCL

The following JCL is used as a model for constructing a JOB to execute SSA1TBLX. This JCL is found in machine readable form in member DUTLTBLX in the &PREFIX.CPPR.Vnnn.CNTL library.

```
//SSATBLX  JOB (...),'SSA',CLASS=A,MSGCLASS=X
/*JOBPARM S=*
//ST1 EXEC PGM=SSA1TBLX,REGION=0M
//STEPLIB  DD DSN=&PREFIX.CPPR.V530.LOADLIB,DISP=SHR
//SYSNAP   DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//INDEX    DD DISP=SHR,DSN=&PREFIX.CPPR.V530.INDEX.WKLD
//ONLINE   DD DISP=SHR,DSN=&PREFIX.CPPR.V530.ONLINE.WKLD
//CPPRERT  DD DISP=SHR,DSN=&PREFIX.CPPR.V530.CPPRERT
//CIMSPASS DD DISP=SHR,DSN=&PREFIX.CPPR.V530.CNTL(CIMSNUM)
//CPPRPARM DD DISP=SHR,DSN=&PREFIX.CPPR.V530.PARMLIB
//*****************************************************************
//*  THE FOLLOWING DD STATEMENT DEFINES THE OUTPUT FILE FOR THE   *
//*    FORMATTED TABLE(S) WHICH ARE TO BE PRODUCED                *
//*****************************************************************
//SYSUT2   DD DSN=OUTPUT.UNLD,DISP=(,CATLG),UNIT=SYSDA,
//          DCB=(RECFM=VB,BLKSIZE=32004,LRECL=32000,DSORG=PS),
//          SPACE=(CYL,(35,10))
//SYSPRINT DD SYSOUT=*
//SYSMSGS  DD  SYSOUT=*
//*****************************************************************
//*  THE FOLLOWING DD STATEMENT LIMITS THE RANGE OF ELEMENTS      *
//*    FOR WHICH CELLS ARE TO BE EXTRACTED.                       *
//*  IN THE CASE OF A DASD TABLE, SPECIFY A VOL SER               *
//*  IN THE CASE OF A CICS TRANSACTION TABLE, SPECIFY A XACTN NAME*
//*  FOR A DSNAME TABLE, SPECIFY A VOLSER (YOU CAN ALSO SPECIFY   *
//*    A DSNAME IN THE SYSIN TO FURTHER QUALIFY THE OUTPUT)       *
//*  ETC.  PLEASE REFER TO APPENDIX A1 IN THE USERS GUIDE.        *
//*****************************************************************
//INCLUDE DD  *
MVSRES
/*
//*****************************************************************
//*  THE FOLLOWING DD STATEMENT IS USED FOR A LISTING OF THE      *
```

```
//*    DATA PRODUCED BY THE SYSTSO STATEMENT IN THE SYSIN        *
//*****************************************************************
//SYSTSOO8 DD SYSOUT=*
//*****************************************************************
//*  THE FOLLOWING DD STATEMENT SPECIFIES THE TABLE TO BE USED    *
//*    AS WELL AS THE SPECIFIC FIELDS WHICH ARE TO BE EXTRACTED.  *
//*  PLEASE REFER TO THE TABLE EXTRACT UTILITY SECTION            *
//*  OF THE CPPR REFERENCE GUIDE FOR FURTHER INFORMATION.         *
//*****************************************************************
//TBLXIN  DD  *
TOO1FOO1      /*   DASD ACTIVITY TABLE  FIELD 1  */
/*
//*****************************************************************
//*  THE FOLLOWING DD STATEMENT CONTROLS THE FORMAT OF THE SYSUT2 *
//*    AS WELL AS THE SPECIFIC DATE AND TIME RANGE FOR THE DATA   *
//*    WHICH IS TO BE EXTRACTED.                                  *
//*****************************************************************
//SYSIN    DD *
*  FOR MONTHLY SUMMARY TABLES, INDICATE THE SEGMENT NUMBER
SEGMENT NUMBER=1
*  WHICH SYSTEM?
SELECTED SYSTEM=*
*  WHAT DATE RANGE?
BEGIN DATE=05/10/2004
END DATE=05/11/2004
*  WHAT TIME RANGE?
BEGIN TIME=00.00
END TIME=24.00
*   THE FOLLOWING STATEMENT CREATES A LISTING OF THE ELEMENTS IN THE
*    SYSTSOO8 FILE.
SYSTSO
*   THE USE OF THE FILTER STATEMENT CAUSES THE TBLX PROGRAM TO CREATE
*    THE OUTPUT FILE (SYSUT2) IN A DIFFERENT FORMAT.  THE STANDARD
*    FORMAT AS DESCRIBED IN THE USERS GUIDE DOES NOT SUPPORT ELEMENT
*    KEYS LONGER THAN 8 CHARACTERS (IT IS A FIXED FORMAT) NOR DOES
*    IT SUPPORT YEAR 2000 DATE FORMS.  THE NEW FORMAT IS SIMILAR TO
*    THE FORMAT OF AN RMF RECORD, WITH A HEADER IN STANDARD SMF FORM:
*        XL2  LENGTH OF THE RECORD
```

```
*        XL2  FILLER
*        XL1  TABLE NUMBER FROM WHICH THE DATA WAS EXTRACTED
*        XL1  TABLE SUFFIX FROM WHICH THE DATA WAS EXTRACTED
*        XL4  TIME IN HUNDREDTHS OF A SECOND
*        PL4  JULIAN DATE
*        CL4  SMF SID
*        XL2  FILLER
*        XL4  OFFSET TO THE DATE FIELD
*        XL2  LENGTH OF THE DATE FIELD
*        XL2  COUNT OF DATE FIELDS (ALWAYS 1)
*        XL4  OFFSET TO THE TIME FIELD
*        XL2  LENGTH OF THE TIME FIELD
*        XL2  COUNT OF TIME FIELDS (ALWAYS 1)
*        XL4  OFFSET TO THE KEY FIELD
*        XL2  LENGTH OF THE KEY FIELD
*        XL2  COUNT OF KEY FIELDS (ALWAYS 1)
*        XL4  OFFSET TO THE VALUE FIELD
*        XL2  LENGTH OF EACH VALUE FIELD
*        XL2  COUNT OF VALUE FIELDS (DEPENDING ON THE TBLXIN INPUT)
*    THE FORMAT OF THE FIELDS THEMSELVES IS AS FOLLOWS:
*      THE DATE FIELD:
*        XL1  LENGTH OF THE DATE FIELD, INCLUDING THIS BYTE
*        XL1  FORMAT (SEE FILTER+00) OF THE FIELD
*        XL.  THE DATE AS SPECIFIED IN FILTER+00
*      THE TIME FIELD:
*        XL1  LENGTH OF THE TIME FIELD, INCLUDING THIS BYTE
*        XL1  FORMAT (SEE FILTER+01) OF THE FIELD
*        XL.  THE TIME AS SPECIFIED IN FILTER+01
*      THE KEY FIELD:
*        XL1  LENGTH OF THE KEY FIELD, INCLUDING THIS BYTE
*        XL.  THE ELEMENT KEY
*      THE VALUE FIELD:
*        XL1  LENGTH OF THE VALUE FIELD, INCLUDING THIS BYTE
*        XL1  THE ORIGINAL FIELD NUMBER OF THIS VALUE (SEE TBLXIN)
*        XL1  FORMAT (SEE FILTER+03) OF THE VALUE
*        XL.  THE VALUE AS SPECIFIED IN FILTER+03
FILTER=00,00,00,00
*   FILTER+00 IS THE DATE FORMAT FLAG
```

```
*     DATE FORMS SUPPORTED ARE:
*          00  ==> JULIAN PACKED PL4'00YYDDDC'  *DEFAULT*
*          01  ==> JULIAN PACKED PL4'CCYYDDDC'
*          02  ==> GREGORIAN PACKED PL4'0MMDDYYC'
*          03  ==> GREGORIAN PACKED PL5'0MMDDCCYYC'
*          04  ==> GREGORIAN PACKED PL4'0YYMMDDC'
*          05  ==> GREGORIAN PACKED PL5'0CCYYMMDDC'
*          06  ==> GREGORIAN PACKED PL4'0DDMMYYC'
*          07  ==> GREGORIAN PACKED PL5'0DDMMCCYYC'
*          10  ==> JULIAN CHARACTER CL5'YYDDD'
*          11  ==> JULIAN CHARACTER CL7'CCYYDDD'
*          12  ==> GREGORIAN CHARACTER CL8'MM/DD/YY'
*          13  ==> GREGORIAN CHARACTER CL10'MM/DD/CCYY'
*          14  ==> GREGORIAN CHARACTER CL8'YY/MM/DD'
*          15  ==> GREGORIAN CHARACTER CL10'CCYY/MM/DD'
*          16  ==> GREGORIAN CHARACTER CL8'DD.MM.YY'
*          17  ==> GREGORIAN CHARACTER CL10'DD.MM.CCYY'
*   FILTER+01 IS THE TIME FORMAT FLAG
*     TIME FORMS SUPPORTED ARE:
*        00  ==> .XX SECONDS BINARY FULLWORD   *DEFAULT*
*        10  ==> .XX SECONDS CHARACTERS HHMMSSHH
*   FILTER+02 IS THE OUTPUT FORMAT FLAG
*     OUTPUT FORMATS SUPPORTED ARE:
*        00  ==> STANDARD FORMAT WITH TRIPLETS *DEFAULT*
*        01  ==> CIMS SERVER DELIMITED ASCII (TEXT) FORMAT
*   FILTER+03 IS THE VALUE FORMAT FLAG
*     TIME FORMS SUPPORTED ARE:
*        00  ==> FULLWORD BINARY: XL4'00'
*        01  ==> SHORT FORM FLOATING POINT
*        02  ==> LONG FORM FLOATING POINT
*        10  ==> DISPLAY FORMAT: CL16'00000000000'
```

Print a Selected Set of HGDLIB Members (SSA1HGDF)

There might be occasions where it becomes desirable to produce a formatted listing of the contents of one or more selected HGDLIB members. The HGDLIB print utility (SSA1HGDF) provides this capability. Specify which HGDLIB members are to be printed through the use of the //INCLUDE facility or which HGDLIB members are not to be printed through the use of the //EXCLUDE facility. Due to the large number of HGDLIB members that can be printed, using the //EXCLUDE has the potential of printing a large number of HGDLIB members.

Parameters

The parameters required to run the SSA1HGDF utility consist of one //SYSIN parameter and a set of //INCLUDE or //EXCLUDE entries defining the HGDLIB members to be printed.

//SYSIN Parameter

SYSTSO—Specifies that the printed output is to be directed to the SYSOUT data set defined by the DD Statement //SYSTS008.

//INCLUDE List

The Include list contains a list of the HGDLIB members that are to be printed. Multiple members must be separated by commas. The list might occupy more than one line. The Wildcard character "*" is used to specify that all member names that compare equally up to the point of the "*" are to be included . For example, the entry IPO12* would result in all members whose names begin with the characters IPO12 being printed.

JCL

Use the following JCL as a model for constructing a JOB to execute SSA1HGDF. This JCL is found in machine readable form in member DUTLHGDF in the &PREFIX.CPPR.Vnnn.CNTL library.

```
//DUTLHGDF  JOB (...),'SSA',CLASS=A,MSGCLASS=X
//ST1       EXEC  PGM=SSA1HGDF
//STEPLIB   DD  DSN=&PREFIX.CPPR.Vnnn.LOADLIB,DISP=SHR
//SYSNAP    DD  SYSOUT=*
//SYSUDUMP  DD  SYSOUT=*
//SYSUT1    DD  DSN=&PREFIX.CPPR.Vnnn.HGDLIB,DISP=SHR
//SYSPRINT  DD  SYSOUT=*
//SYSTS008  DD  SYSOUT=*
//SYSIN     DD  *
//SYSTSO
//INCLUDE   DD  *
//IPO12C1,IPO12C2,IPO13*
```

Checking for Unprocessed Intervals in the Performance Database (SSA1GAPS)

While reducing data with the Workload Subsystem, occasionally periods of data might be omitted from the input (lost tapes, bad input media, or inadvertent oversights). The CIMS Capacity Planner utility program, SSA1GAPS, detects any fifteen minute period for which no data was reduced. This can include periods where no data was available (an IPL, for instance) or might represent periods that can be recovered by locating the original SMF/RMF data and processing it through SSA1WKLD. In either case, the SSA1GAPS program will list those periods from which Workload data is missing.

Parameters

BEGIN DATE—specifies the beginning of the period for which the scan is effective.

END DATE—specifies the end of the period for which the scan is effective.

SELECTED SYSTEM—specifies the SMF SID of the system to which the scan applies.

JCL

Use the following JCL as a model for constructing a JOB to execute SSA1GAPS. This JCL is found in machine readable form in member DUTLGAPS in the `&PREFIX.CPPR.Vnnn.CNTL` library.

```
//DUTLGAPS  JOB (...),'SSA',CLASS=A,MSGCLASS=X
//ST1       EXEC  PGM=SSA1GAPS
//STEPLIB   DD  DSN=&PREFIX.CPPR.Vnnn.LOADLIB,DISP=SHR
//SYSNAP    DD  SYSOUT=*
//SYSUDUMP  DD  SYSOUT=*
//ONLINE    DD  DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.ONLINE.WKLD
//INDEX     DD  DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.INDEX.WKLD
//CPPRPARM  DD  DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.PARMLIB
//CPPRERT   DD  DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.CPPRERT
//CIMSPASS DD DISP=SHR,DSN=&PREFIX.CPPR.V530.CNTL(CIMSNUM)
//SYSPRINT  DD  SYSOUT=*
//SYSMSGS   DD  SYSOUT=*
//SYSIN     DD  *
BEGIN DATE=03/01/97
END DATE=06/15/97
SELECTED SYSTEM=MVSA   WHERE MVSA IS THE SMF SID  -OR-
SELECTED SYSTEM=*      THE SMF SID OF THE SYSTEM ON WHICH THE JOB
//*                    WILL BE RUN
```

The Table Update Utility (SSA1TBLU)

A utility, SSA1TBLU, has been provided that allows you to update one or more specific fields in the Performance Data Base. The nature of the CIMS Capacity Planner database file structure is necessarily complex. The Table Extract utility, SSA1TBLX, described in the previous section allows you to select a specific table within the database, and to examine a specific field for a particular time on a particular date. The Table Update Utility allows you to actually change the contents of that field as well.

The first step in this procedure is to execute the Table Extract Utility so that the data in the field to be changed is in a manageable state. This results in a sequential file (VB) being written to SYSUT2 that has a header containing a description of the Table number, the time and date and, if necessary, the key value (e.g., transaction name) associated with the segment that contained the selected field. The contents of the field(s) follow the header. They are presented in their original binary form.

It is important to note that the origin of the data in each of the subsequent fields is determined by the incoming TBLXIN DD statements. That is, if tyou wanted to see the contents of field 3 followed immediately by the contents of field 6, this arrangement is easily achieved. This means that the values are no longer intrinsically associated with a specific field once they have passed through the Table Extract Utility.

From the point of view of the Table Update Utility, in order to update a specific field, it is important to know where the original data came from. Or at least to know where the new values are to be stored. Therefore, the data that is produced by the Table Extract Utility must represent the contents of each of the fields in a segment in the order in which they occur in the table.

Once the data is in a sequential file, it is a simple matter to modify the contents of the field(s) using either a batch program or an online editor such as ISPF/PDF. Be careful not to modify the descriptive information in the header, as it provides a road map back to the field(s) to be altered.

The last step is to send the altered data through the Table Update Utility (via SYSUT1) and update the database. A sample of the JCL for this process is shown below.

```
//JOB  JOB  (...)
//STEP1EXEC PGM=SSA1TBLU
//SYSPRINT DD  SYSOUT=*
//SYSMSGS  DD  SYSOUT=*
//SYSUT1   DD  DISP=OLD,DSN=EDITED.OUTPUT.FROM.SSA1TBLX
//SYSUT3   DD  SPACE=(CYL,(30,30)),UNIT=SYSDA
//ONLINE   DD  DISP=SHR,DSN=SYS2.CPPR.ONLINE.WKLD
//INDEX    DD  DISP=SHR,DSN=SYS2.CPPR.INDEX.WKLD
//SYSIN    DD  DUMMY
```

The Library Member Transfer Utility (SSA1LIBX)

A utility, SSA1LIBX, has been provided that allows you to gather one or more HGDLIB or LNGVLIB members into a sequential file for subsequent down load to a PC. This utility also converts the data from fixed blocked to variable format and removes trailing blanks from each line of data. Entirely blank lines are eliminated from the file. Individual members are separated by an identifying statement that is used by the PC-resident Unpacker utility to split the members back into individual .CSV files on the PC.

Library members to be placed in the sequential file are selected through the use of the INCLUDE/EXCLUDE facility. The sequential file is written to the SYSUT2 file. Optionally, the individual members can also be written to an XFRLIB library for later processing with the Library Member Merge Utility (SSA1LIBM) described below.

A sample of the JCL for this process is shown below. The JCL is found in the distributed CNTL library under the member name DUTLLIBX.

```
//SSAUTIL  JOB (...),'SSA',CLASS=A,MSGCLASS=X
//* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//* THIS JOBSTREAM MAY BE USED FOR ONE OF TWO PURPOSES (OR BOTH):
//*
//*  1. GATHER A GROUP OF FIXED BLOCKED CHARACTER LIBRARY MEMBERS
//*        (FOR EXAMPLE, HGDLIB MEMBERS OR LNGVLIB MEMBERS)
//*      INTO A LARGE (VBS) FLAT FILE, ELIMINATING TRAILING BLANKS AND
//*      ENTIRELY BLANK LINES, SEPARATE THE MEMBERS BY TEXT SO THAT
//*      AN UNPACKER UTILITY ON THE PC CAN BE USED TO SEPARATE THEM
//*      BACK INTO INDIVIDUAL .CSV FILES.
//*
//*  2. GATHER A GROUP OF FIXED BLOCKED CHARACTER LIBRARY MEMBERS
//*        (FOR EXAMPLE, HGDLIB MEMBERS OR LNGVLIB MEMBERS)
//*      INTO A VBS PDS, ELIMINATING TRAILING BLANKS AND
//*      ENTIRELY BLANK LINES, SUITABLE FOR DOWNLOADING WITH LANRES
//*      OR A SIMILAR UTILITY WHICH HANDLES VARIABLE BLOCKED FILES.
//*
//* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//STO01 EXEC PGM=SSA1LIBX,REGION=4096K,TIME=60
//STEPLIB DD DSN=&PREFIX.CPPR.Vnnn.LOADLIB,DISP=SHR
//SYSNAP   DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//CPPRPARM DD DSN=&PREFIX.CPPR.Vnnn.PARMLIB,DISP=SHR
//CPPRERT  DD DSN=&PREFIX.CPPR.Vnnn.CPPRERT,DISP=SHR
//CIMSPASS DD DISP=SHR,DSN=&PREFIX.CPPR.V530.CNTL(CIMSNUM)
//SYSIN DD DUMMY
```

```
//SYSPRINT DD SYSOUT=*
//* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//*
//* THE FOLLOWING DD STATEMENT IS USED TO IDENTIFY THE LIBRARY
//*  CONTAINING THE SELECTED MEMBERS. (SEE INCLUDE DD BELOW)
//*
//* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//SYSUT1   DD DSN=&PREFIX.CPPR.V303.HGDLIB,DISP=SHR
//* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//*
//* THE FOLLOWING DD STATEMENT IS USED TO CREATE A VBS FLAT FILE
//*  CONTAINING THE BODY OF EACH OF THE SELECTED MEMBERS, EACH
//*   SET SEPARATED BY "MEMBER NAME= ........"
//* TRAILING BLANKS AND BLANK LINES ARE DROPPED.
//*
//* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//SYSUT2   DD DISP=(,CATLG),DSN=&PREFIX.CPPR.VLRFILE,
//         SPACE=(TRK,(10,10)),
//         UNIT=SYSDA
//* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//*
//* THE FOLLOWING DD STATEMENT IS USED TO CREATE A VARIABLE BLOCKED PDS
//*  CONTAINING EACH OF THE SELECTED MEMBERS.
//* TRAILING BLANKS AND BLANK LINES ARE DROPPED.
//*
//* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//XFRLIB    DD DISP=(,CATLG),DSN=&PREFIX.CPPR.XFRFILE,
//          SPACE=(TRK,(10,10,10)),
//          UNIT=SYSDA
//* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//*
//* THE FOLLOWING DD STATEMENT IS USED TO SELECT THE MEMBERS WHICH WILL
//*  BE INCLUDED IN EITHER THE SYSUT2 OR THE XFRLIB FILES.
//*
//* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//INCLUDE DD *
IPO110*
```

The Library Member Merge Utility (SSA1LIBM)

A utility, SSA1LIBM, has been provided that allows you to gather one or more columns of data from one or more HGDLIB members and place them into a newly created member. The resultant member is in variable blocked format and contains up to 21 columns of data. You might also want to change the labels for each column of data. The new names can each be up to sixteen characters in length, and can be in upper or lower case.

You are responsible for the granular integrity of the data within a newly created member. Therefore it is suggested that data be merged from like Object members (i.e., Hourly, Daily, Weekly, Monthly) and that the Prime Shift values for each of the Object members be the same.

A sample of the JCL for this process is shown below. The JCL is found in the distributed CNTL library under the member name DUTLLIBM.

```
//DUTLLIBM JOB (...),'SSA',CLASS=A,MSGCLASS=X
//*--------------------------------------------------------------------
//* This utility is used to build a VLR member in the XFRLIB which is
//*  composed of columns from one or more members in the HGDLIB.
//*
//* An output member may be up to 20 columns wide.
//*
//* Each column is built from a combination of one or more columns from
//*  one or more members in the HGDLIB.
//*
//* The user may specify labels for each column in the output member,
//*  and those labels may be up to 16 characters long in upper/lower
//*   case.
//*--------------------------------------------------------------------
//ST1      EXEC PGM=SSA1LIBM
//STEPLIB  DD DSN=&PREFIX.CPPR.Vnnn.LOADLIB,DISP=SHR
//SYSNAP   DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//SYSUT1   DD DSN=&PREFIX.CPPR.Vnnn.HGDLIB,DISP=SHR
//CPPRPARM DD DSN=&PREFIX.CPPR.Vnnn.PARMLIB,DISP=SHR
//CPPRERT  DD DSN=&PREFIX.CPPR.Vnnn.CPPRERT,DISP=SHR
//CIMSPASS DD DISP=SHR,DSN=&PREFIX.CPPR.V530.CNTL(CIMSNUM)
//SYSPRINT DD SYSOUT=*
//*--------------------------------------------------------------------
//* The following statement defines the library from which the input
//*  members are to come.  It may be the HGDLIB.
```

```
//*-------------------------------------------------------------------
//HGDLIB   DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.HGDLIB
//*-------------------------------------------------------------------
//* The following statement defines a VLR library which will be used
//*  to hold the member created in this step.  LRECL=4096.
//*-------------------------------------------------------------------
//XFRLIB   DD DISP=SHR,DSN=&PREFIX.CPPR.Vnnn.XFRLIB
//SYSIN    DD DUMMY
//MBRDEFN  DD *
*
* These statements describe each input column which will be used in
*  constructing the output member.  The fields are as follows:
*
*                      Statement Identifier, used by OUTPUT COLUMN...
*                      |
*                      |  Member Name in HGDLIB
*                      |  |
*                      |  |       Column in Member (OO is X-Axis Label
*                      |  |       |
INPUT COLUMN DEFINITION=01,IPO1101,01
INPUT COLUMN DEFINITION=02,IPO1101,02
INPUT COLUMN DEFINITION=03,IPO1101,03
INPUT COLUMN DEFINITION=04,IPO1101,04
INPUT COLUMN DEFINITION=05,IPO1101,05
INPUT COLUMN DEFINITION=06,IPO1101,06
*
* These statements describe each output column which will be built in
*  the member which will be written to the XFRLIB library
*
*                       Output Column Number (OO is Not Used)
*                       |
*                       |  Input Statement which describes the origin
*                       |  |
*                       |  |      Legend Label (16 bytes, upper/lower)
*                       |  |      |
OUTPUT COLUMN DEFINITION=01,((06)),Used to be 06
OUTPUT COLUMN DEFINITION=02,((05)),Used to be 05
OUTPUT COLUMN DEFINITION=03,((04)),Used to be 04
```

```
OUTPUT COLUMN DEFINITION=04,((03)),Used to be 03
OUTPUT COLUMN DEFINITION=05,((02)),Used to be 02
OUTPUT COLUMN DEFINITION=06,((01)),Used to be 01
OUTPUT COLUMN DEFINITION=07,((1+2+3+4+5+6)),Sum Total
OUTPUT COLUMN DEFINITION=08,((1+2+3+4+5+6)/'100'),Sum Total Scaled
*
* This statement names the member
*
OUTPUT MEMBER NAME=FIRSTEST
```

3

CIMS Capacity Planner Graphs

General Guidelines

The process of building a graph using a PC program such as EXCEL or Harvard Graphics is greatly simplified with CIMS Capacity Planner. The templates for each graph are distributed on a floppy disk and are copied to the hard disk of the PC that is used to create the graphs. The template describes the "body" of the graph. That is, the template contains information regarding the type of graph that is to be built (Pie, Bar, Mixed), the colors that represent the various objects, some minimal labeling information (X-Axis, Y-Axis), line sizing and footnotes.

The actual data for each graph is contained in the HGDLIB, a Partitioned Dataset that resides with the Host Processor. The HGDLIB is built by batch jobs executed on the Host processor. These Batch Jobs reduce data from the Performance Database into one or more individual Data Point members of the HGDLIB, each representing the data for a specific graph.

These Data Point members are then down-loaded from the Host to a PC using some sort of file transfer protocol (IND$FILE is one of the more popular methods). Finally the PC Graphing program (e.g, Harvard Graphics or EXCEL) is started, the template is fetched from the directory where it was stored, and the Data Point Member for the specific graph is imported into the Template to form a graph.

Definition of CIMS Capacity Planner Graph Characteristics

CIMS Capacity Planner graphs are available in one of four styles:

- Hourly
- Daily
- Weekly
- Monthly

The characteristics of each style is explained below.

Hourly Graph Data Representation (p=1)

The data in an Hourly graph represents the average value for that hour, for all the days in the date range (BEGIN DATE:END DATE). The batch job that creates the Data Point member allows you to specify which days are included (SELECTED DAY). If no SELECTED DAY statement is found, the SELECTED DAY defaults to WEEKDAYS. It is also possible to exclude HOLIDAYS from the average calculation.

The hourly values will include all hours in the defined Prime Shift (PRIME SHIFT FIRST HOUR:LATE SHIFT FIRST HOUR). You can optionally exclude the Lunch break (LUNCH BREAK BEGIN HOUR:LUNCH BREAK END HOUR) from the graph.

Daily Graph Data Representation (p=2)

The data in a Daily graph represents the average Prime Shift value, for each of the days in the date range (BEGIN DATE:END DATE). The batch job that creates the Data Point member allows you to specify which days are included (SELECTED DAY). If no SELECTED DAY statement is found, the SELECTED DAY defaults to WEEKDAYS. It is also possible to exclude HOLIDAYS from the graph.

The daily averages are for all hours in the defined Prime Shift (PRIME SHIFT FIRST HOUR:LATE SHIFT FIRST HOUR). You can optionally exclude the Lunch break (LUNCH BREAK BEGIN HOUR:LUNCH BREAK END HOUR) from the graph.

Weekly Graph Data Representation (p=3)

Each data point in a Weekly graph represents the average Prime Shift value for a given week, for each of the weeks in the date range (BEGIN DATE:END DATE). The batch job that creates the Data Point member allows you to specify which days are included (SELECTED DAY) to derive the weekly average. If no SELECTED DAY statement is found, the SELECTED DAY defaults to WEEKDAYS. It is also possible to exclude HOLIDAYS from the weekly average calculation.

The weekly averages are for all hours in the defined Prime Shift (PRIME SHIFT FIRST HOUR:LATE SHIFT FIRST HOUR). You can optionally exclude the Lunch break (LUNCH BREAK BEGIN HOUR:LUNCH BREAK END HOUR) from the graph.

Monthly Graph Data Representation (p=4)

Each data point in a Monthly graph represents the average Prime Shift value for a given month, for each of the months in the date range (BEGIN DATE:END DATE). Normally, monthly graph data point members are created using monthly summary tables (see **Building Summary Tables (SSA1SUMM),** on page 2-13). It is also possible to use the original detail tables to build monthly graphs. In this case, the batch job that creates the Data Point member allows you to specify which days are included (SELECTED DAY) to derive the monthly average. If no SELECTED DAY statement is found, the SELECTED DAY defaults to WEEKDAYS. It is also possible to exclude HOLIDAYS from the monthly average calculation.

The monthly averages are for all hours in the defined Prime Shift (PRIME SHIFT FIRST HOUR:LATE SHIFT FIRST HOUR). You can optionally exclude the Lunch break (LUNCH BREAK BEGIN HOUR:LUNCH BREAK END HOUR) from the graph.

Building Presentation with Harvard Graphics

The old MS/DOS based Harvard Graphics was the earliest Presentation Graphics tool supported by the CIMS Capacity Planner family of subsystems. In fact, Harvard Graphics Release 2.3 was the simplest of the packages to use. Graph templates were distributed on a floppy disk. A separate sub-directory was used for each subsystem. You simply copied the templates to the hard disk and, when it was time to create a graph, (in Harvard Graphics terminology, a "Chart") you fetched a template, imported the data point member into the template and the graph was created. You also had the option of logically grouping several charts together in s Slide Show, that could then be displayed through a Slide Show utility, independent from the actual Harvard Graphics program. There was a limitation of 99 Charts in a Slide Show.

When Software Publishing came up with Release 3.0, the rules changed. It was no longer possible to simply import data into a template to form a Chart. Now it was necessary to map the data into the template, providing a good deal of flexibility but at the same time, involving a certain degree of manual intervention. Charts could still be grouped together into Slide Shows, with the same limitation of 99 Charts per show.

The CIMS Capacity Planner solution for this release was to build a series of Harvard Graphics Macros for each subsystem. Each macro represented the key strokes needed to build one or more graphs. In addition, a set of `.BAT` files were included to tailor the Macros to a specific location (SMF SID, Sub-directory name). In order to build a Chart, you loaded the Macro, executed the macro, identified the graph and the Macro performed the task of mapping the data into the template and creating the graph.

Now each subsystem occupied a separate floppy disk, including Macros and templates. The Macros had built-in limitations that made the task of creating the Macros as well as the graphs somewhat cumbersome, and, as the number of graphs available within each subsystem grew, the task of maintaining the Macros became rather substantial.

With the advent of Harvard Graphics for Windows (Release 3.0), the task of building graphs has become much easier. Only the terminology has changed. Instead of charts, graphs are now called "Slides". Instead of a Slide Show, the set of Slides is called a Presentation. Now the templates for each of the Slides in the Presentation are "Linked" to the data point members so when the Presentation is Opened, the current data is automatically mapped into the Slides in the Presentation. In this manner, the graphs always contain current data.

Sample Presentations are distributed for each CIMS Capacity Planner subsystem. Because the Presentations are built using the CPPR name, you must first tailor the Presentation to specify the name of the local SMF SID as well as the location of the sub-directory that contains the data point members.

Distribution Approach for Harvard Graphics for Windows Presentations

The sample presentations are distributed on six 3.5 inch floppy disks thta are prepared using an industry standard software distribution product called an Install Shield. These presentations must be customized to reflect the proper file linkages and slide tiles.

Installing the Sample Presentations

The sample presentations and the Unpacker utility program are installed in the \HGW\PRES and the \HGW\PRES\EXEFILES subdirectories (folders of Windows/95)

- If you are using Windows 3.1:

  Under the RUN option of the program manager, enter d:\SETUP , where d is the drive used to read the distribution disks. The install utility stores the files in ther proper subdirectories and creates the icons that are used in accessing the presentations and the Unpacker utility program.

- If you are using Windows/95:

  Using the START button, choose SETTINGS and then CONTROL PANEL to access the ADD/REMOVE PROGRAMS option. Insert the first disk into the floppy drive and click on the INSTALL button.

The Presentations Themselves

Each subsystem is provided with up to four Presentations (Hourly, Daily, Weekly and Monthly). The Presentation itself consists of several slides. Each slide is made up of a graph layout and a link to a data point file. You can change the graph layout (headings, colors, chart format, axis labels) to any values you want. If you want to change the data, however, you must re-establish the linkage to a data file. Otherwise, Harvard Graphics will respond with the message "***LINKED CELLS CAN'T BE CHANGED***."

Until you become familiar with Harvard Graphics for Windows, we recommend that you leave the sample data intact and modify the other aspects of the slides. You might even want to make a hard copy (PRINT) of the Presentation with the sample data embedded in each slide.

Once you are comfortable with Harvard Graphics for Windows, build some test HGDLIB members on the MVS Host, download several of the members to files in the `C:\HGW\HGDATA` directory, fetch up a Presentation and update the Links to point to your files. This will result in your own data being automatically included in the Presentation. Furthermore, once the Links have been updated, every time you fetch up the Presentation (after it has been SAVED!) the data currently residing in the `C:\HGW\HGDATA` directory is included in the Presentation. This means that the Presentation will always be as current as the `C:\HGW\HGDATA` directory files.

Using the Presentations

Note • The specific actions you are required to take will differ depending on the Release of Harvard Graphics for Windows. The sample scenario below is based on HGW 3.0.

Opening a Presentation

To Open a presentation once you are in Windows

1 Double Click on Harvard Graphics

2. Click on OPEN PRESENTATION
3. Specify the Directory as C:\HGW\PRES
4. Double Click on one of the Presentations provided (e.g, WKLDHOUR.PRS)

   The machine will hum for a while, then offer the following:

   DO YOU WANT TO UPDATE THE LINKS?
5. Click "NO" the first time through to see the samples

   This will result in the entire Presentation being made available for your evaluation.

Viewing the Presentation

Examine each of the slides for its relevance to your own environment. Click on the right arrow in the bottom right hand corner of the screen to go to the next slide. Click on the left arrow to go to the previous slide and so forth. Keep the slides you want. Delete the ones you don't want. (Click on SLIDE on the menu bar directly above the displayed slide, then Click on DELETE SLIDE and the slide is deleted.) Don't worry if you inadvertently delete a slide you wanted to keep. You can always go back to the distribution floppy and bring back the entire Presentation.

The footnote describes the name of the graph, and the CNTL member used to build the graph.

Changing the data

If you want to Update the presentation with data of your own, Click "YES" to the question "***DO YOU WANT TO UPDATE THE LINKS***?" but make sure the files that are to be used reside in the C:\HGW\HGDATA directory (i.e, have been down loaded from the MVS Host) so they are accessible. As noted above, the distributed Presentations presume the file names begin with CPPR. You can do one of two things:

- Rename your file names from your SMF SID to CPPR, or
- Refresh the Presentation with file names of your own

  (HGW will give you the chance to specify file names if the CPPR... files are absent from `C:\HGW\HGDATA` by Browsing)

For several reasons, it is prudent to simply rename your files as necessary. At least until you become more familiar with HGW.

The UNPACKER Utility

A Windows utility is distributed in the UNPACKER Directory of the distribution floppy that is intended to simplify the process of down loading several data point members at one time.

A Utility on the MVS Host (see the distribution CNTL library member named “DUTLLIBX”) is provided that can be used to build a composite flat file containing one or more individual HGDLIB members, each of which is separated by the designation

MEMBER NAME =. This large flat file can then be down loaded in a single transfer to the PC. Then the UNPACKER utility is invoked to take that flat file and split it out into the original individual files in the C:\HGW\HGDATA directory.

In order to install the Utility, copy the contents of the UNPACKER directory to the `C:\HGW\HGDATA` directory. Then Click once on the Harvard Graphics icon, go up to File and Click once and Click on New. The next frame will allow you to select Program Item (do so). Click on OKAY and fill in the boxes as follows:

Description: HGDLIB File Unpacker

Command Line: `C:\HGW\HGDATA\WUNPAK.EXE`

Working Directory: `C:\HGW\HGDATA`

You can also choose one of the ICONS distributed in the C:\HGW\HGDATA directory if you want.

Then build a composite flat file on the MVS Host, down load it to the PC and Unpack it.

Building Graphs with Microsoft Excel

Beginning with release 5.2 of CPPR, CIMS Lab is providing enhanced support for building graphs in the Windows environment, using Microsoft Excel (version 97 or later). This support is provided as an Excel spreadsheet which dynamically builds graphs from existing (downloaded) HGDLIB members.

For more information on using Excel to build graphs, please refer to CPPRTOOL.EXE, available either on the CPPR distribution tape, or separately downloadable from the Customer Area of the CIMS Lab website. The self-extracting executable contains separate instructions for using the spreadsheet and its various options.

Workload Subsystem Graphs

p01-p07: CPU % Busy by Component (PARMLIB=Local Member)

Graph Description

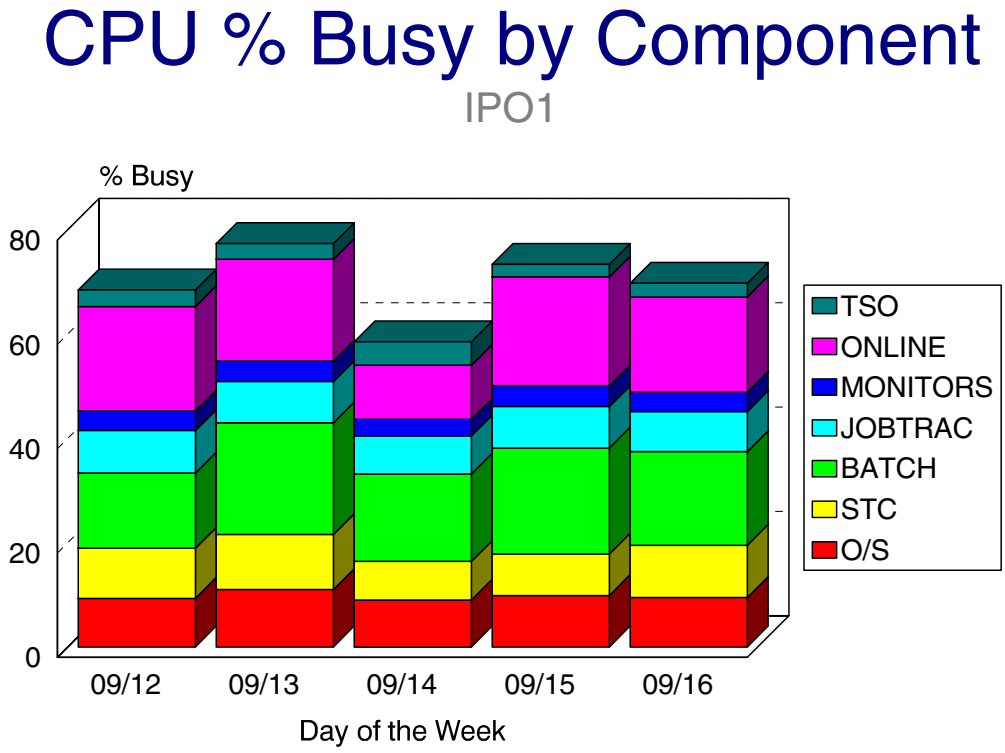
This bar graph shows total CPU utilization in terms of Percent busy, divided into six categories. The categories are determined at Data Reduction time, using the Local PARMLIB Member (name = the SMF Sid) to group CPU time into categories based on Performance Group Number (PGN). The Labels for each category are appended to the graph when the Data Point Member of HGDLIB is created.

Which Program Builds the Data Point Member

PGM=SSA1TGRF

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the total percent busy for the CPU, with each of the six categories showing the percentage busy represented by that category. The charts x02-x07 simply show each individual category in terms of percentage busy.



Graph(201):CNTL(DWKLDGRF)

p08: CPU % Busy by TOPnn Jobs

Graph Description

This pie chart shows which Jobs are actually using the CPU during any particular period (BEGIN TIME:END TIME). The chart is divided into the following categories:

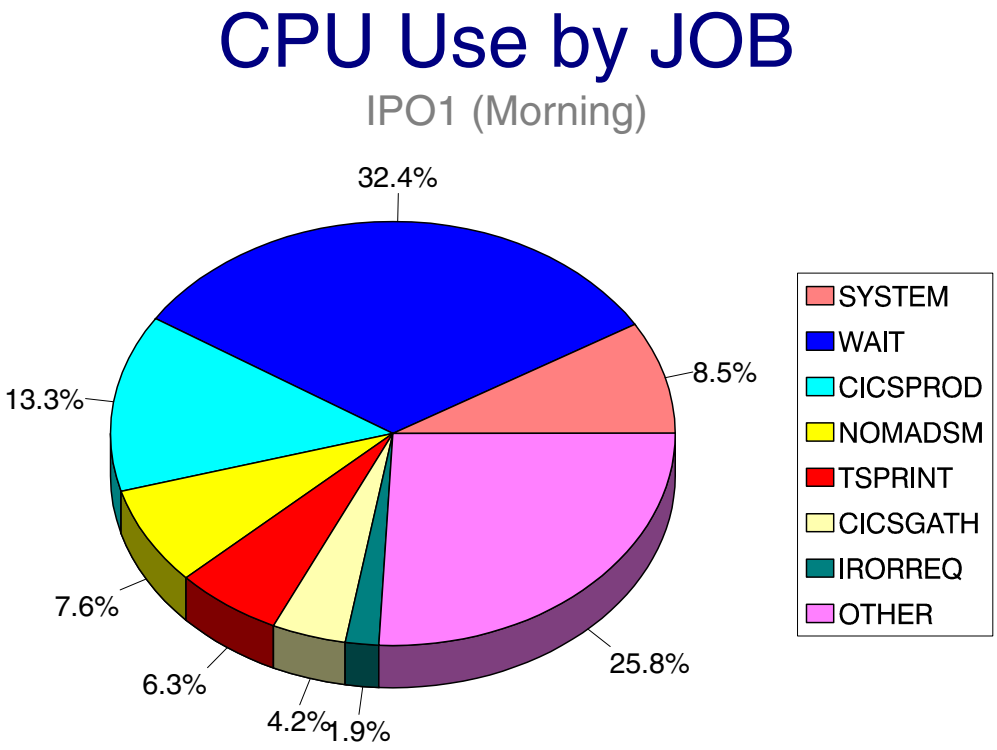
- Operating System Overhead (Capture Ratio)
- WAIT time (100.00% minus CPU % busy)
- The name of the JOB or Started Task that used the most CPU time during the specified period
- The name of the 2nd and successive CPU users up to the limit specified in TOPnn (to a maximum of 24)
- Other (the remainder of the CPU that was actually used)

Which Program Builds the Data Point Member

PGM=SSA1TGRS

What Does the Data Represent

The data represents the amount of CPU time, in terms of percent busy, that each individually charted element consumed. It is important that Interval Accounting be active (see SMFPRMxx in the Init and Tuning Guide) in order to accurately allocate the CPU time for each Job or Started Task across hourly boundaries.



Graph(208A):CNTL(DCAFTGRS)

p09: CPU % Busy by Component (PARMLIB=PGNS)

Graph Description

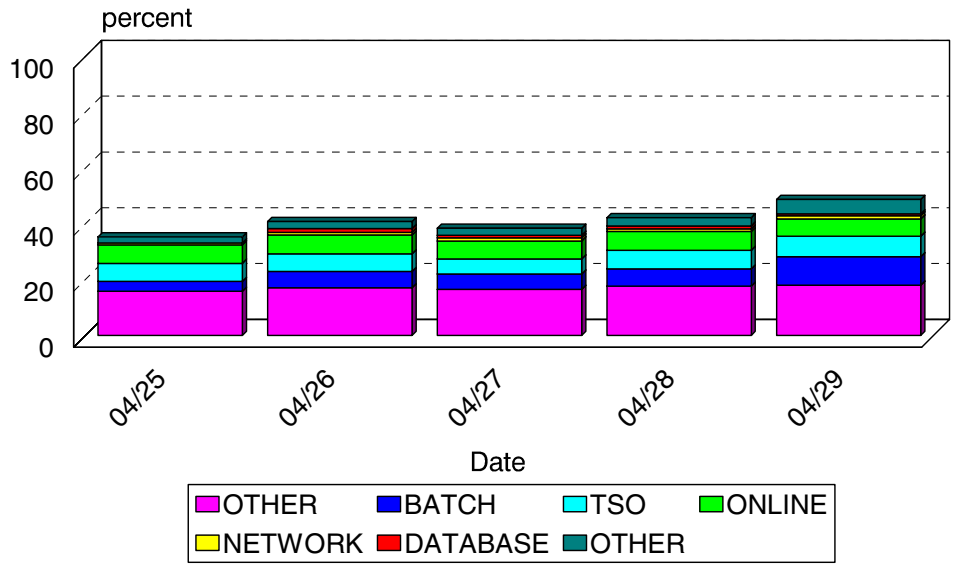
This stacked bar chart shows which components are actually using the CPU, based on the average percent busy for the CPU as a whole. It is a variation on Graph p01, showing essentially the same information but, whereas Graph p01 is based on categories determined at data reduction time, this graph allows you to dynamically set the categories based on the PARMLIB member named `&Sid.PGNS`. In addition, this graph shows absolute CPU % busy (i.e, not taking the number of engines into account) so that a two engine CPU could be as much as 200% busy.

Which Program Builds the Data Point Member

PGM=SSA1TGRT

What Does the Data Represent

The data represents the amount of CPU time, in terms of percent busy, that each category consumed, regardless of the number of CPU engines in the machine.



p0A: CPU Factored % Busy by Component (PARMLIB=PGNS)

Graph Description

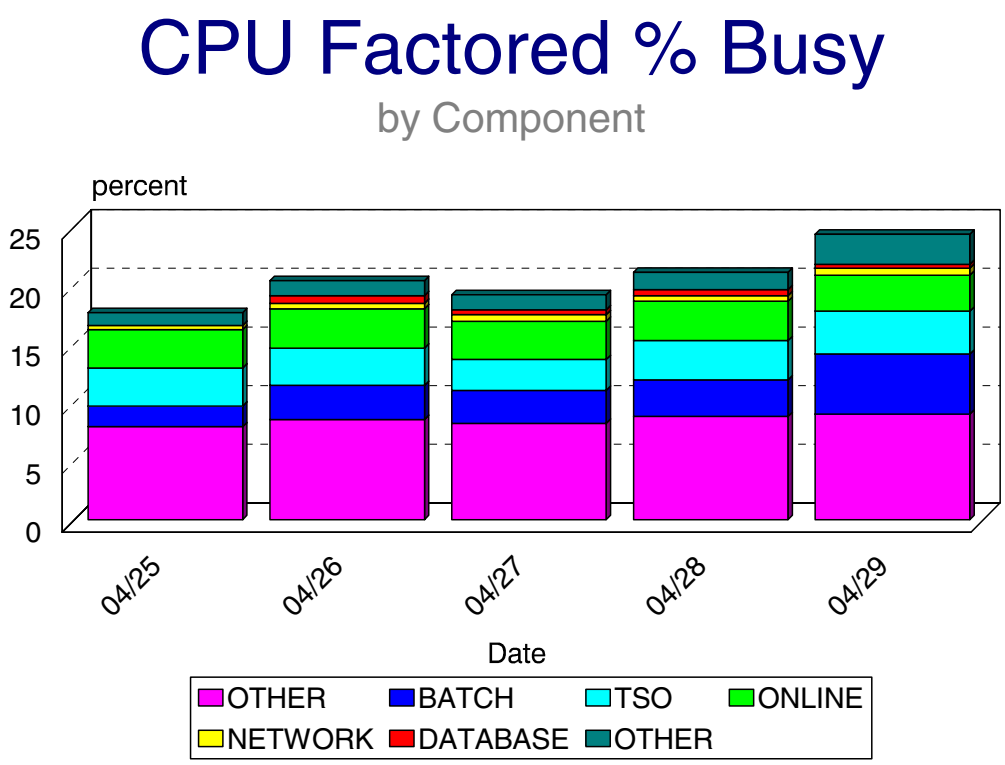
This stacked bar chart shows which components are actually using the CPU, based on the average percent busy for the CPU as a whole. It is a variation on Graph p01, showing essentially the same information but, whereas Graph p01 is based on categories determined at data reduction time, this graph allows you to dynamically set the categories based on the PARMLIB member named `&Sid.PGNS`. In addition, this graph shows absolute CPU % busy (i.e, not taking the number of engines into account) so that a two engine CPU could be as much as 200% busy.

Which Program Builds the Data Point Member

PGM=SSA1TGRT

What Does the Data Represent

The data represents the amount of CPU time, in terms of percent busy, that each category consumed, regardless of the number of CPU engines in the machine.



p0B: CPU Minutes Busy by Component (PARMLIB=PGNS)

Graph Description

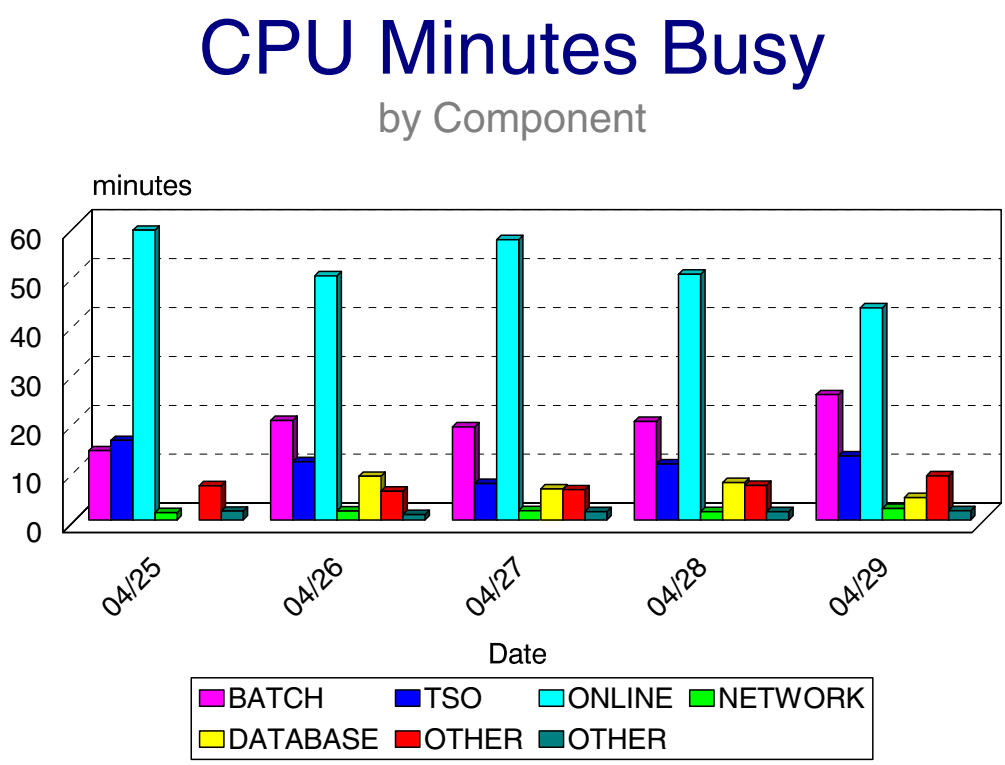
This stacked bar chart shows which components are actually using the CPU, based on the number of minutes per engine for the CPU as a whole. It is a variation on Graph p01, showing essentially the same information but, whereas Graph p01 is based on categories determined at data reduction time, this graph allows you to dynamically set the categories based on the PARMLIB member named `&Sid.PGNS`. In addition, this graph shows absolute CPU % busy (i.e, not taking the number of engines into account) so that a two engine CPU could be as much as 200% busy.

Which Program Builds the Data Point Member

PGM=SSA1TGRT

What Does the Data Represent

The data represents the amount of CPU time, in terms CPU minutes, that each category of work consumed, regardless of the number of CPU engines in the machine.



p0C: Private Storage Usage by Component (PARMLIB=PGNS)

Graph Description

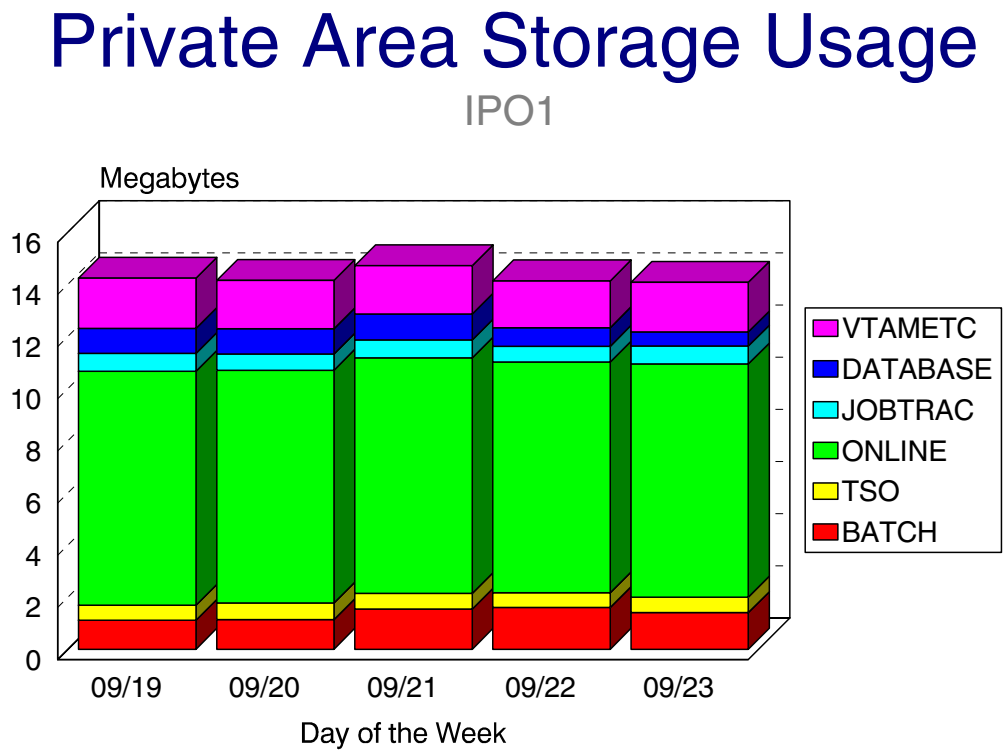
This stacked bar chart shows which components are actually using Private Area Storage, based on the size of the Private Area including both Central and Expanded storage. This graph shows actual Private Area use, based on occupancy data from MSO Service Units and Central and Expanded Storage Maps.

Which Program Builds the Data Point Member

PGM=SSA1TGRR

What Does the Data Represent

The data represents the amount of Private Area Storage in Megabytes occupied by a particular component during a particular period.



Graph(20C):CNTL(DCAFDGRR)

p10-p16: Paging Activity by Component (PARMLIB=Local Member)

Graph Description

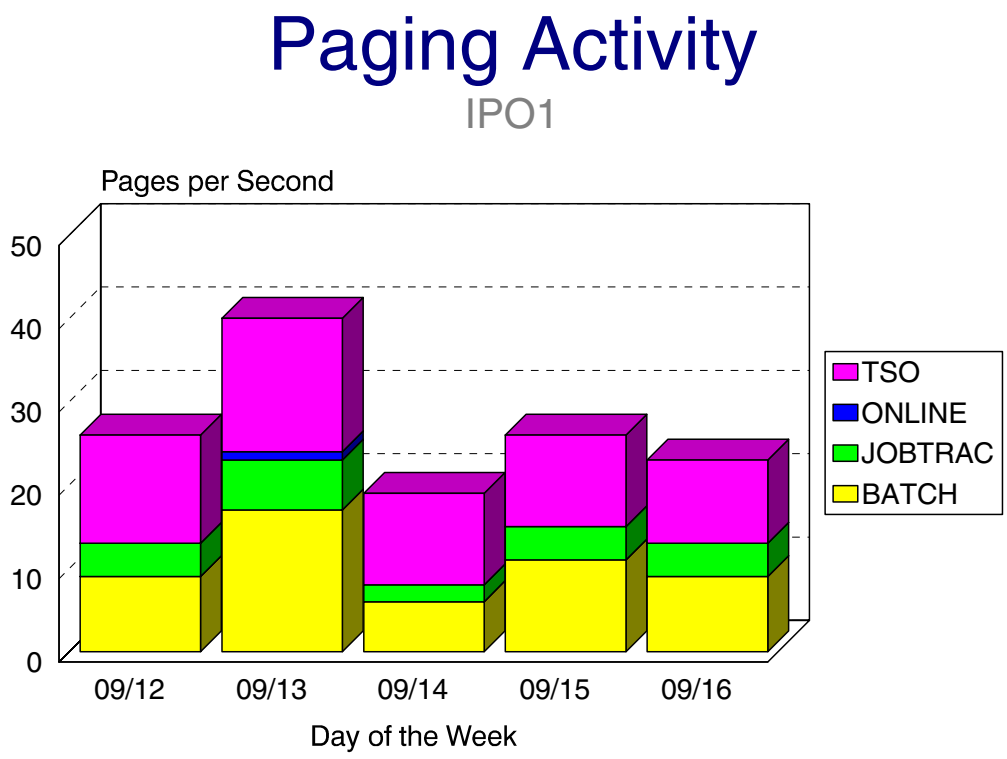
This bar graph shows total Paging Activity to and from Auxiliary Storage in terms of pages per second, divided into six categories. The categories are determined at Data Reduction time, using the Local PARMLIB Member (name=the SMF Sid) to group CPU time into categories based on Performance Group Number (PGN). The Labels for each category are appended to the graph when the Data Point Member of HGDLIB is created.

Which Program Builds the Data Point Member

PGM=SSA1TGRF

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the total number of pages per second, with each of the six categories showing the pages per second represented by that category. The charts x11-x16 simply show each individual category in terms of pages per second.



Graph(210):CNTL(DCAFDGRF)

p1A: % of CPU Service Units by PGN(*6) Group (PARMLIB=PGNS)

Graph Description

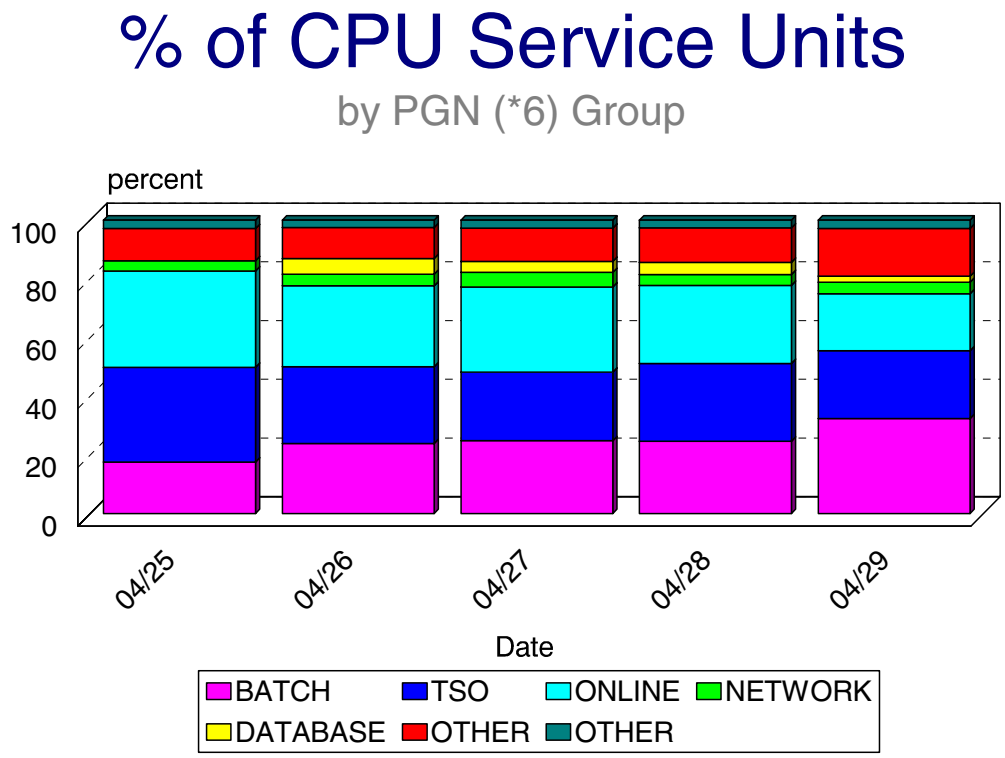
This graph allows you to divide the population of users into six categories (by Performance Group Number, RPGNs are also included) and to show how the CPU Service Units (that represent actual internal processor time) within the data center are used by those six categories, with the remainder shown in a category labeled "Other". Labels for each of the six categories come from the PGNS PARMLIB member.

Which Program Builds the Data Point Member

PGM=SSA1TGRR

What Does the Data Represent

The chart is presented in the form of an area graph. Each data point on the graph represents the percentage of CPU Service Units consumed by a specific group of PGNs.



p1B: % of MSO Service Units by PGN(*6) Group (PARMLIB=PGNS)

Graph Description

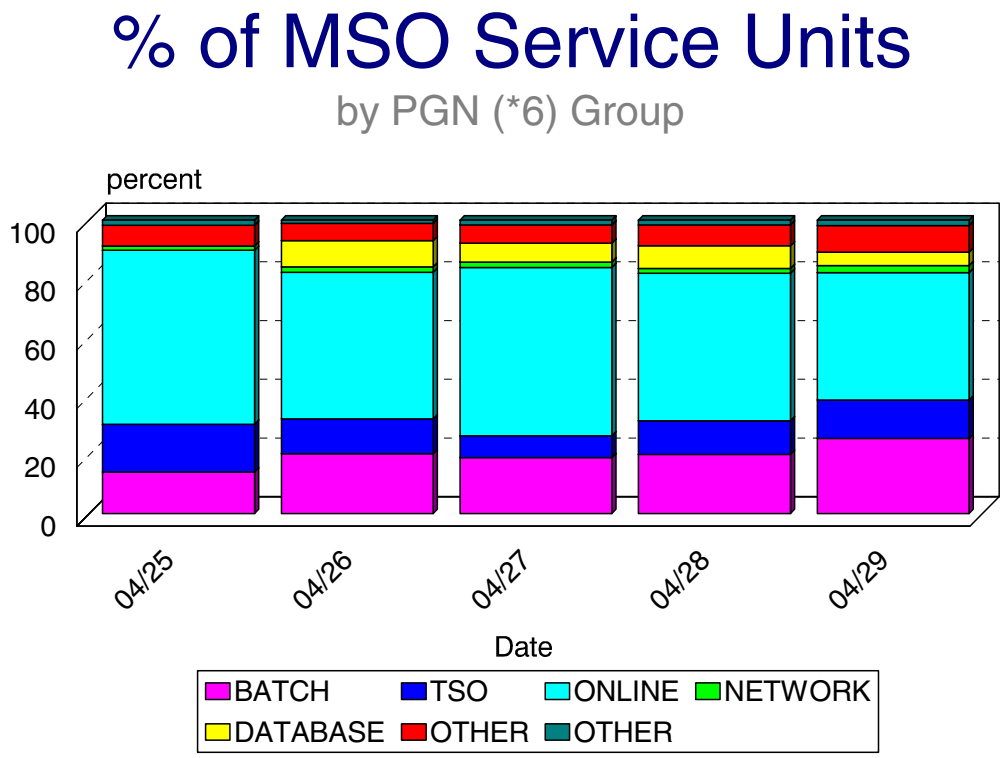
This graph allows you to divide the population of users into six categories (by Performance Group Number, RPGNs are also included) and to show how the MSO Service Units (that represent Main Storage Occupancy) within the data center are used by those six categories, with the remainder shown in a category labeled "Other". Labels for each of the six categories come from the PGNS PARMLIB member.

Which Program Builds the Data Point Member

PGM=SSA1TGRR

What Does the Data Represent

The chart is presented in the form of an area graph. Each data point on the graph represents the percentage of MSO Service Units consumed by a specific group of PGNs.



p1C: % of IOC Service Units by PGN(*6) Group (PARMLIB=PGNS)

Graph Description

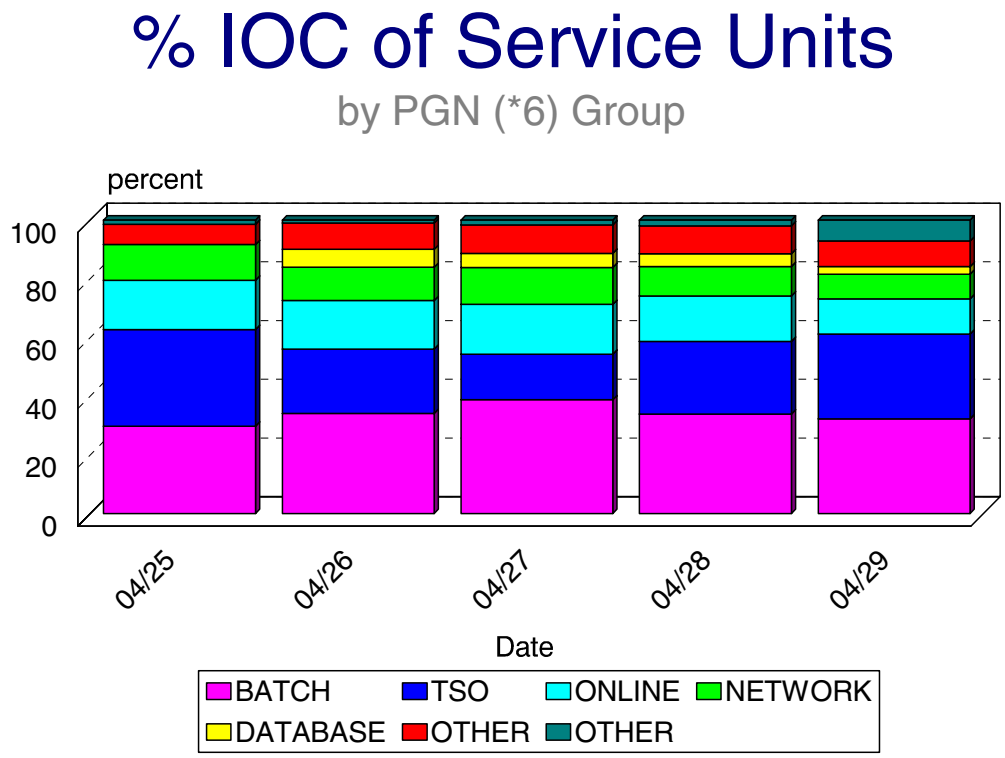
This graph allows you to divide the population of users into six categories (by Performance Group Number, RPGNs are also included) and to show how the IOC Service Units (that represent actual input and output operations) within the data center are used by those six categories, with the remainder shown in a category labeled "Other". Labels for each of the six categories come from the PGNS PARMLIB member.

Which Program Builds the Data Point Member

PGM=SSA1TGRR

What Does the Data Represent

The chart is presented in the form of an area graph. Each data point on the graph represents the percentage of IOC Service Units consumed by a specific group of PGNs.



p1D: # of CPU Service Units by PGN(*6) Group (PARMLIB=PGNS)

Graph Description

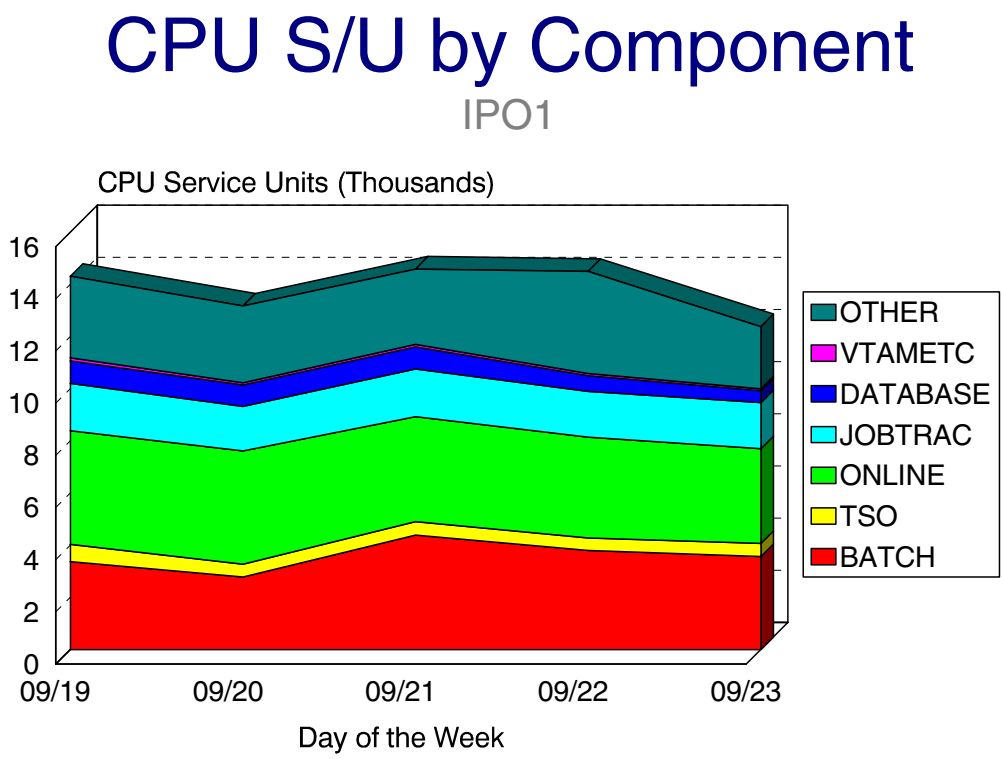
This graph allows you to divide the population of users into six categories (by Performance Group Number, RPGNs are also included) and to show how the CPU Service Units within the data center are used by those six categories, with the remainder shown in a category labeled "Other". Labels for each of the six categories come from the PGNS PARMLIB member.

Which Program Builds the Data Point Member

PGM=SSA1TGRR

What Does the Data Represent

The chart is presented in the form of an area graph. Each data point on the graph represents the actual number of CPU Service Units consumed by a specific group of PGNs.



Graph(21D):CNTL(DCAFDGRR)

p1E: # of MSO Service Units by PGN(*6) Group (PARMLIB=PGNS)

Graph Description

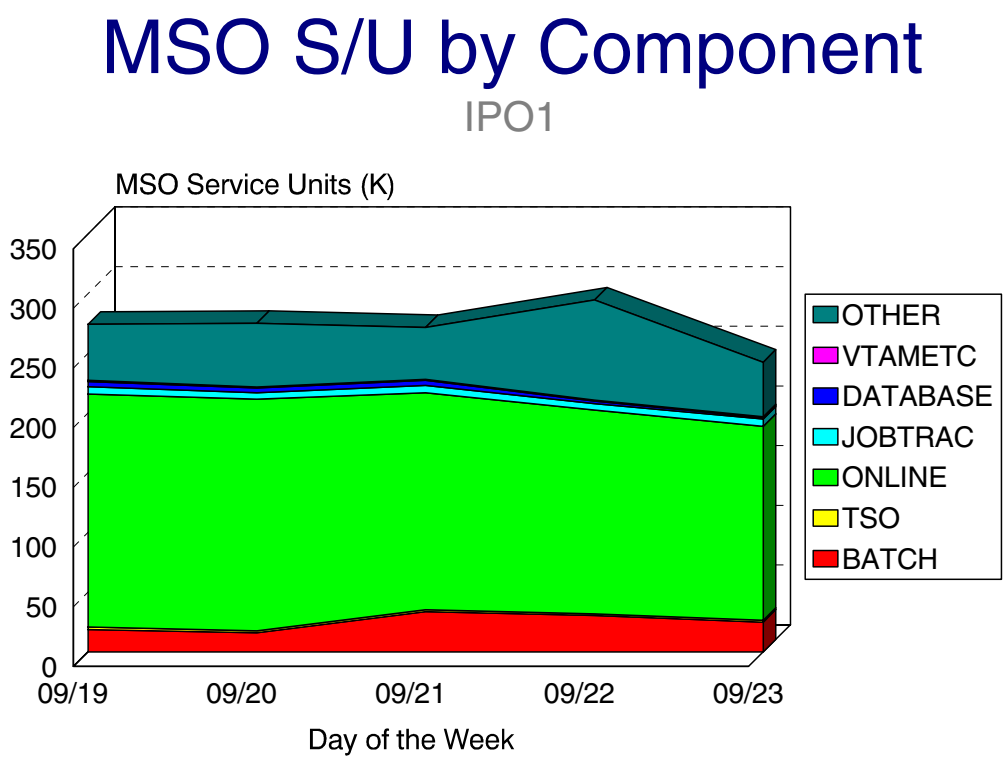
This graph allows you to divide the population of users into six categories (by Performance Group Number, RPGNs are also included) and to show how the MSO Service Units within the data center are used by those six categories, with the remainder shown in a category labeled "Other". Labels for each of the six categories come from the PGNS PARMLIB member.

Which Program Builds the Data Point Member

PGM=SSA1TGRR

What Does the Data Represent

The chart is presented in the form of an area graph. Each data point on the graph represents the actual number of MSO Service Units consumed by a specific group of PGNs.



Graph(21E):CNTL(DCAFDGRR)

p1F: # of IOC Service Units by PGN(*6) Group (PARMLIB=PGNS)

Graph Description

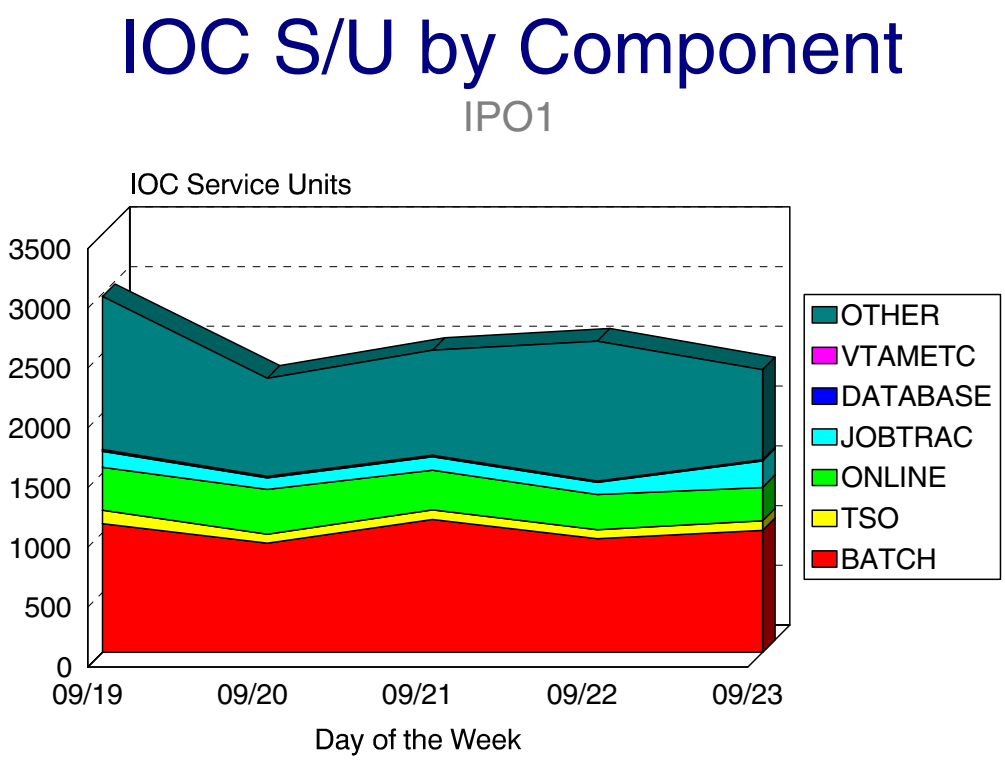
This graph allows you to divide the population of users into six categories (by Performance Group Number, RPGNs are also included) and to show how the IOC Service Units within the data center are used by those six categories, with the remainder shown in a category labeled "Other". Labels for each of the six categories come from the PGNS PARMLIB member.

Which Program Builds the Data Point Member

PGM=SSA1TGRR

What Does the Data Represent

The chart is presented in the form of an area graph. Each data point on the graph represents the actual number of IOC Service Units consumed by a specific group of PGNs.



Graph(21F):CNTL(DCAFDGRR)

p1G: % of CPU Service Units by PGN(*64) Group (PARMLIB=PGNX)

Graph Description

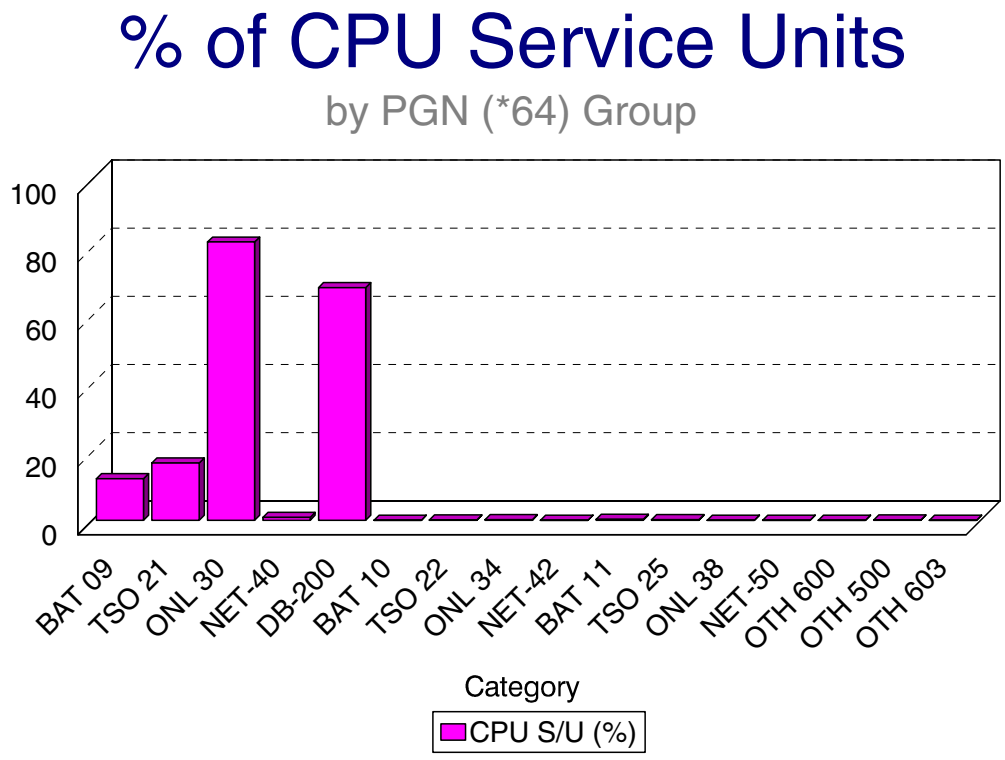
This graph allows you to divide the population of users into up to 64 categories (by Performance Group Number, RPGNs are also included) and to show how the CPU Service Units within the data center are used by each category. Labels for each of the 64 categories come from the PGNX PARMLIB member.

Which Program Builds the Data Point Member

PGM=SSA1TGRR

What Does the Data Represent

The chart is presented in the form of a horizontal bar graph. Each individual PGN group is show on a separate line of the graph. Each data point on the graph represents the percentage of CPU Service Units consumed by a specific group of PGNs.



p1H: % of MSO Service Units by PGN(*64) Group (PARMLIB=PGNX)

Graph Description

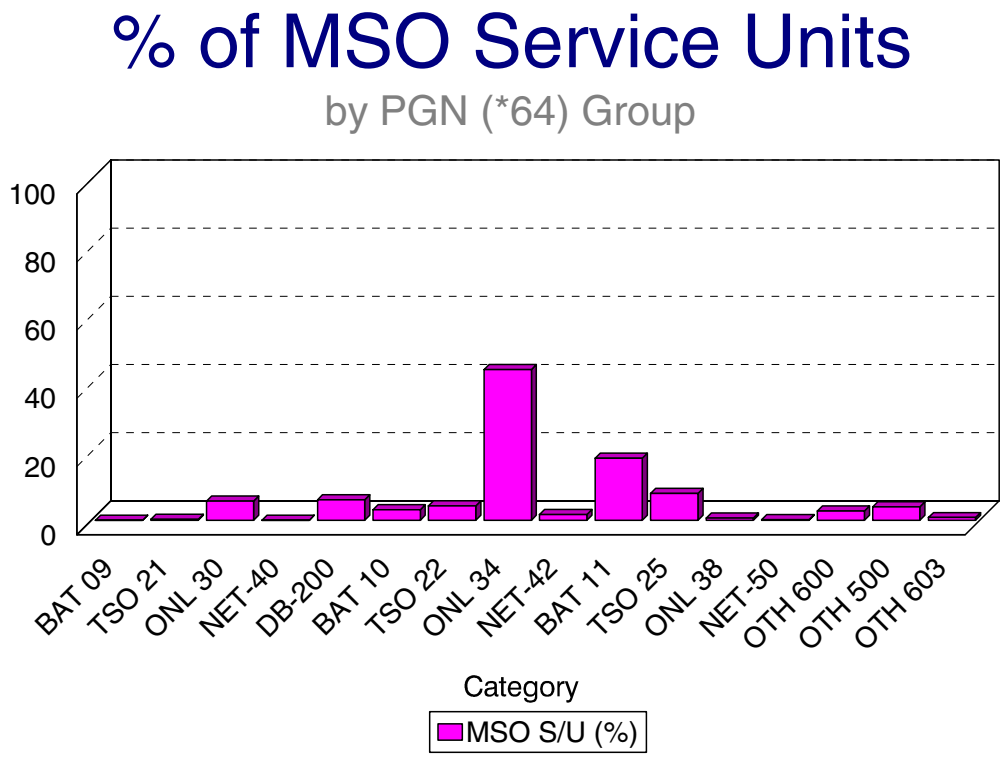
This graph allows you to divide the population of users into up to 64 categories (by Performance Group Number, RPGNs are also included) and to show how the MSO Service Units within the data center are used by each category. Labels for each of the 64 categories come from the PGNX PARMLIB member.

Which Program Builds the Data Point Member

PGM=SSA1TGRR

What Does the Data Represent

The chart is presented in the form of a horizontal bar graph. Each individual PGN group is show on a separate line of the graph. Each data point on the graph represents the percentage of MSO Service Units consumed by a specific group of PGNs.



p1I: % of IOC Service Units by PGN(*64) Group (PARMLIB=PGNX)

Graph Description

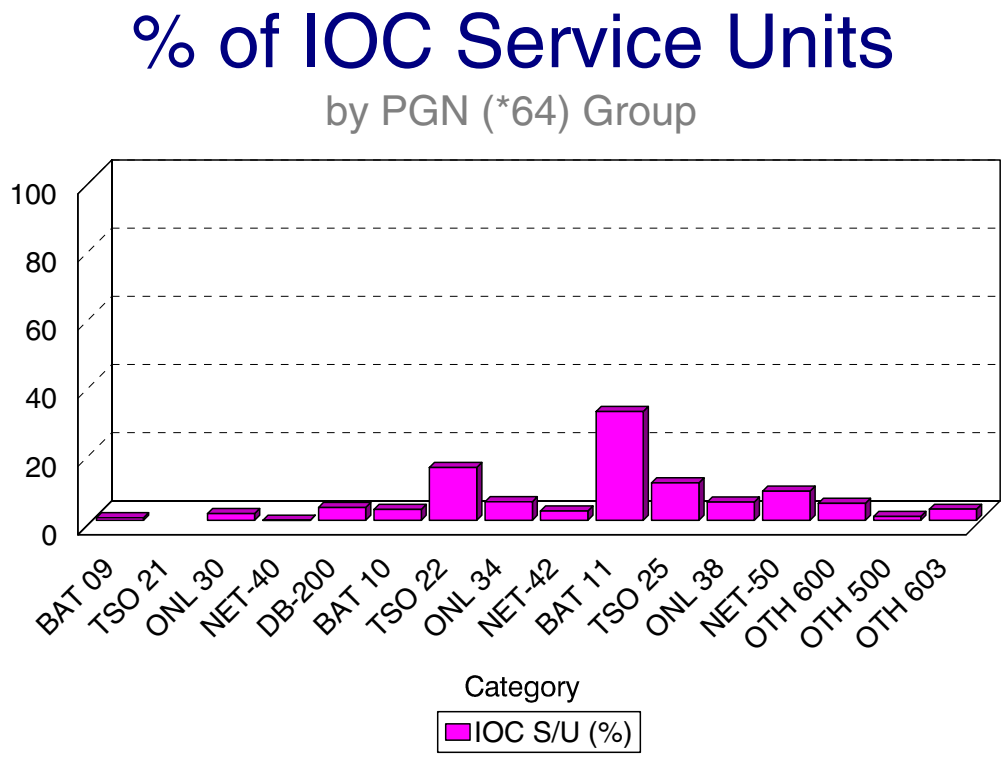
This graph allows you to divide the population of users into up to 64 categories (by Performance Group Number, RPGNs are also included) and to show how the IOC Service Units within the data center are used by each category. Labels for each of the 64 categories come from the PGNX PARMLIB member.

Which Program Builds the Data Point Member

PGM=SSA1TGRR

What Does the Data Represent

The chart is presented in the form of a horizontal bar graph. Each individual PGN group is show on a separate line of the graph. Each data point on the graph represents the percentage of IOC Service Units consumed by a specific group of PGNs.



p1J: # of CPU Service Units by PGN(*64) Group (PARMLIB=PGNX)

Graph Description

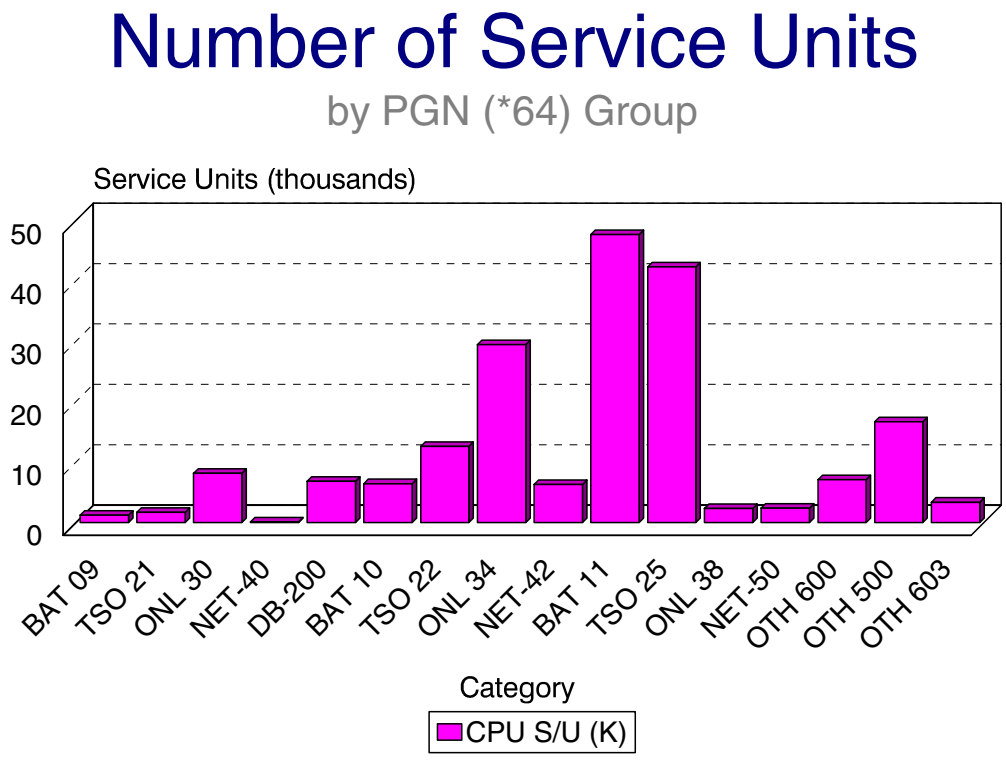
This graph allows you to divide the population of users into up to 64 categories (by Performance Group Number, RPGNs are also included) and to show how the CPU Service Units within the data center are used by each category. Labels for each of the 64 categories come from the PGNX PARMLIB member.

Which Program Builds the Data Point Member

PGM=SSA1TGRR

What Does the Data Represent

The chart is presented in the form of a horizontal bar graph. Each individual PGN group is show on a separate line of the graph. Each data point on the graph represents the actual number of CPU Service Units consumed by a specific group of PGNs.



p1K: # of MSO Service Units by PGN(*64) Group (PARMLIB=PGNX)

Graph Description

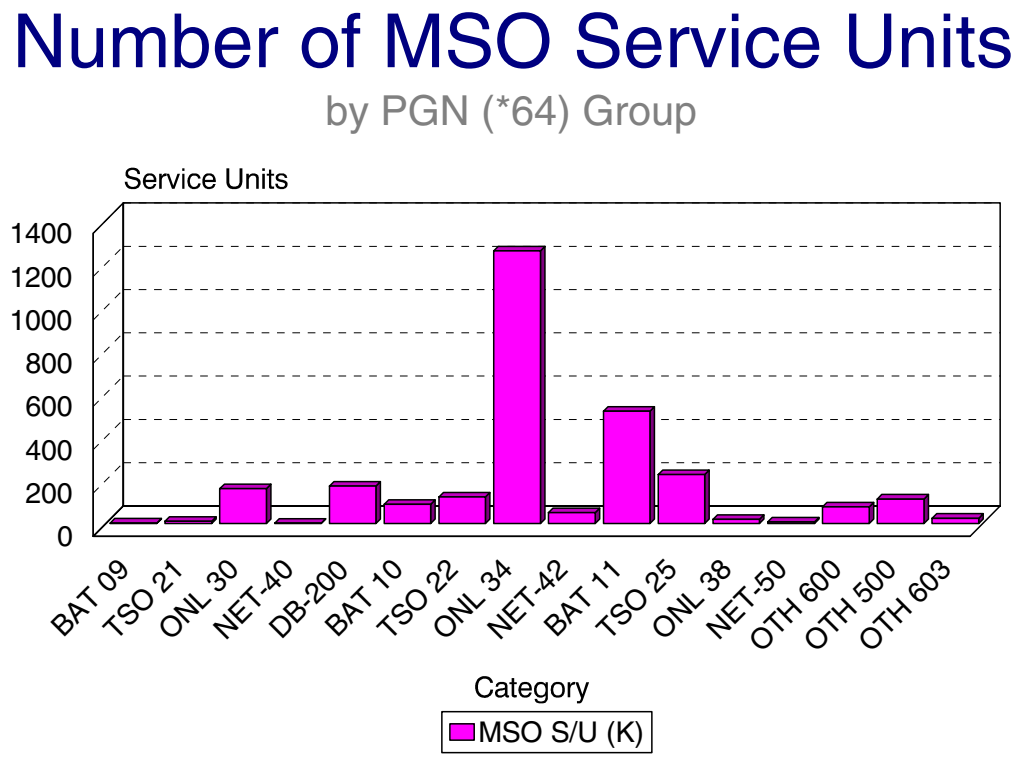
This graph allows you to divide the population of users into up to 64 categories (by Performance Group Number, RPGNs are also included) and to show how the MSO Service Units within the data center are used by each category. Labels for each of the 64 categories come from the PGNX PARMLIB member.

Which Program Builds the Data Point Member

PGM=SSA1TGRR

What Does the Data Represent

The chart is presented in the form of a horizontal bar graph. Each individual PGN group is show on a separate line of the graph. Each data point on the graph represents the actual number of MSO Service Units consumed by a specific group of PGNs.



p1L: # of IOC Service Units by PGN(*64) Group (PARMLIB=PGNX)

Graph Description

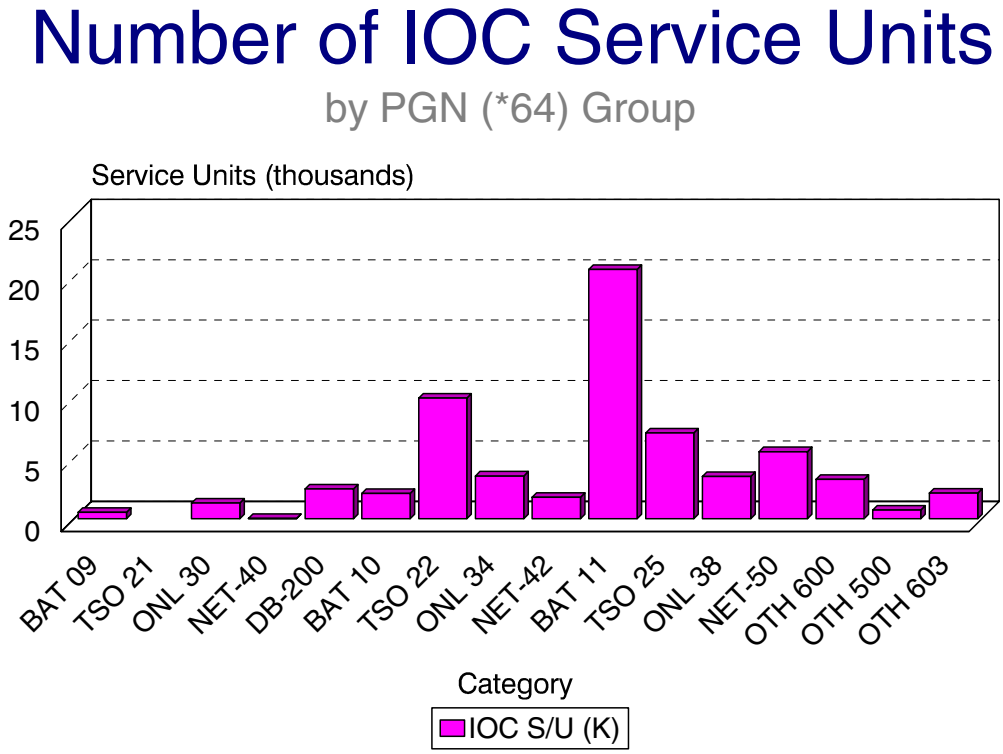
This graph allows you to divide the population of users into up to 64 categories (by Performance Group Number, RPGNs are also included) and to show how the IOC Service Units within the data center are used by each category. Labels for each of the 64 categories come from the PGNX PARMLIB member.

Which Program Builds the Data Point Member

PGM=SSA1TGRR

What Does the Data Represent

The chart is presented in the form of a horizontal bar graph. Each individual PGN group is show on a separate line of the graph. Each data point on the graph represents the actual number of IOC Service Units consumed by a specific group of PGNs.



p1M: MIPS Usage by PGN/Service Class Name

Graph Description:

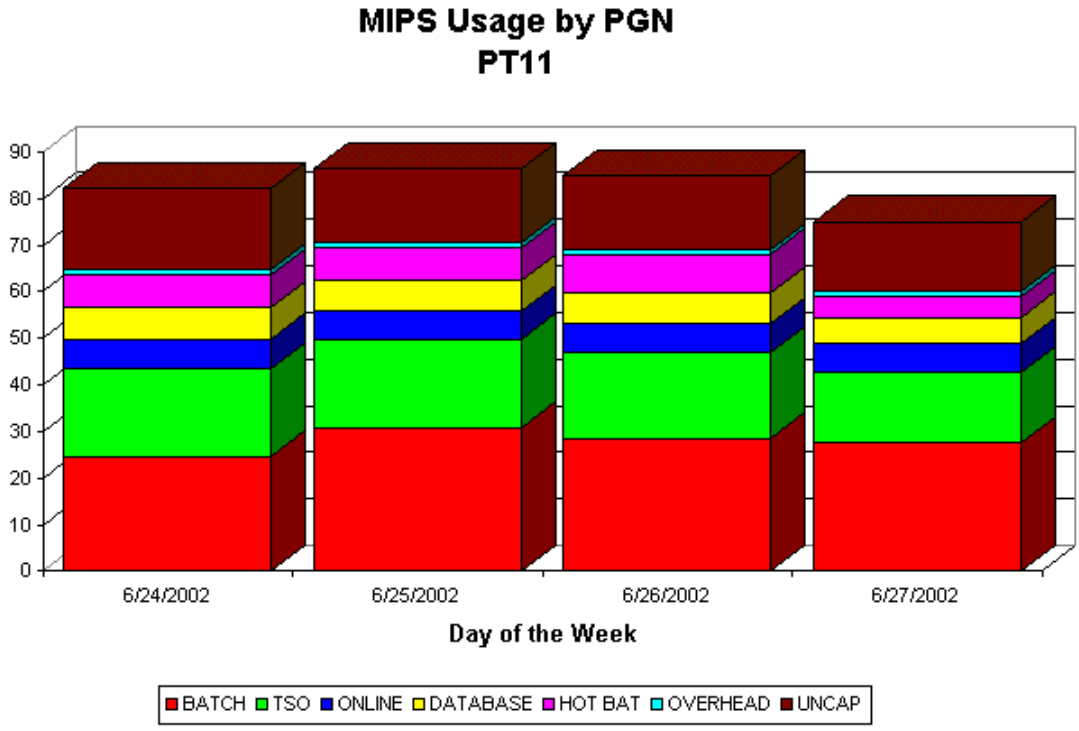
This graph represents the CPU Power consumption in terms of MIPS represented by a set of address spaces with no capture ratio applied. The make-up of the set of address spaces is derived through a PARMLIB member that indicates which address spaces are members of the set. If the system is running in compatibility mode, the PGN for each address space is used to identify the members of the set (PARMLIB MEMBER=&sid.PGNS). If the system is running in Goal Mode, the Service Class Name is used to identify the members of the set (PARMLIB MEMBER=&sid.SVCN). The MIPS Value is derived through the use of a table that converts % Busy values to MIPS (PARMLIB MEMBER=CPUTABLE).

Which Program Builds the Data Point Member

`PGM=SSA1TGRJ`

What does the data represent?

The chart is presented as a stacked bar chart showing up to 5 individual categories of work as specified in the &sid.PGNS or &sid.SVCN PARMLIB member plus a 6th category (OTHER) plus the capture ratio (UNCAP). The individual columns in the data point member represent MIPS consumed by each category of work.



p1N: MIPS Usage by PGN/Service Class Name, CPU S/U

Graph Description:

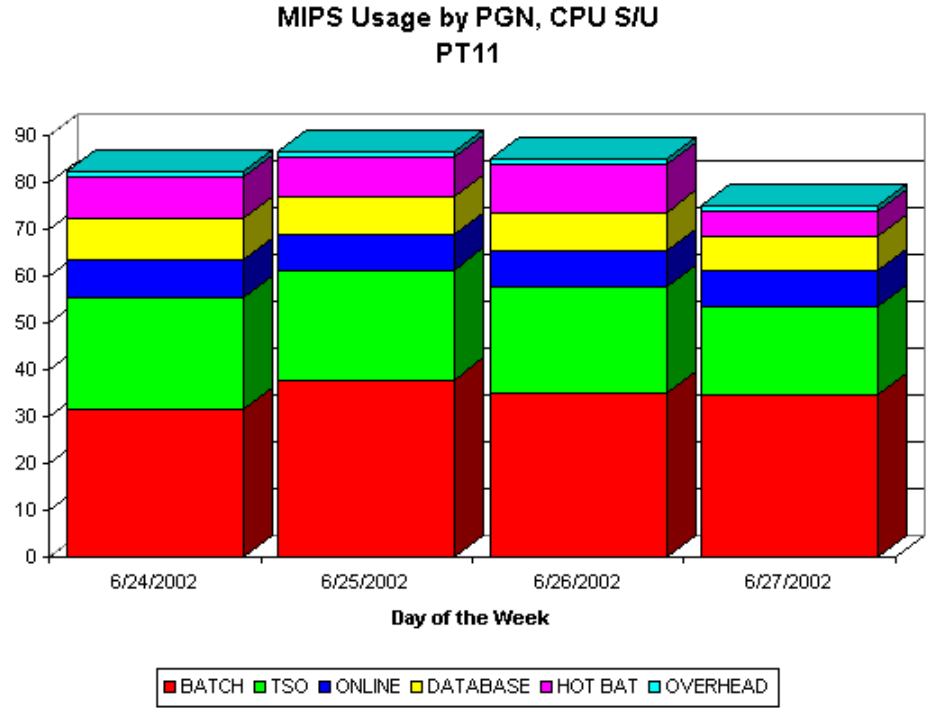
This graph represents the CPU Power consumption in terms of MIPS represented by a set of address spaces with the capture ratio applied based on % of CPU Service Units. The make-up of the set of address spaces is derived through a PARMLIB member that indicates which address spaces are members of the set. If the system is running in compatibility mode, the PGN for each address space is used to identify the members of the set (PARMLIB MEMBER=&sid.PGNS). If the system is running in Goal Mode, the Service Class Name is used to identify the members of the set (PARMLIB MEMBER=&sid.SVCN). The MIPS Value is derived through the use of a table that converts % Busy values to MIPS (PARMLIB MEMBER=CPUTABLE).

Which Program Builds the Data Point Member

```
PGM=SSA1TGRJ
```

What does the data represent

The chart is presented as a stacked bar chart showing up to 5 individual categories of work as specified in the &sid.PGNS or &sid.SVCN PARMLIB member plus a 6th category (OTHER). The individual columns in the data point member represent MIPS consumed by each category of work. The Uncaptured CPU is spread across each of the individual categories based on the percentage of CPU Service Units each category consumed.



p10: MIPS Usage by PGN/Service Class Name, IOC S/U

Graph Description:

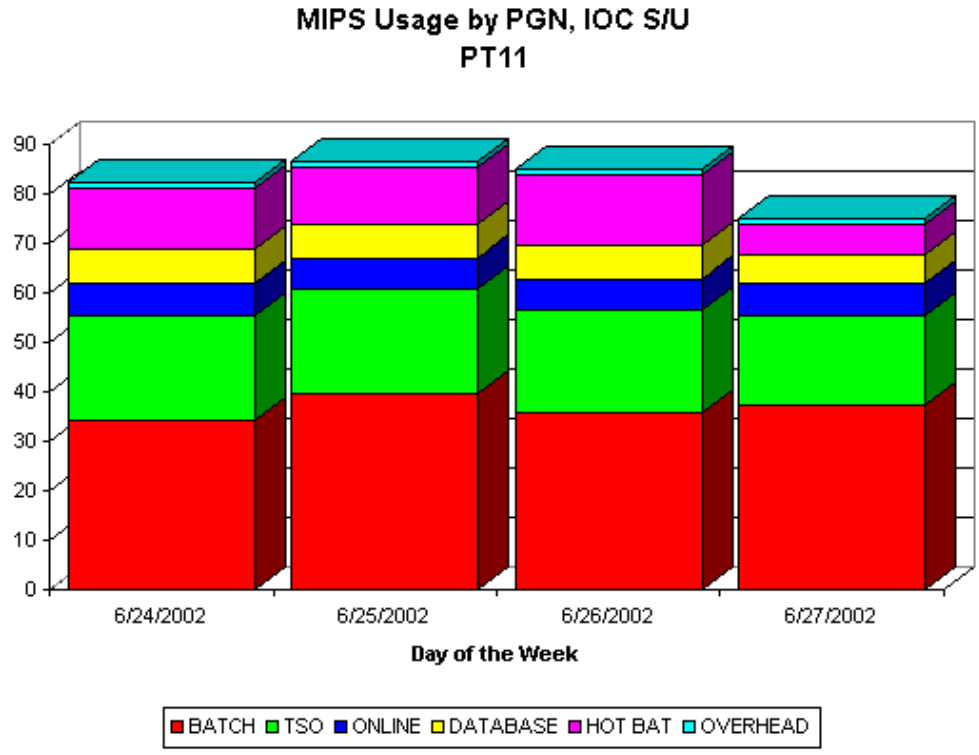
This graph represents the CPU Power consumption in terms of MIPS represented by a set of address spaces with the capture ratio applied based on % of IOC Service Units. The make-up of the set of address spaces is derived through a PARMLIB member that indicates which address spaces are members of the set. If the system is running in compatibility mode, the PGN for each address space is used to identify the members of the set (PARMLIB MEMBER=&sid.PGNS). If the system is running in Goal Mode, the Service Class Name is used to identify the members of the set (PARMLIB MEMBER=&sid.SVCN). The MIPS Value is derived through the use of a table that converts % Busy values to MIPS (PARMLIB MEMBER=CPUTABLE).

Which Program Builds the Data Point Member

```
PGM=SSA1TGRJ
```

What does the data represent?

The chart is presented as a stacked bar chart showing up to 5 individual categories of work as specified in the &sid.PGNS or &sid.SVCN PARMLIB member plus a 6th category (OTHER). The individual columns in the data point member represent MIPS consumed by each category of work. The Uncaptured CPU is spread across each of the individual categories based on the percentage of IOC Service Units each category consumed.



p1P: MIPS Usage by PGN/Service Class Name, CPU & IOC S/U

Graph Description:

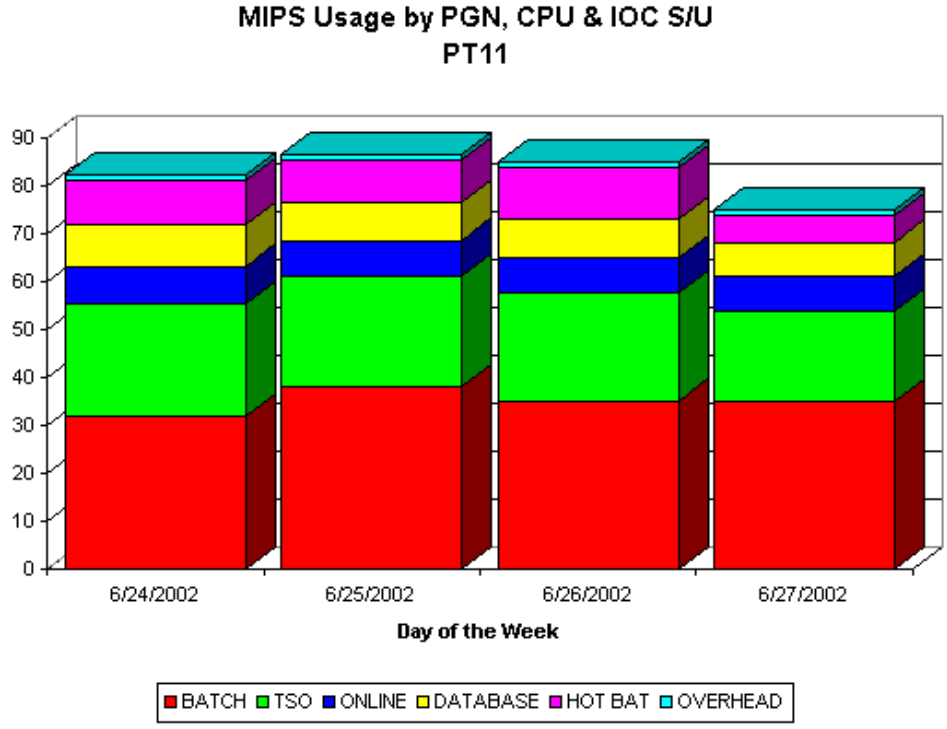
This graph represents the CPU Power consumption in terms of MIPS represented by a set of address spaces with the capture ratio applied based on % of CPU and IOC Service Units. The make-up of the set of address spaces is derived through a PARMLIB member that indicates which address spaces are members of the set. If the system is running in compatibility mode, the PGN for each address space is used to identify the members of the set (PARMLIB MEMBER=&sid.PGNS). If the system is running in Goal Mode, the Service Class Name is used to identify the members of the set (PARMLIB MEMBER=&sid.SVCN). The MIPS Value is derived through the use of a table that converts % Busy values to MIPS (PARMLIB MEMBER=CPUTABLE).

Which Program Builds the Data Point Member

```
PGM=SSA1TGRJ
```

What does the data represent?

The chart is presented as a stacked bar chart showing up to 5 individual categories of work as specified in the &sid.PGNS or &sid.SVCN PARMLIB member plus a 6th category (OTHER). The individual columns in the data point member represent MIPS consumed by each category of work. The Uncaptured CPU is spread across each of the individual categories based on the percentage of CPU and IOC Service Units each category consumed.



p20: TSO Activity

Graph Description

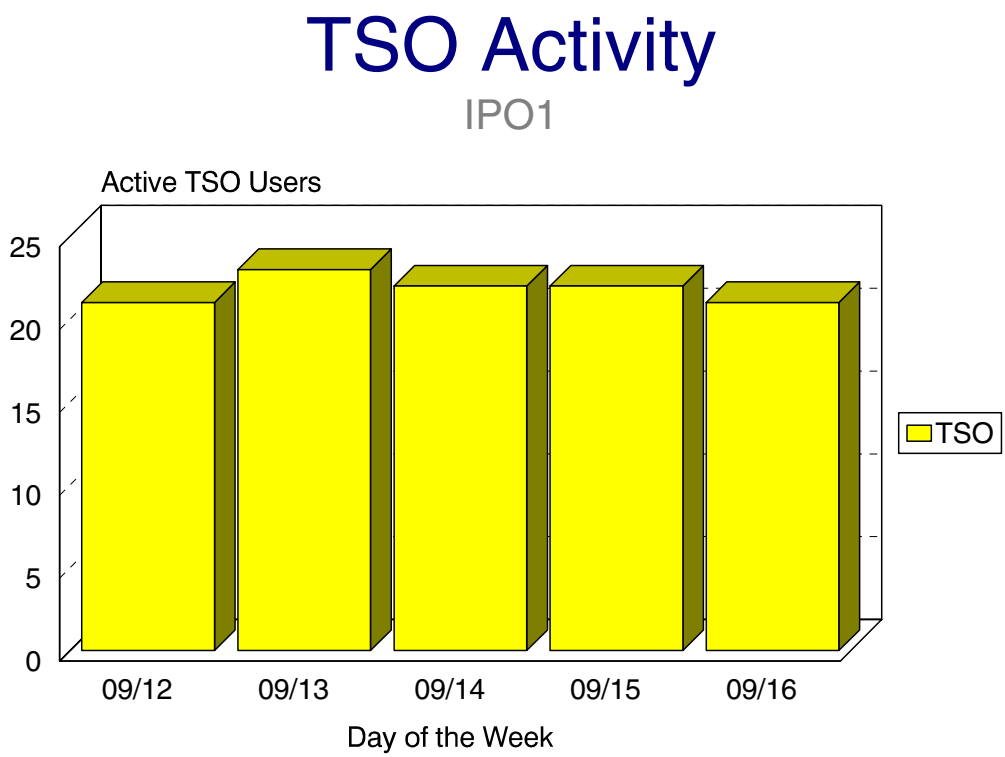
This graph shows the average number of TSO users active during a given period.

Which Program Builds the Data Point Member

PGM=SSA1TGRF

What Does the Data Represent

The chart is presented in the form of a bar graph. Each data point represents the number of active TSO users.



Graph(220):CNTL(DCAFDGRF)

p21: TSO Response

Graph Description

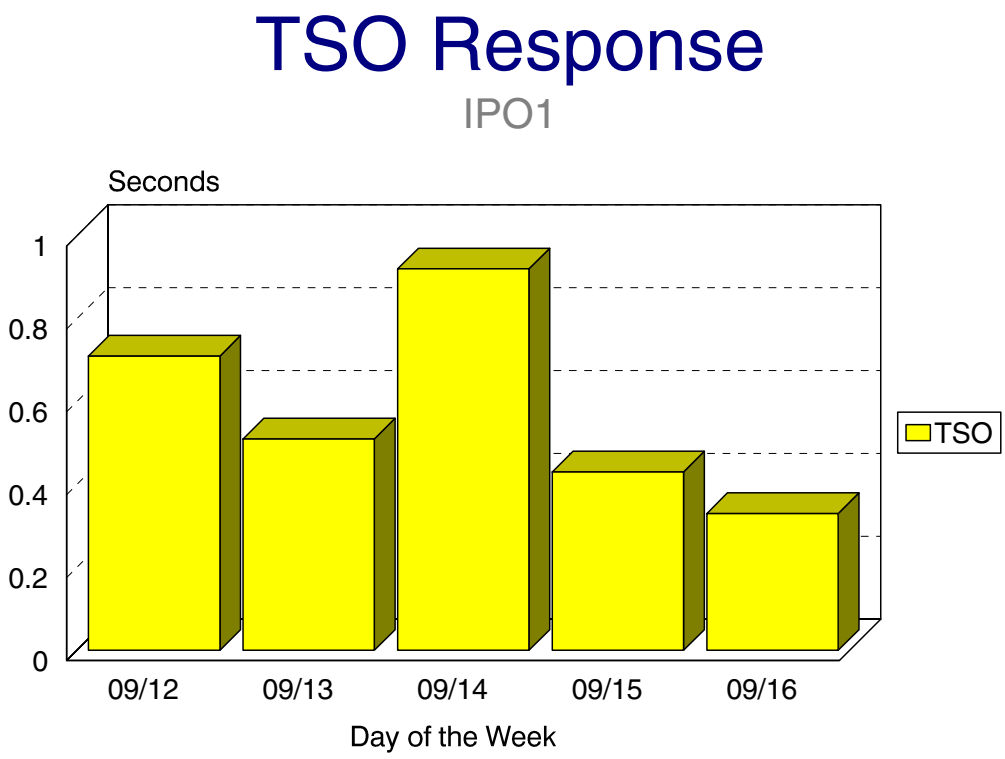
This graph shows the average internal response time for TSO trivial transactions during a given period. A TSO trivial transaction is one which completes in the First Period as defined to the SRM through the IPS.

Which Program Builds the Data Point Member

PGM=SSA1TGRF

What Does the Data Represent

The chart is presented in the form of a bar graph. Each data point represents the internal response time for TSO trivial transactions in hundredths of a second.



Graph(221):CNTL(DCAFDGRF)

p22: TSO Transaction Volume

Graph Description

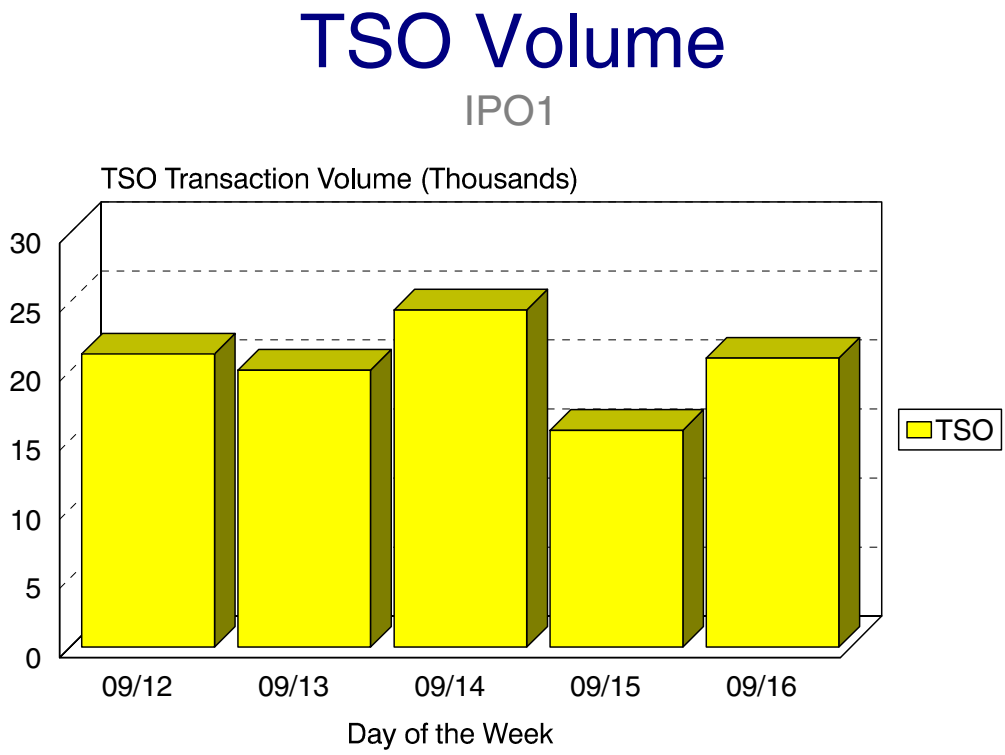
This graph shows the average number of TSO transactions that completed during a given period.

Which Program Builds the Data Point Member

PGM=SSA1TGRF

What Does the Data Represent

The chart is presented in the form of a bar graph. Each data point represents the number of TSO transactions that completed.



Graph(222):CNTL(DCAFDGRF)

p23: TSO Volume by Response by PGN

Graph Description

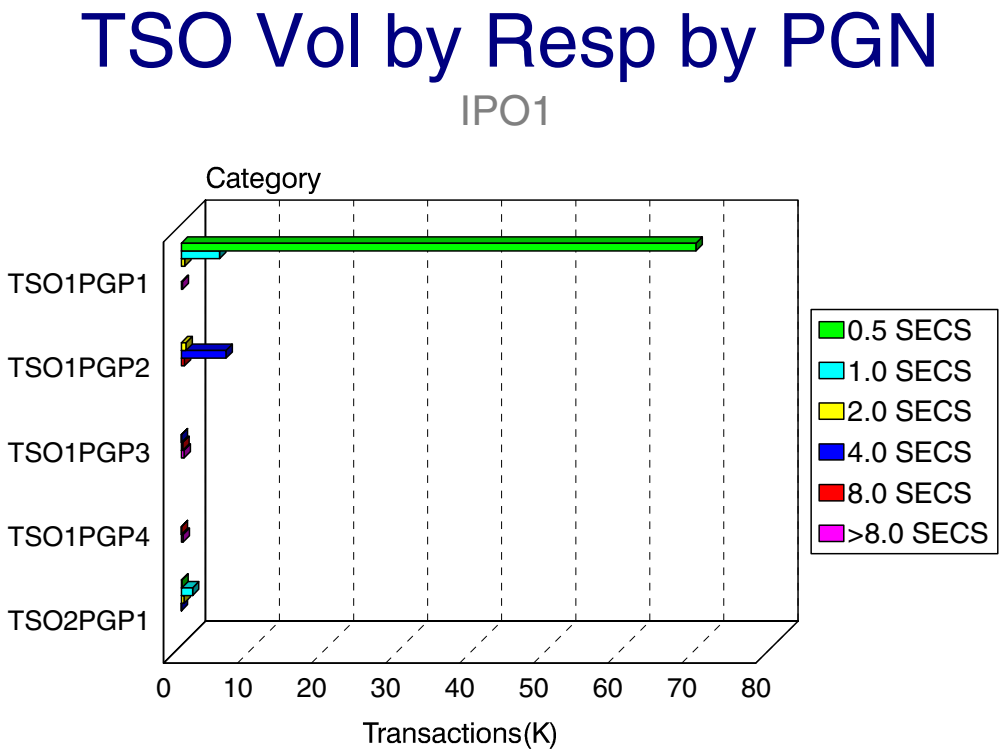
This horizontal bar graph shows the average number of TSO transactions that completed within a response threshold for a Performance Group Period within a PGN (Performance Group Number) during a given period.

Which Program Builds the Data Point Member

PGM=SSA1TGRH

What Does the Data Represent

The chart is presented in the form of a horizontal bar graph. Each data point represents the number of TSO transactions that completed within a threshold (e.g, > .5 seconds) for a PGP within a PGN.



Graph(223):CNTL(DCAFTGRH)

p24x: TSO Volume by PGP (x=PGN)

Graph Description

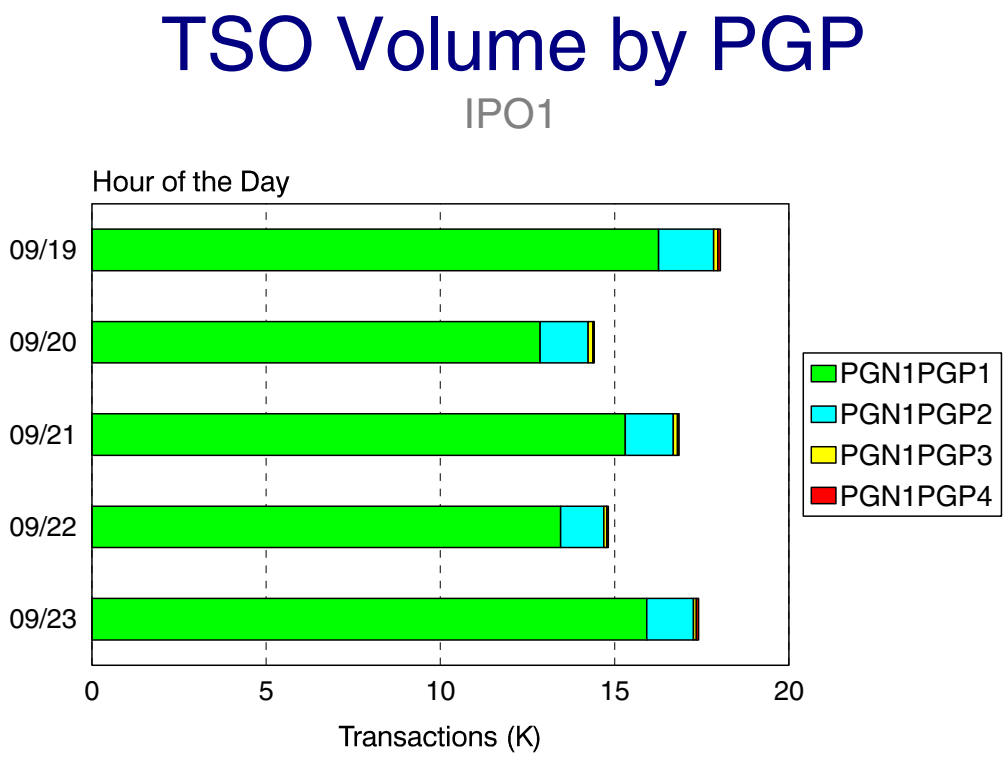
This horizontal bar graph shows the average number of TSO transactions that completed for a Performance Group Period during a given period. A different data point member is produced for each TSO PGN (up to 4).

Which Program Builds the Data Point Member

PGM=SSA1TGHY

What Does the Data Represent

The chart is presented in the form of a horizontal bar graph. Each data point represents the number of TSO transactions that completed for a PGP within a PGN.



Graph(224):CNTL(DCAFDGHY)

p25x: TSO Average Response by PGP (x=PGN)

Graph Description

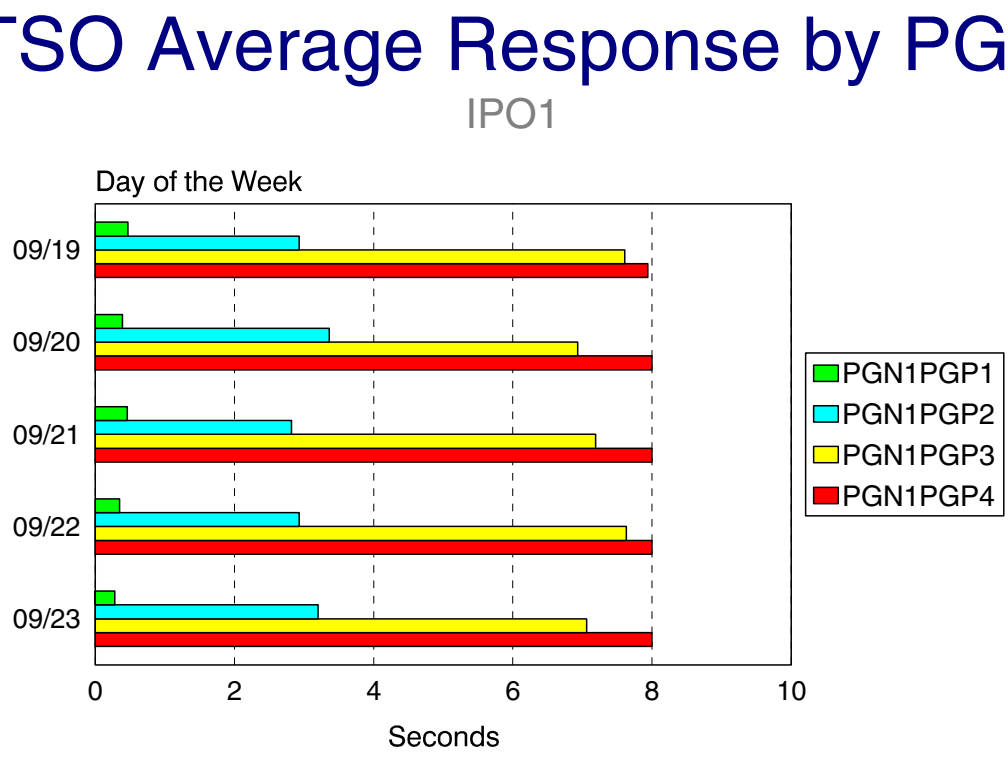
This horizontal bar graph shows the average response time for TSO transactions that completed for a Performance Group Period during a given period. A different data point member is produced for each TSO PGN (up to 4).

Which Program Builds the Data Point Member

PGM=SSA1TGHY

What Does the Data Represent

The chart is presented in the form of a horizontal bar graph. Each data point represents the average response for all TSO transactions that completed for a PGP within a PGN.



Graph(225):CNTL(DCAFDGHY)

p30: Batch JOB Throughput

Graph Description

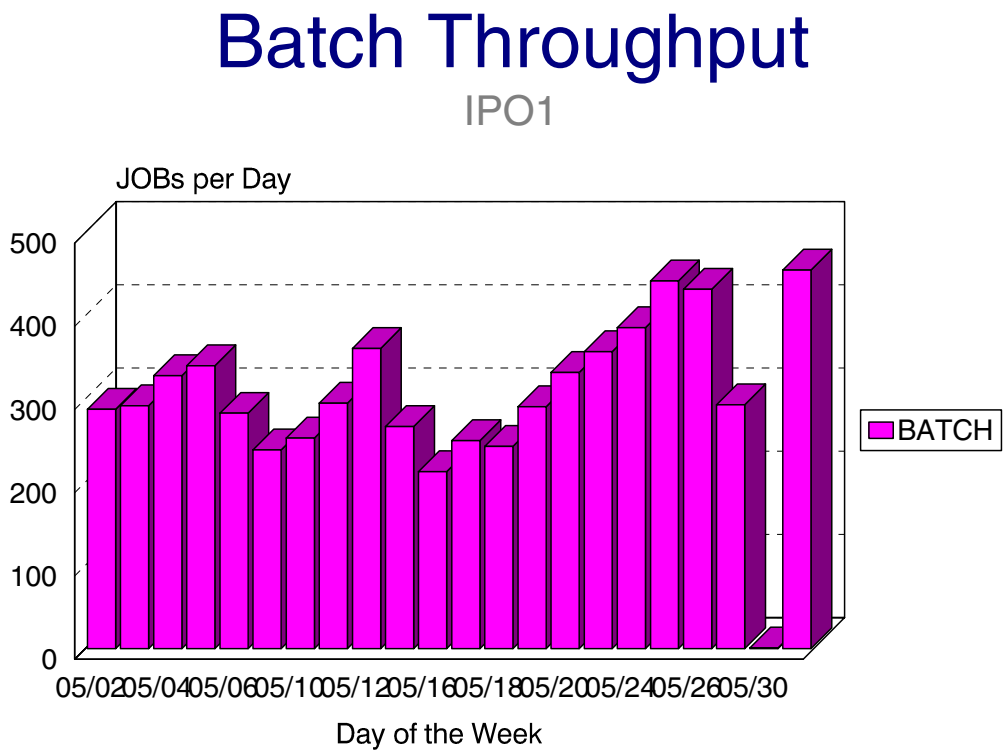
This graph shows the average number of Batch JOBs that terminated during a given period.

Which Program Builds the Data Point Member

PGM=SSA1TGRF

What Does the Data Represent

The chart is presented in the form of a bar graph. Each data point represents the number of JOBs that terminated.



Graph(230):CNTL(DCAFDGRF)

p301-306:Batch JOB Throughput by Initiator Group (PARMLIB=JOBS)

Graph Description

This set of graphs, one for each category of Initiator class, shows the average number of Batch JOBs within a specific set of Initiator classes that terminated during a given period. Up to six sets of Initiator classes can be defined via the JOBS member of PARMLIB. The label for each group is also determined from the JOBS member of PARMLIB.

Which Program Builds the Data Point Member

PGM=SSA1TGRF

What Does the Data Represent

The chart is presented in the form of a bar graph. Each data point represents the number of JOBs that terminated in a specified Initiator group.

p31: Batch JOB Turnaround

Graph Description

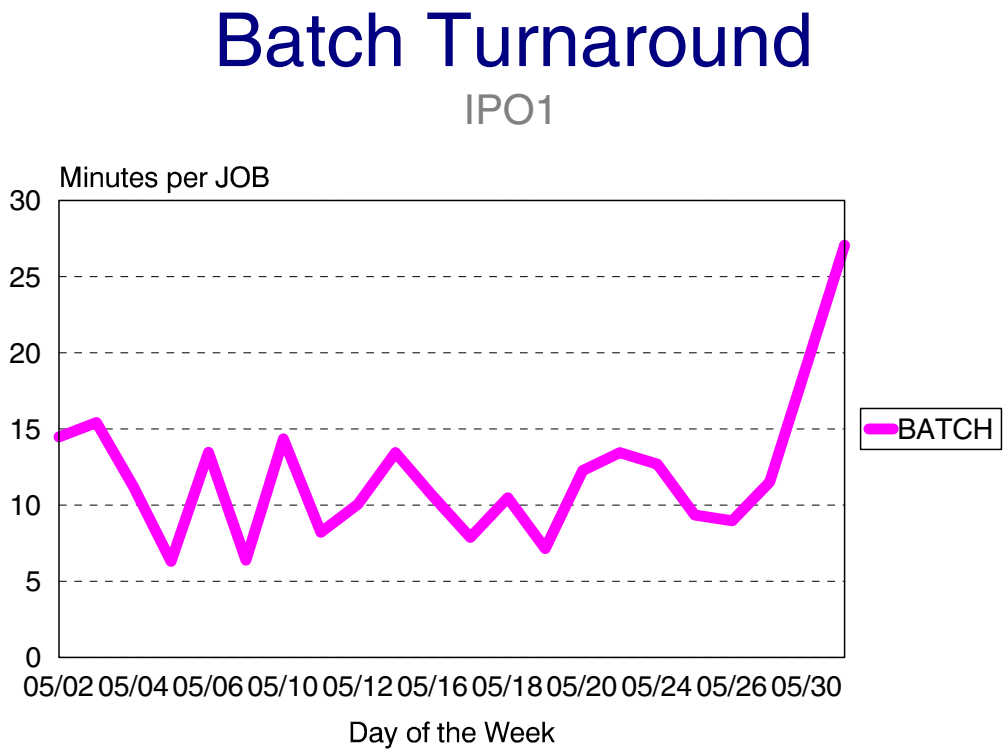
This graph shows the average turnaround time for Batch JOBs that terminated during a given period. Turnaround time is defined as the elapsed time from JES Reader time to JOB termination.

Which Program Builds the Data Point Member

PGM=SSA1TGRF

What Does the Data Represent

The chart is presented in the form of a bar graph. Each data point represents the average turnaround time in minutes for all Batch JOBs that terminated during the period.



Graph(231):CNTL(DCAFDGRF)

p311-316: Batch JOB Turnaround by Initiator Group (PARMLIB=JOBS)

Graph Description

This set of graphs, one for each category of Initiator class, shows the average turnaround time for all Batch JOBs within a specific set of Initiator classes that terminated during a given period. Up to six sets of Initiator classes can be defined via the JOBS member of PARMLIB. The label for each group is also determined from the JOBS member of PARMLIB.

Which Program Builds the Data Point Member

PGM=SSA1TGRF

What Does the Data Represent

The chart is presented in the form of a bar graph. Each data point represents the average turnaround time, in minutes, for all JOBs that terminated in a specified Initiator group.

p33: Batch JOB CPU Time in 64 Groups (PARMLIB=JGRP)

Graph Description

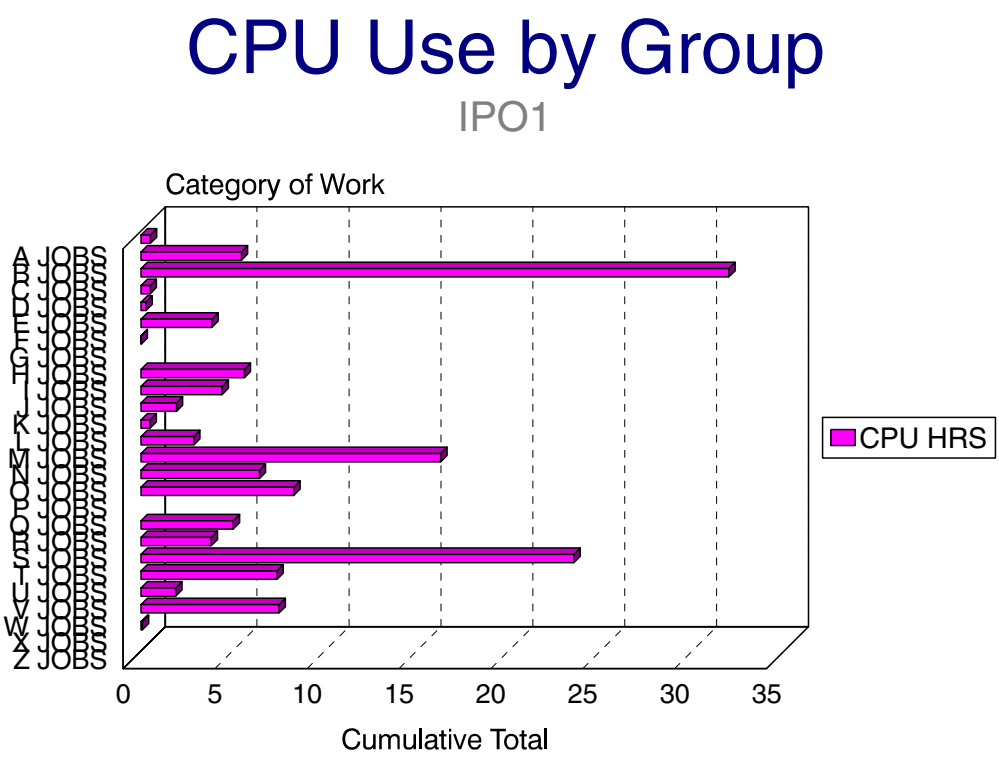
This graph shows who was actually using CPU time during any given period (BEGIN TIME:END TIME), based on JOBNAME. The JGRP member of PARMLIB allows you to group JOBs into up to 64 categories by JOBNAME or fragment of JOBNAME (wildcards). Then the actual CPU time used by that category is shown on this graph. Labels are determined from the JGRP member as well.

Which Program Builds the Data Point Member

PGM=SSA1TGRD

What Does the Data Represent

The chart is presented in the form of a horizontal bar graph. Each line shows the number of CPU seconds, in hundredths of a second, that were used by a particular category of user, based on JOBNAME.



Graph(233):CNTL(DCAFTGRD)

p35: Task Availability

Graph Description

This graph shows when a JOB or Started Task started and terminated during any given period (BEGIN TIME:END TIME), based on JOBNAME.

The Hourly form of the graph (135) allows you to specify, via the INCLUDE DD Statement, up to 24 individual JOBs or Started Tasks, for a specific date. The availability of those JOBs or Started Tasks for that date is shown: a red bar shows when the task was down, a green bar shows when the task was active.

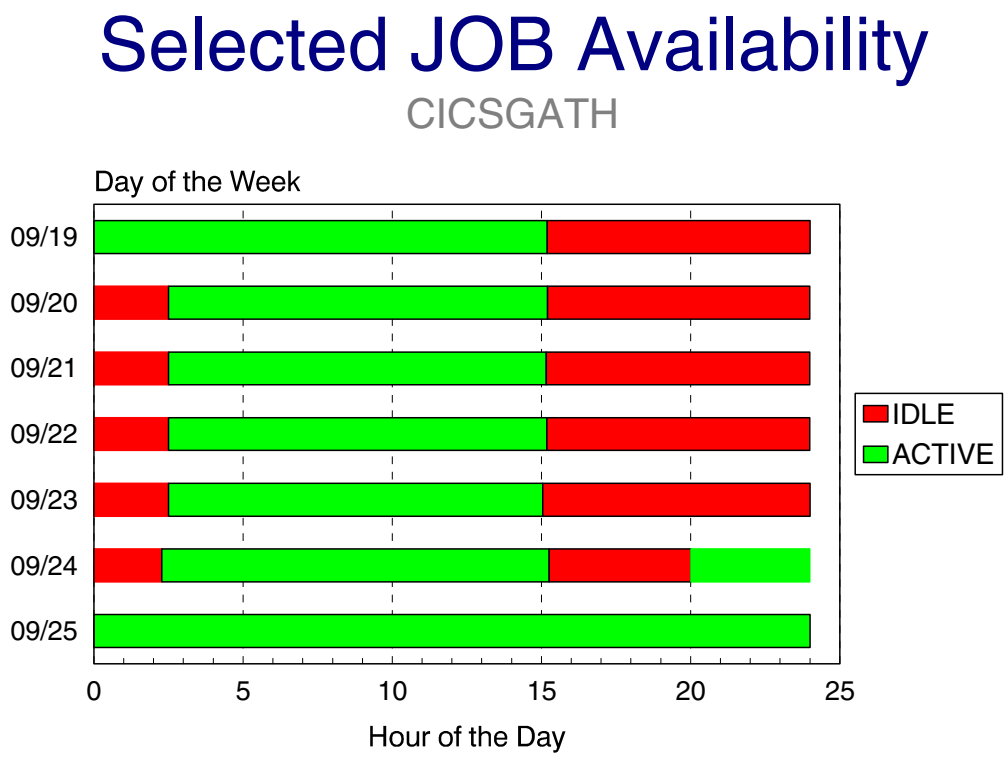
The Daily form of the graph (235) allows you to specify, via the INCLUDE DD Statement, a specific JOB or Started Task, for a specific date range (BEGIN DATE:END DATE). The availability of that JOB or Started Task for each date in the date range is shown: a red bar shows when the task was down, a green bar shows when the task was active.

Which Program Builds the Data Point Member

PGM=SSA1TGRV

What Does the Data Represent

The chart is presented in the form of a horizontal bar graph. Each line shows the time a JOB or Started Task was up (green bar) or was down (red bar).



Graph(235):CNTL(DCAFDGRV)

p36: Task Unscheduled Outage by Incident (Uses SCHEDLIB)

Graph Description

This graph is used to map actual outages against scheduled availability. The graph relies on a library named SCHEDLIB that contains the scheduled availability of specified JOBs or Started Tasks. The members in SCHEDLIB represent tasks, by name, for all tasks that are to be included in the graph for the period. JOBs or Started Tasks can be grouped into categories as well.

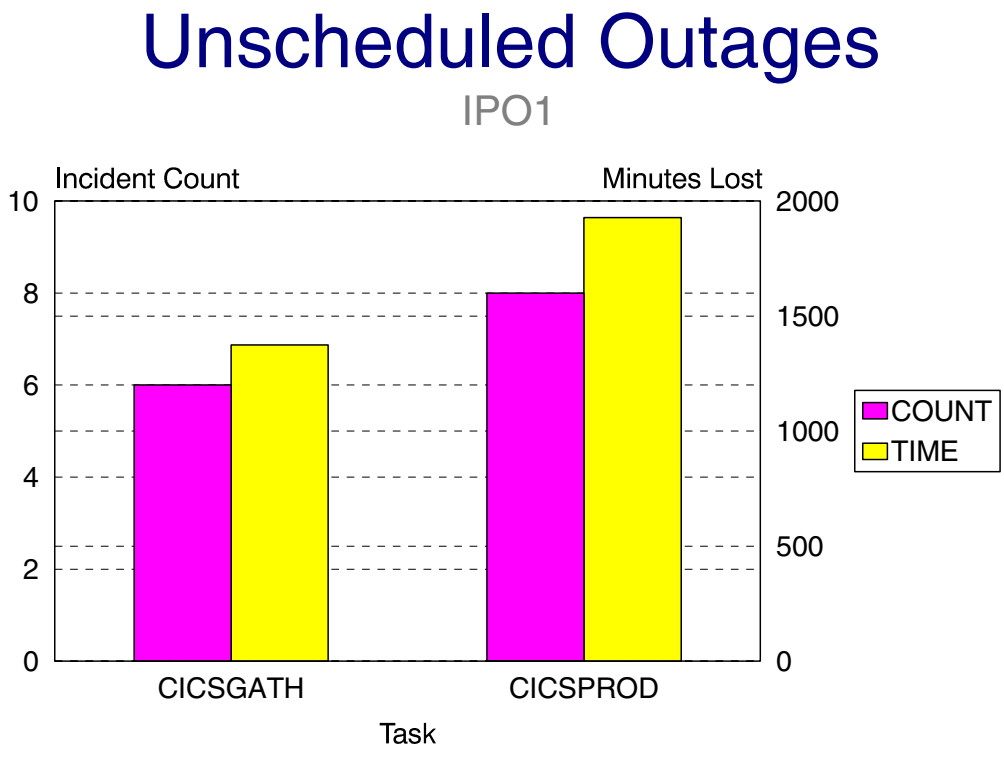
The schedule for each task in SCHEDLIB can be according to day of the month (the default) or it can be according to day of the week (SCHEDLIB WEEKLY FORMAT=YES). Only the actual days specified (SELECTED DAY) for the date range (BEGIN DATE:END DATE) are taken into consideration when plotting the graph.

Which Program Builds the Data Point Member

PGM=SSA1TGRK

What Does the Data Represent

The chart is shown as a vertical side-by-side bar graph. Each category (or JOB or Started Task, depending on the SCHEDLIB member) has a single bar showing the number of minutes of unscheduled outage, along with the number of times an unscheduled outage occurred.



Graph(236):CNTL(DCAFTGRK)

p37: Task Uptime % Against Objectives (Uses SCHEDLIB)

Graph Description

This graph is used to map the percentage of task availability against specific objectives. The graph relies on a library named SCHEDLIB that contains the scheduled availability of specified JOBs or Started Tasks. The members in SCHEDLIB represent tasks, by name, for all tasks that are to be included in the graph for the period. JOBs or Started Tasks can be grouped into categories as well.

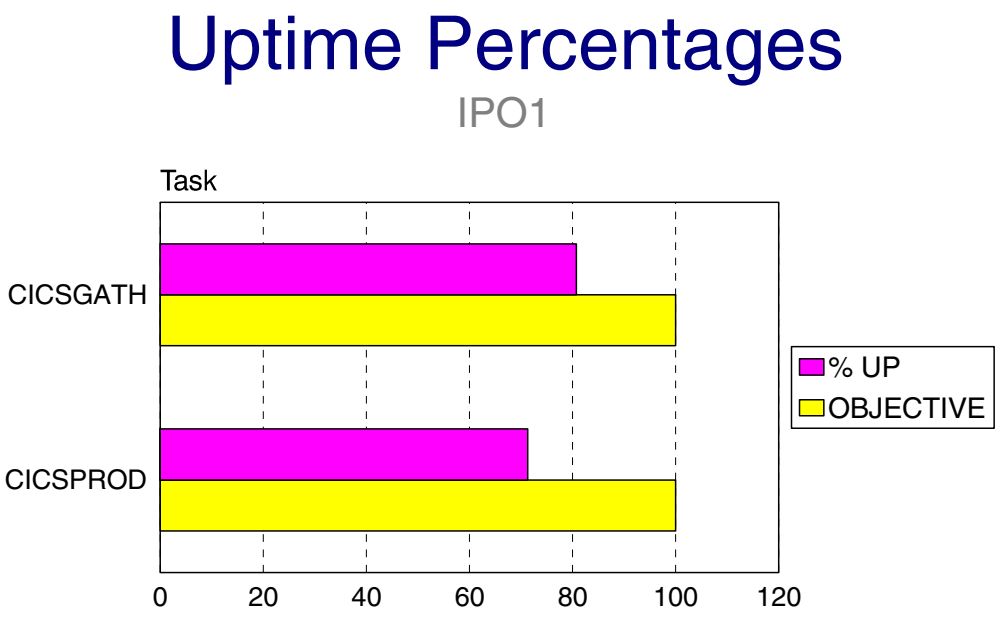
The schedule for each task in SCHEDLIB can be according to day of the month (the default) or it can be according to day of the week (SCHEDLIB WEEKLY FORMAT=YES). Only the actual days specified (SELECTED DAY) for the date range (BEGIN DATE:END DATE) are taken into consideration when plotting the graph.

Which Program Builds the Data Point Member

PGM=SSA1TGRK

What Does the Data Represent

The chart is shown as a horizontal bar graph. Each category (or JOB or Started Task, depending on the SCHEDLIB member) has a single horizontal bar showing the percentage of availability for that category, above a horizontal bar showing the availability objective for the category.



	CICSGATH	CICSPROD
% UP	80.74	71.3
OBJECTIVE	100	100

Graph(237):CNTL(DCAFTGRK)

p40: DASD Overall Average Device Busy %

Graph Description

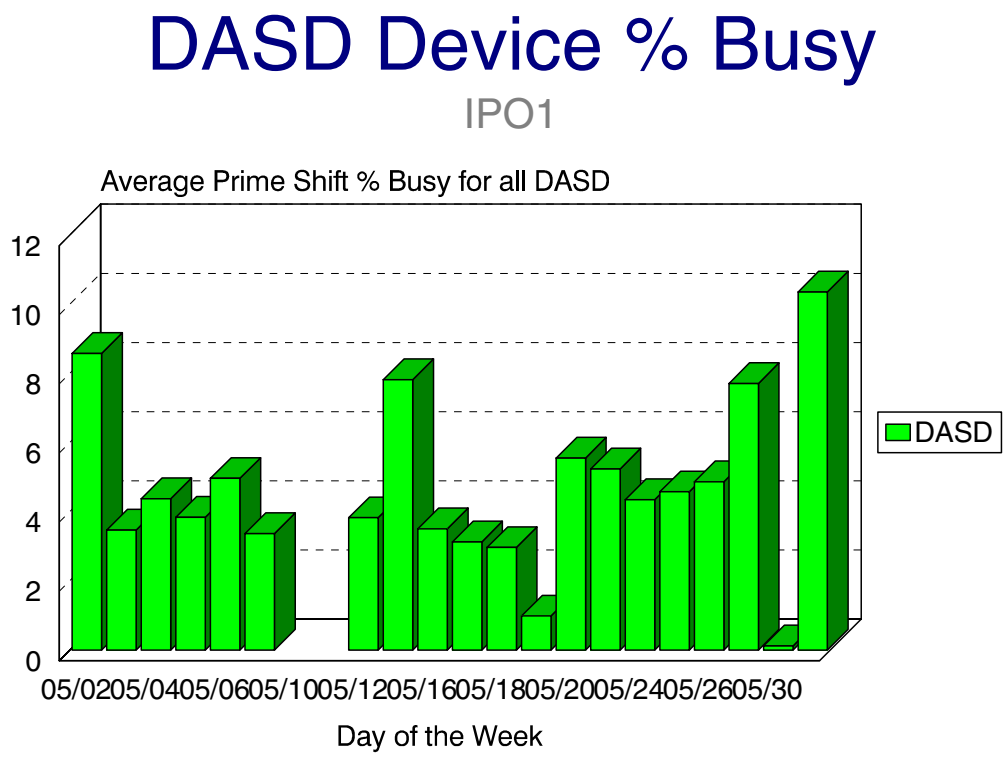
This graph shows, for all DASD devices associated with a given system, the overall average device busy percentage. If you want to build this graph with a selected set of DASD devices, use the SSA1TGFT program along with a //INCLUDE file that consists of DASD Device Addresses in the form DASDccuu where the "ccuu" is the actual device address. A range of device addresses can be specified by using an asterisk to terminate the entry. For example, an entry of DASD023* would include all devices in the range 0230-023F.

Which Program Builds the Data Point Member

PGM=SSA1TGRF

What Does the Data Represent

The chart is presented as a bar graph. Each data point represents the average DASD device busy percentage, taking into consideration all DASD devices.



Graph(240):CNTL(DCAFDGRF)

p41: DASD Overall Average Queue Delay

Graph Description

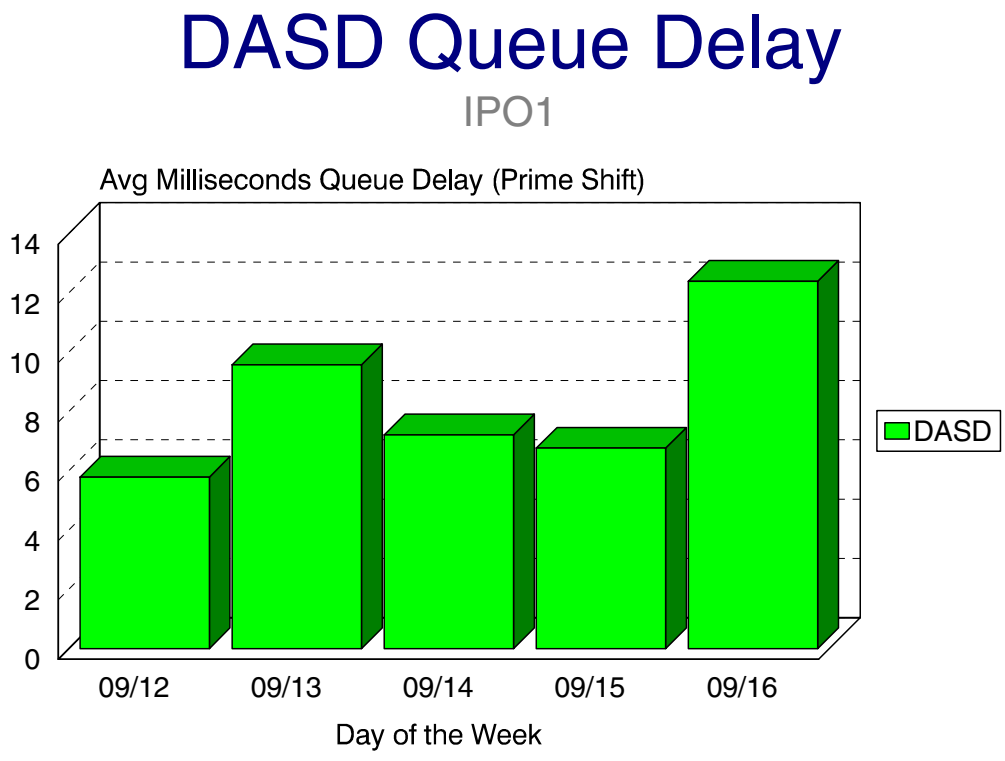
This graph shows, for all DASD devices associated with a given system, the overall average in storage queue delay time. If you want to build this graph with a selected set of DASD devices, use the SSA1TGFT program along with a //INCLUDE file that consists of DASD Device Addresses in the form DASDccuu where the "ccuu" is the actual device address. A range of device addresses can be specified by using an asterisk to terminate the entry. For example, an entry of DASD023* would include all devices in the range 0230-023F.

Which Program Builds the Data Point Member

PGM=SSA1TGRF

What Does the Data Represent

The chart is presented as a bar graph. Each data point represents the average DASD queue delay time, in hundredths of a millisecond, taking into consideration all DASD devices.



Graph(241):CNTL(DCAFDGRF)

p42: DASD Overall Average I/O Service Time

Graph Description

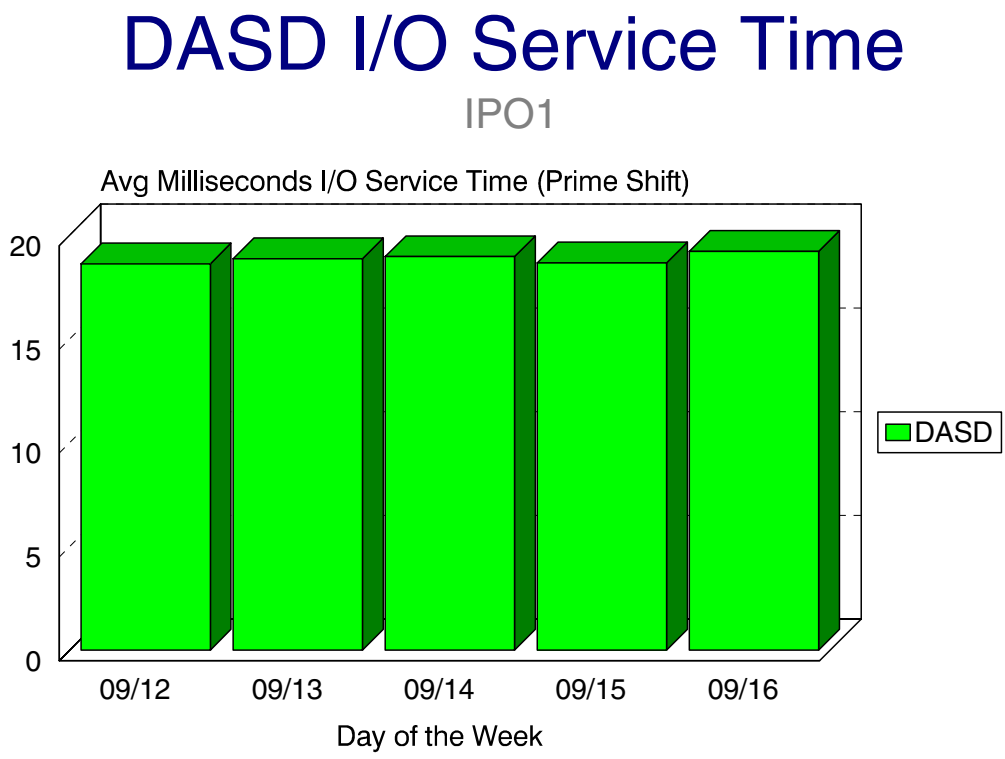
This graph shows, for all DASD devices associated with a given system, the overall average I/O service time, exclusive of queue delay time. If you want to build this graph with a selected set of DASD devices, use the SSA1TGFT program along with a //INCLUDE file that consists of DASD Device Addresses in the form DASDccuu where the "ccuu" is the actual device address. A range of device addresses can be specified by using an asterisk to terminate the entry. For example, an entry of DASD023* would include all devices in the range 0230-023F.

Which Program Builds the Data Point Member

PGM=SSA1TGRF

What Does the Data Represent

The chart is presented as a bar graph. Each data point represents the average DASD I/O service time in hundredths of a millisecond, taking into consideration all DASD devices.



Graph(242):CNTL(DCAFDGRF)

p43: DASD Overall Average SIO per Second

Graph Description

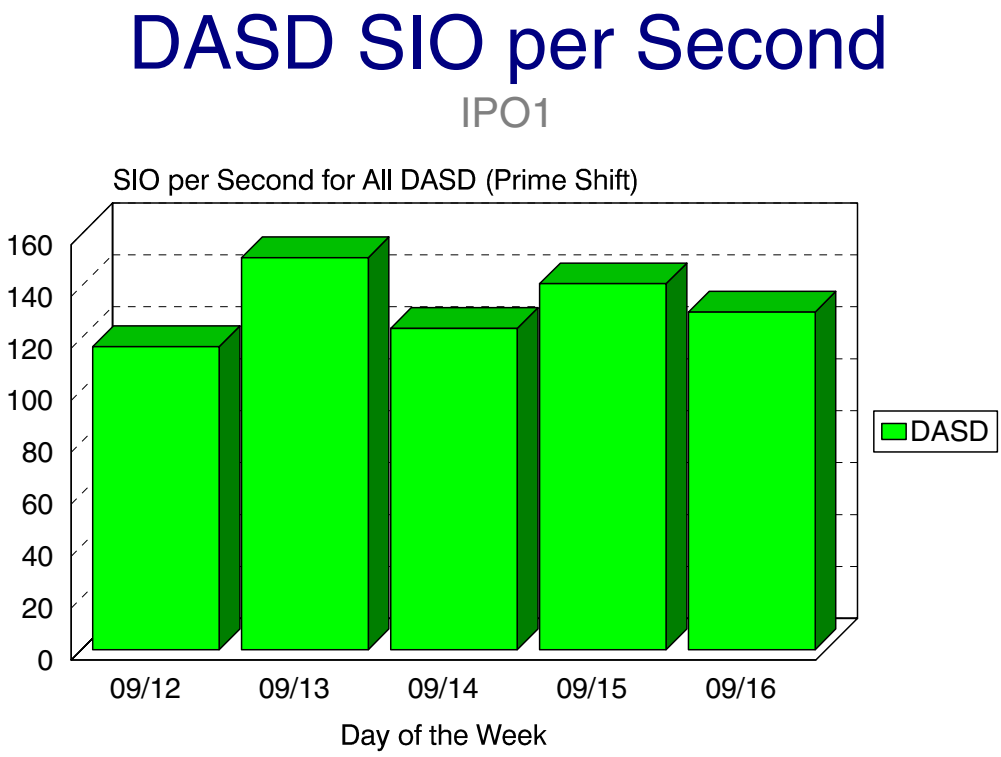
This graph shows, for all DASD devices associated with a given system, the overall average number of I/O operations per second. If you want to build this graph with a selected set of DASD devices, use the SSA1TGFT program along with a //INCLUDE file that consists of DASD Device Addresses in the form DASDccuu where the "ccuu" is the actual device address. A range of device addresses can be specified by using an asterisk to terminate the entry. For example, an entry f DASD023* would include all devices in the range 0230-023F.

Which Program Builds the Data Point Member

PGM=SSA1TGRF

What Does the Data Represent

The chart is presented as a bar graph. Each data point represents the number of I/O operations per second (SIO), taking into consideration all DASD devices.



Graph(243):CNTL(DCAFDGRF)

p50: Channel Overall Average % Busy

Graph Description

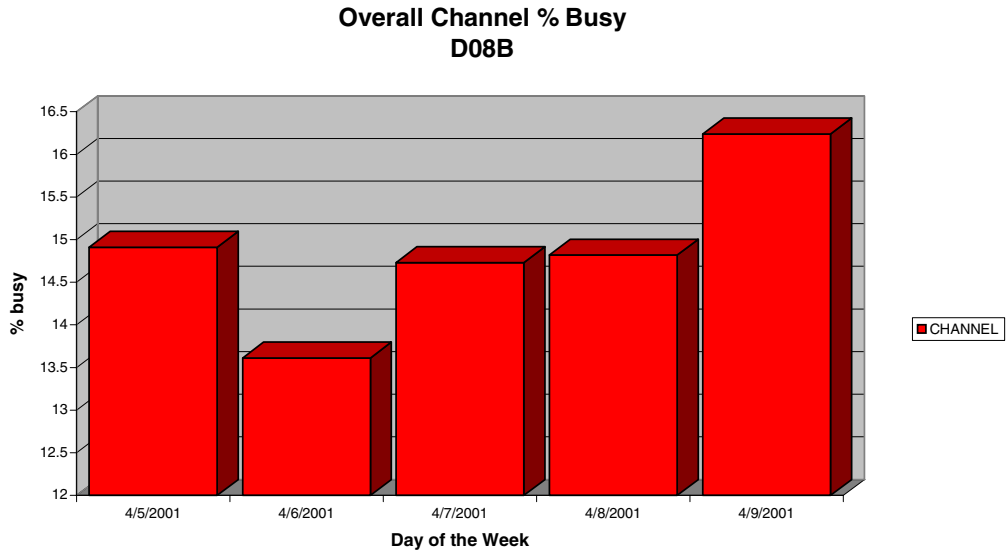
This graph shows, for all Channel or CHPIDs associated with a given system, the overall average busy percentage. If you want to build this graph with a selected set of Channels or CHPIDs, use the SSA1TGFT program along with a //INCLUDE file that consists of Channel Addresses in the form CHANnnnn where the "nnnn" is the actual channel or CHPID address. A range of channel addresses can be specified by using an asterisk to terminate the entry. For example, an entry of CHAN008* would include all channels and CHPIDs in the range 0080-008F.

Which Program Builds the Data Point Member

PGM=SSA1TGRF

What Does the Data Represent

The chart is presented as a bar graph. Each data point represents the average busy percentage, taking into consideration all Channels and CHPIDs.



p5xx: Individual Channel Average % Busy

Graph Description

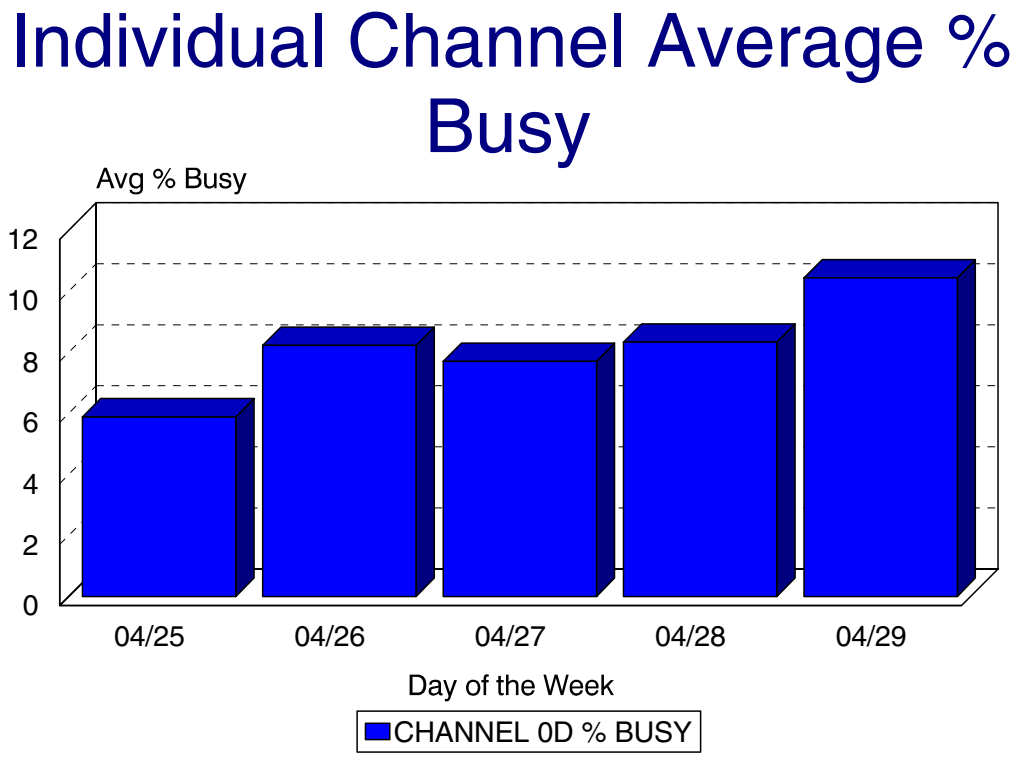
This graph shows, for a specific Channel or CHPID associated with a given system, the average busy percentage. Each separate channel or CHPID is represented by a separate Data Point member, the hex value of the Channel or CHPID being part of the Member name (e.g, Channel 0A would produce member p50A).

Which Program Builds the Data Point Member

PGM=SSA1TGRQ

What Does the Data Represent

The chart is presented as a bar graph. Each data point represents the average busy percentage for a specific Channel or CHPID.



pE0E: CPU % Busy Early Shift (PARMLIB=CPUV)

Graph Description

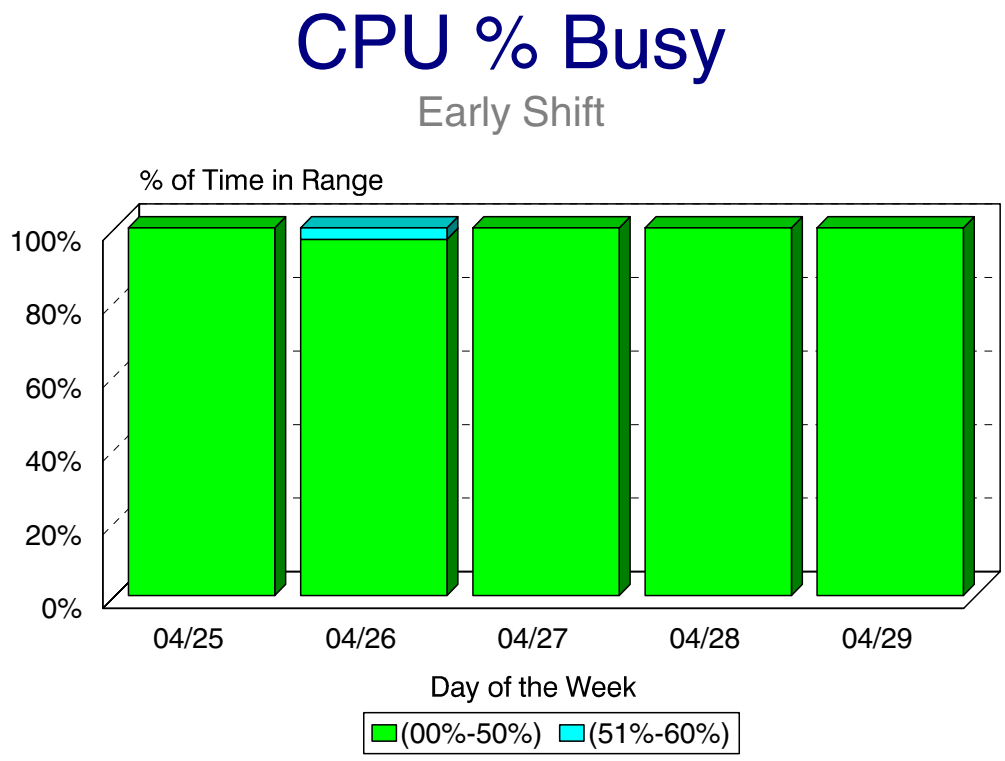
This graph portrays how saturated the CPU has become during Early Shift, in terms of percent busy, based on thresholds contained in the CPUV member of PARMLIB. The CPUV member contains percent busy thresholds. The actual CPU percent busy is plotted against those thresholds. In the Hourly version of the graph (1E0E) the graph shows how many minutes of each Early Shift hour, on average, the CPU percent busy exceeded each specified threshold. In the Daily, Weekly and Monthly versions of the graph, the graph shows how many hours of each Early Shift, on average, the CPU percent busy exceeded each specified threshold.

Which Program Builds the Data Point Member

PGM=SSA1TGRE

What Does the Data Represent

The chart is presented as an area graph. Each data point represents the amount of Early Shift elapsed time during which the CPU exceeded a specified threshold.



pE0P: CPU % Busy Prime Shift (PARMLIB=CPUV)

Graph Description

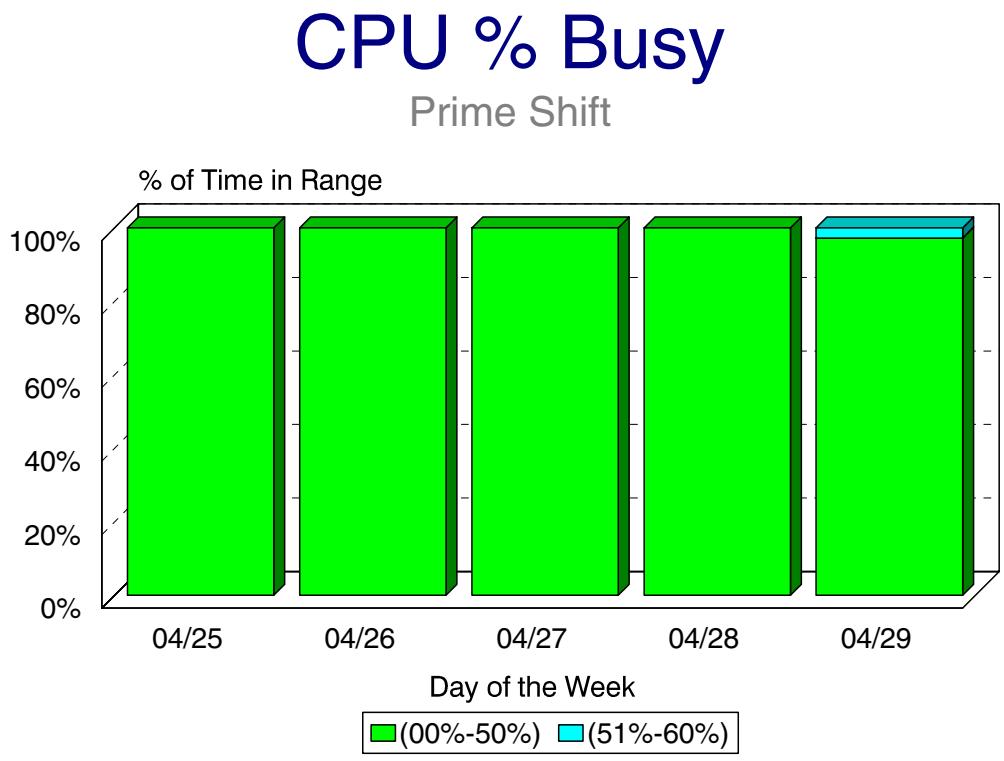
This graph portrays how saturated the CPU has become during Prime Shift, in terms of percent busy, based on thresholds contained in the CPUV member of PARMLIB. The CPUV member contains percent busy thresholds. The actual CPU percent busy is plotted against those thresholds. In the Hourly version of the graph (1E0P) the graph shows how many minutes of each Prime Shift hour, on average, the CPU percent busy exceeded each specified threshold. In the Daily, Weekly and Monthly versions of the graph, the graph shows how many hours of each Prime Shift, on average, the CPU percent busy exceeded each specified threshold.

Which Program Builds the Data Point Member

PGM=SSA1TGRE

What Does the Data Represent

The chart is presented as an area graph. Each data point represents the amount of Prime Shift elapsed time during which the CPU exceeded a specified threshold.



pE0L: CPU % Busy Late Shift (PARMLIB=CPUV)

Graph Description

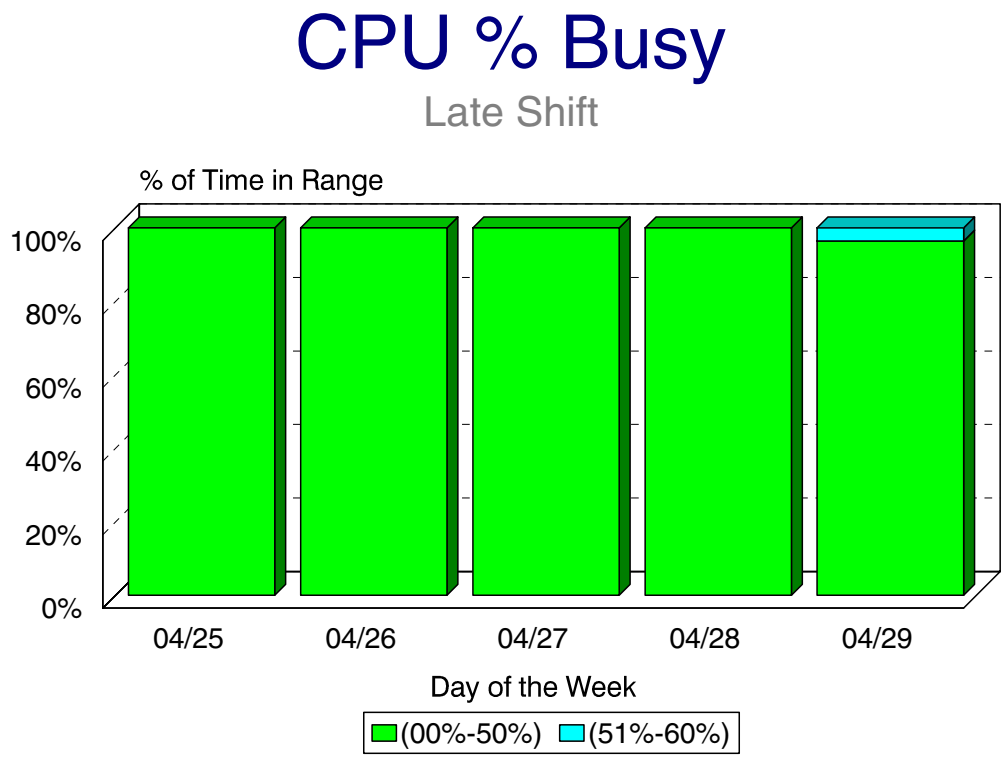
This graph portrays how saturated the CPU has become during Late Shift, in terms of percent busy, based on thresholds contained in the CPUV member of PARMLIB. The CPUV member contains percent busy thresholds. The actual CPU percent busy is plotted against those thresholds. In the Hourly version of the graph (1E0L) the graph shows how many minutes of each Late Shift hour, on average, the CPU percent busy exceeded each specified threshold. In the Daily, Weekly and Monthly versions of the graph, the graph shows how many hours of each Late Shift, on average, the CPU percent busy exceeded each specified threshold.

Which Program Builds the Data Point Member

PGM=SSA1TGRE

What Does the Data Represent

The chart is presented as an area graph. Each data point represents the amount of Late Shift elapsed time during which the CPU exceeded a specified threshold.



pX0: ESA Storage Activity: Central to Expanded Movement

Graph Description

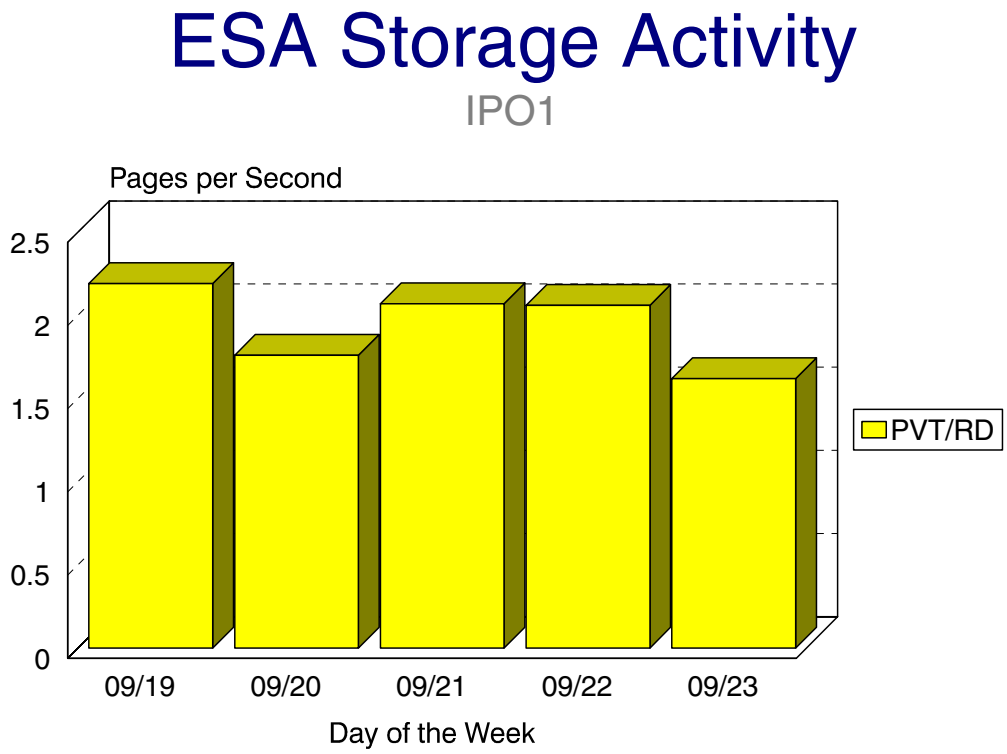
This graph shows the average number of pages per second moved from Central to Expanded storage (Page Writes) or from Expanded to Central Storage (Page Reads) for the private area, for Hiperspaces or for VIO.

Which Program Builds the Data Point Member

PGM=SSA1TGRX

What Does the Data Represent

The chart is presented as a stacked bar graph. Each data point represents the number of pages per second moved for a given category (VIO Reads, VIO Writes, Private Reads, Private Writes, Hiper Reads, Hiper Writes).



Graph(2X0):CNTL(DCAFDGRX)

pX1: ESA Storage Activity: Expanded to Auxiliary Migration

Graph Description

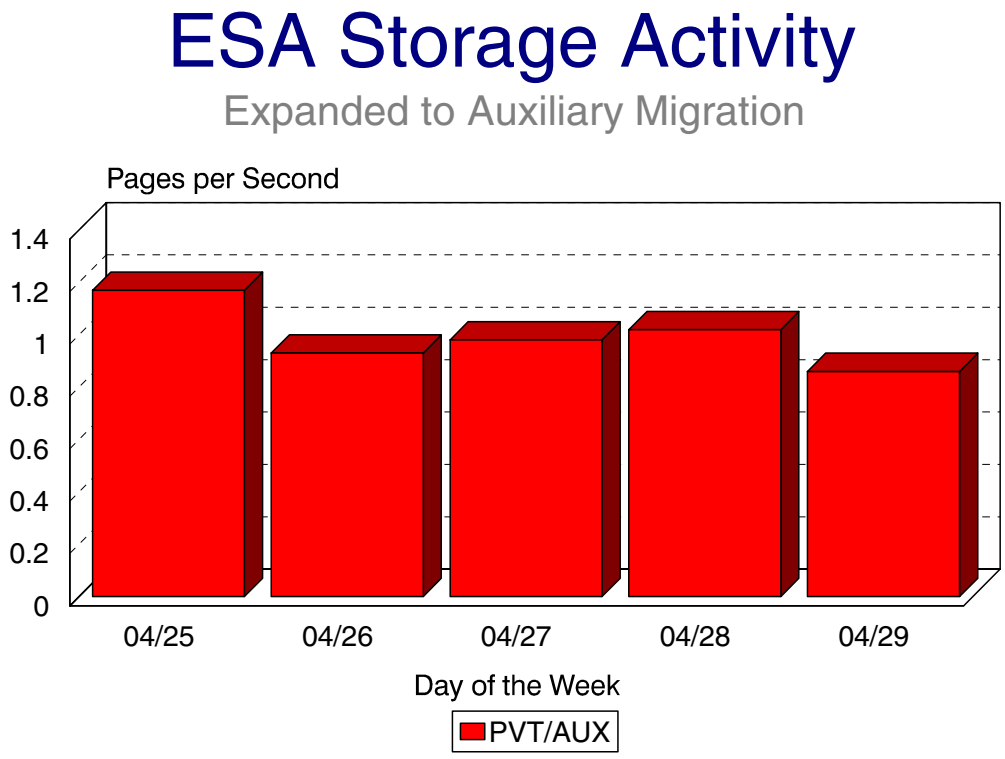
This graph shows the average number of pages per second migrated from Expanded to Auxiliary storage (Page Writes) or from Auxiliary to Expanded Storage (Page Reads) for the private area, for Hiperspaces or for VIO.

Which Program Builds the Data Point Member

PGM=SSA1TGRX

What Does the Data Represent

The chart is presented as a stacked bar graph. Each data point represents the number of pages per second migrated for a given category (VIO Reads, VIO Writes, Private Reads, Private Writes, Hiper Reads, Hiper Writes).



pX2: ESA Storage Activity: Paging Activity by Category

Graph Description

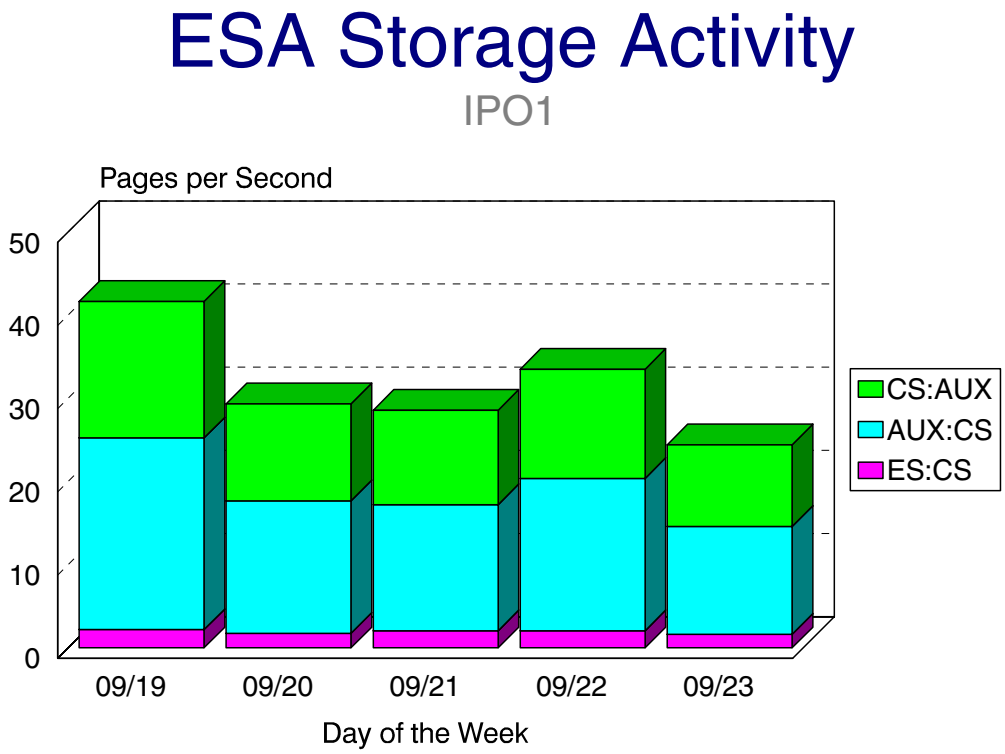
This graph shows the average number of pages per second moved or migrated (Central Storage==>Expanded Storage, Expanded Storage==>Central Storage, Central Storage==>Auxiliary Storage, Auxiliary Storage==>Central Storage, Expanded Storage==>Auxiliary Storage through Central Storage).

Which Program Builds the Data Point Member

PGM=SSA1TGRX

What Does the Data Represent

The chart is presented as a stacked bar graph. Each data point represents the number of pages per second moved or migrated.



Graph(2X2):CNTL(DCAFDGRX)

pX3: Central Storage Map

Graph Description

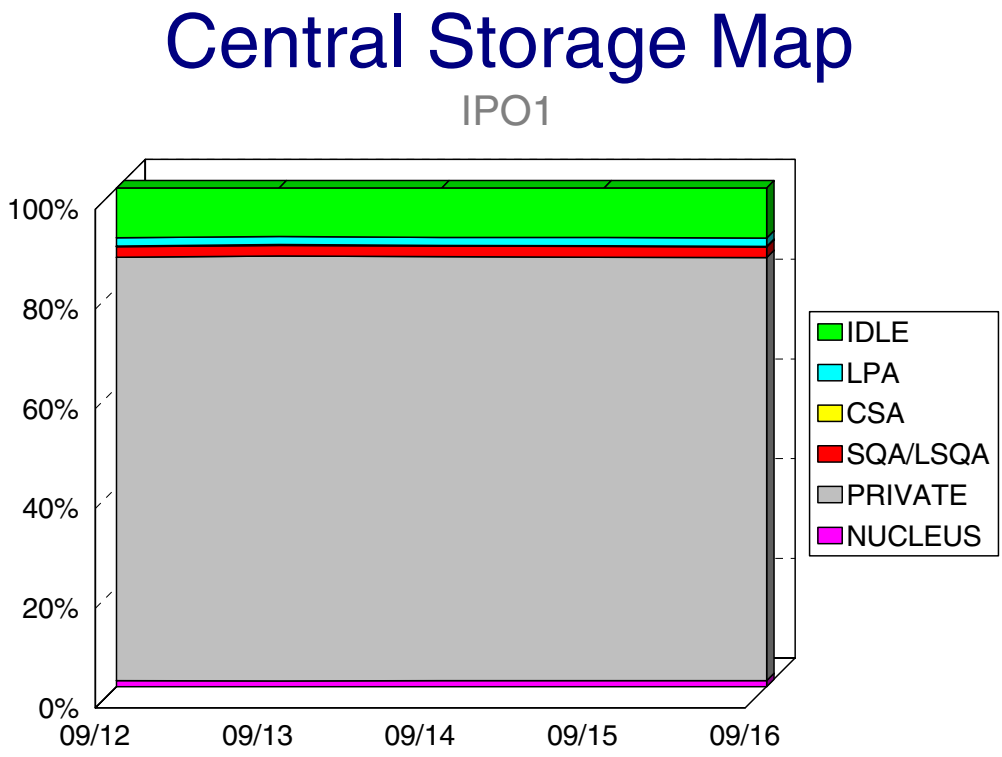
This graph shows the manner in which Central Storage is mapped, divided into Nucleus, LPA, SQA, LSQA, CSA, Private Area and available frames.

Which Program Builds the Data Point Member

PGM=SSA1TGRX

What Does the Data Represent

The chart is presented as a stacked bar graph. Each data point represents the number of Megabytes of Central Storage mapped by a specific component.



CHART(2X3):CNTL(DCAFHGRX)

pX4: Expanded Storage Map

Graph Description

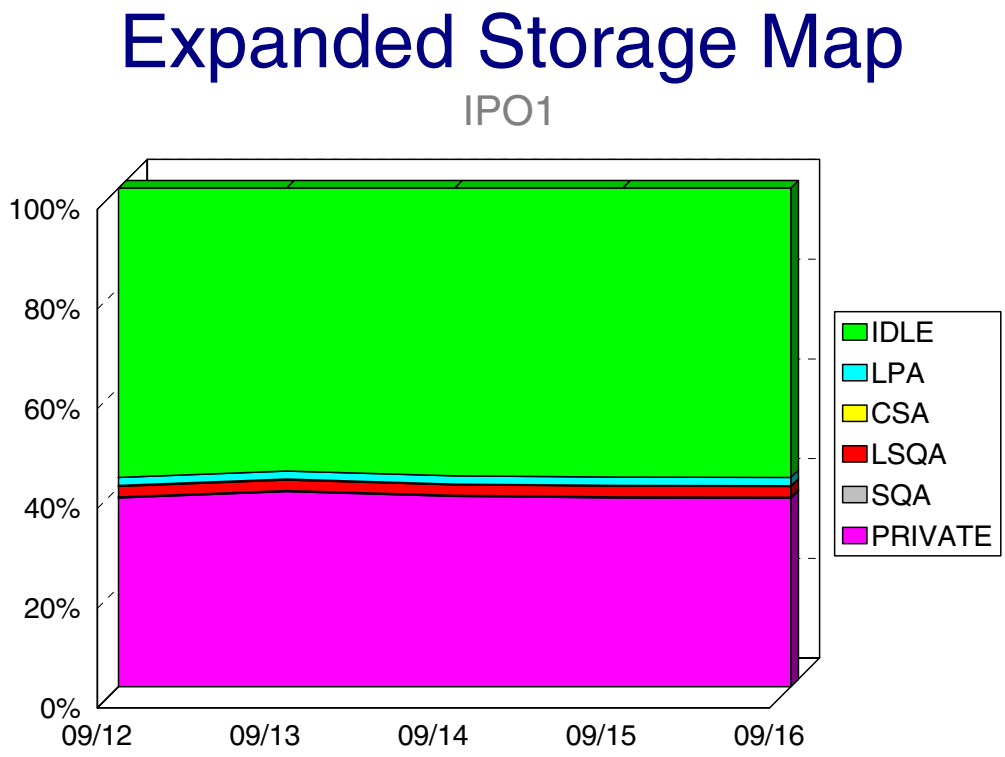
This graph shows the manner in which Expanded Storage is mapped, divided into LPA, SQA, LSQA, CSA, Private Area and available frames.

Which Program Builds the Data Point Member

PGM=SSA1TGRX

What Does the Data Represent

The chart is presented as a stacked bar graph. Each data point represents the number of Megabytes of Expanded Storage mapped by a specific component.



CHART(2X4):CNTL(DCAFHGRX)

pX5E: PR/SM LPAR % Busy Early Shift (PARMLIB=CPUV)

Graph Description

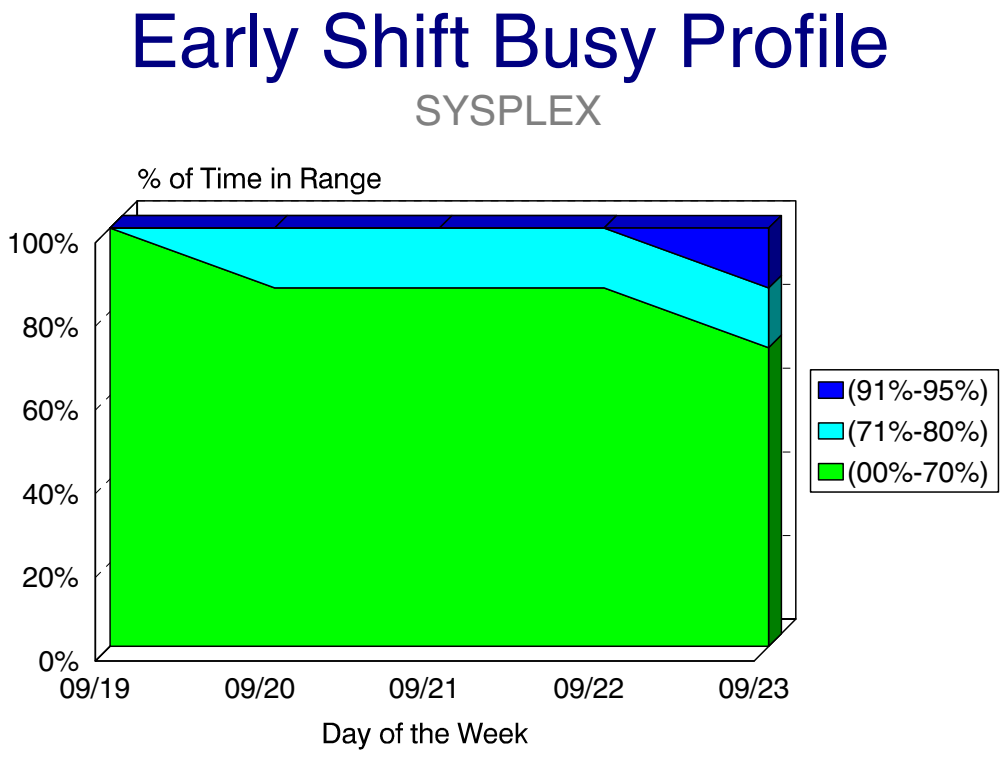
This graph portrays how saturated the PR/SM Sysplex (all LPARs) has become during Early Shift, in terms of percent busy, based on thresholds contained in the CPUV member of PARMLIB. The CPUV member contains percent busy thresholds. The actual PR/SM Sysplex percent busy is plotted against those thresholds. In the Hourly version of the graph (1X5E) the graph shows how many minutes of each Early Shift hour, on average, the PR/SM Sysplex percent busy exceeded each specified threshold. In the Daily, Weekly and Monthly versions of the graph, the graph shows how many hours of each Early Shift, on average, the PR/SM Sysplex percent busy exceeded each specified threshold.

Which Program Builds the Data Point Member

PGM=SSA1TGRU

What Does the Data Represent

The chart is presented as an area graph. Each data point represents the amount of Early Shift elapsed time during which the PR/SM Sysplex exceeded a specified threshold.



Graph(2X5E):CNTL(DCAFDGRU)

pX5P: PR/SM LPAR % Busy Prime Shift (PARMLIB=CPUV)

Graph Description

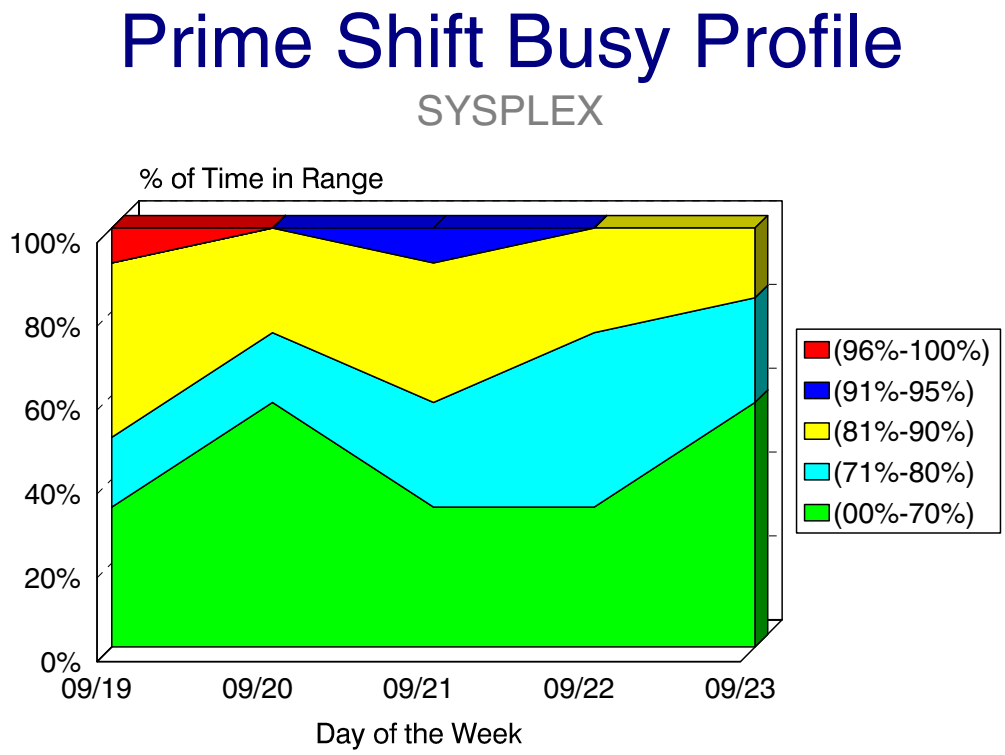
This graph portrays how saturated the PR/SM Sysplex (all LPARs) has become during Prime Shift, in terms of percent busy, based on thresholds contained in the CPUV member of PARMLIB. The CPUV member contains percent busy thresholds. The actual PR/SM Sysplex percent busy is plotted against those thresholds. In the Hourly version of the graph (1X5P) the graph shows how many minutes of each Prime Shift hour, on average, the PR/SM Sysplex percent busy exceeded each specified threshold. In the Daily, Weekly and Monthly versions of the graph, the graph shows how many hours of each Prime Shift, on average, the PR/SM Sysplex percent busy exceeded each specified threshold.

Which Program Builds the Data Point Member

PGM=SSA1TGRU

What Does the Data Represent

The chart is presented as an area graph. Each data point represents the amount of Prime Shift elapsed time during which the PR/SM Sysplex exceeded a specified threshold.



Graph(2X5P):CNTL(DCAFDGRU)

pX5L: PR/SM LPAR % Busy Late Shift (PARMLIB=CPUV)

Graph Description

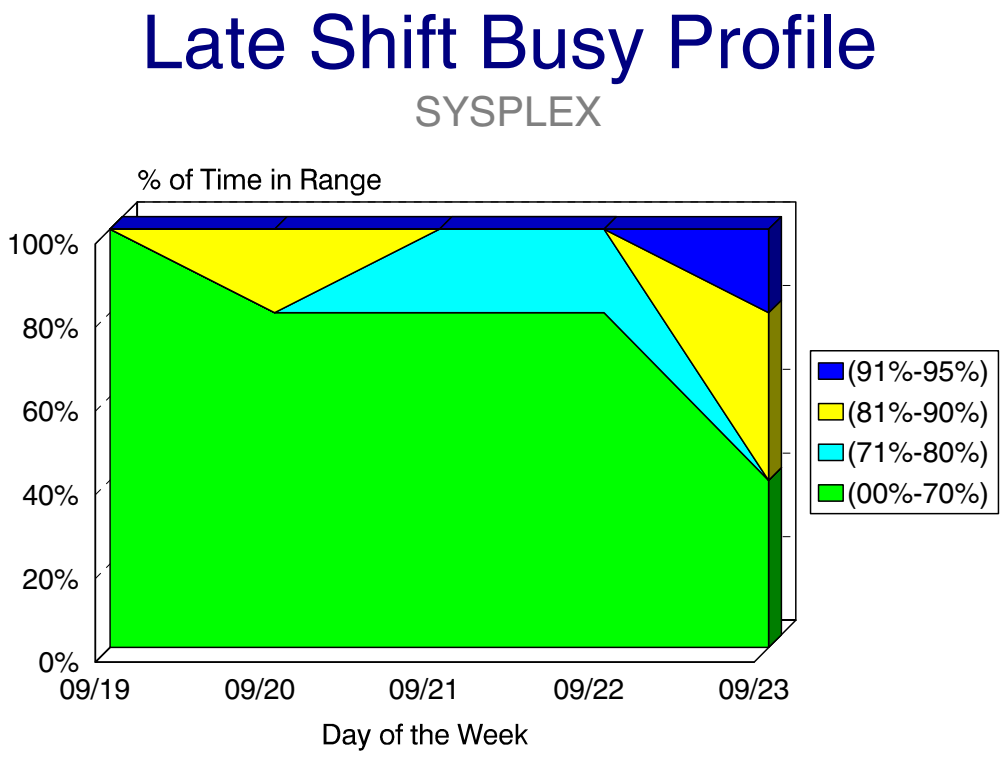
This graph portrays how saturated the PR/SM Sysplex (all LPARs) has become during Late Shift, in terms of percent busy, based on thresholds contained in the CPUV member of PARMLIB. The CPUV member contains percent busy thresholds. The actual PR/SM Sysplex percent busy is plotted against those thresholds. In the Hourly version of the graph (1X5E) the graph shows how many minutes of each Late Shift hour, on average, the PR/SM Sysplex percent busy exceeded each specified threshold. In the Daily, Weekly and Monthly versions of the graph, the graph shows how many hours of each Late Shift, on average, the PR/SM Sysplex percent busy exceeded each specified threshold.

Which Program Builds the Data Point Member

PGM=SSA1TGRU

What Does the Data Represent

The chart is presented as an area graph. Each data point represents the amount of Late Shift elapsed time during which the PR/SM Sysplex exceeded a specified threshold.



Graph(2X5L):CNTL(DCAFDGRU)

pX6: PR/SM Sysplex % Busy by LPAR

Graph Description

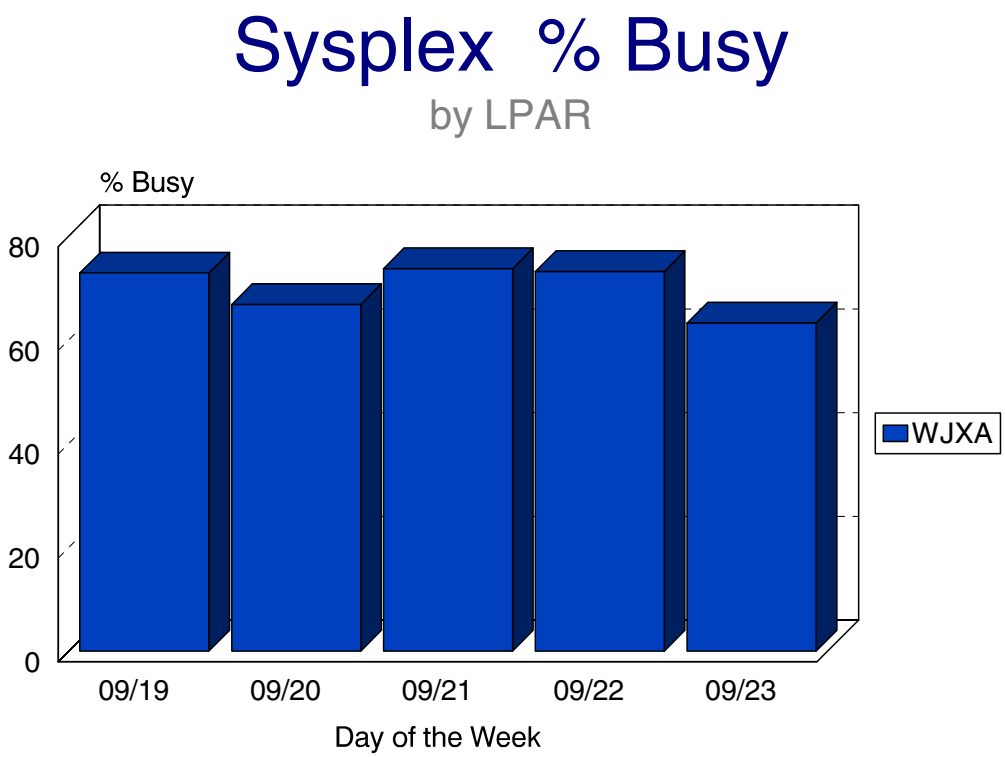
This graph shows the percent CPU utilization for each LPAR in the PR/SM Sysplex.

Which Program Builds the Data Point Member

PGM=SSA1TGRU

What Does the Data Represent

The chart is presented as a stacked bar graph. Each data point represents the percentage CPU busy for each LPAR in the PR/SM Sysplex.



Graph(2X6):CNTL(DCAFDGRU)

pX7: PR/SM Sysplex Hi/Avg/Low % Busy

Graph Description

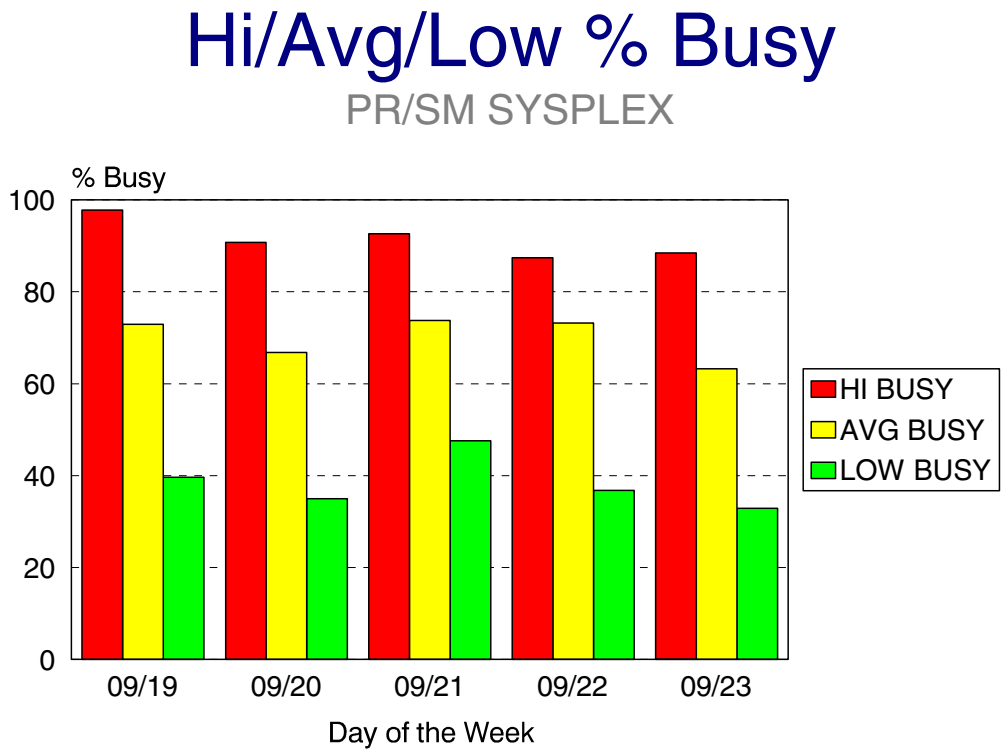
This graph shows, for a given PR/SM SYSPLEX, the percent CPU utilization in terms of High (the weighted average peak value per day during Prime Shift) Average (Prime shift average) and Low (the weighted average Low value during Prime shift).

Which Program Builds the Data Point Member

PGM=SSA1TGRU

What Does the Data Represent

The chart is presented as a side by side bar graph. Each data point represents a percentage CPU busy for the PR/SM Sysplex.



Graph(2X7):CNTL(DCAFDGRU)

pX8: PR/SM Sysplex Peak/Avg Prime/Avg Offshift % Busy

Graph Description

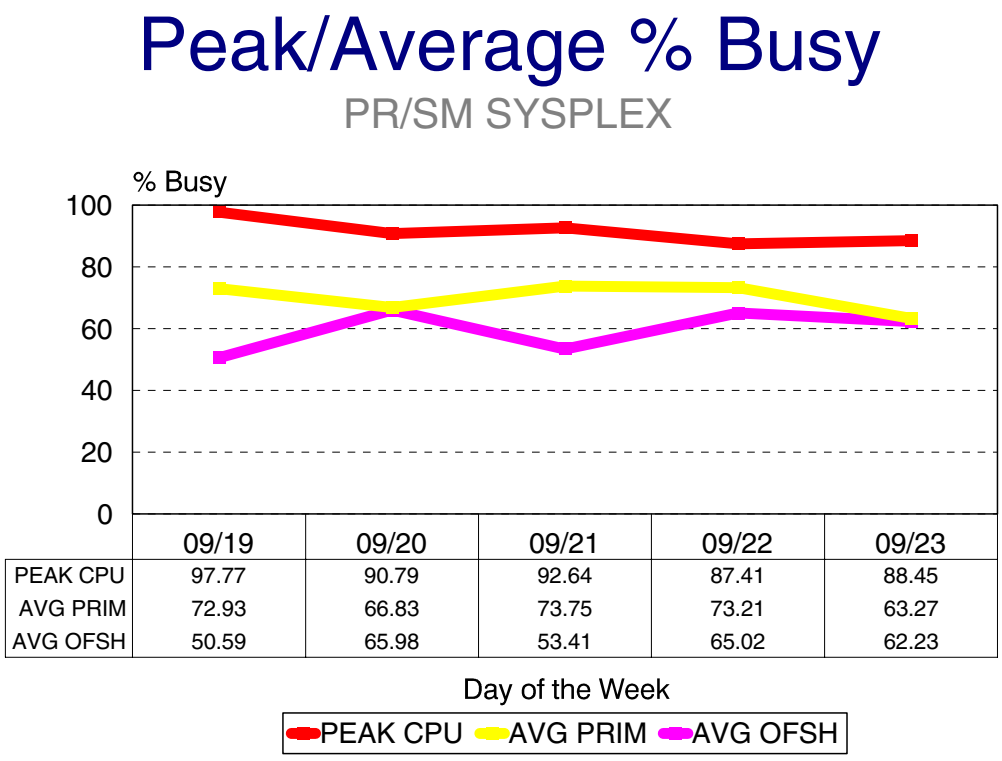
This graph shows, for a given PR/SM SYSPLEX, the percent CPU utilization in terms of Peak (the actual peak value per day during Prime Shift) Average Prime shift (Prime shift average) and Average Off shift (the average non-Prime % busy value).

Which Program Builds the Data Point Member

PGM=SSA1TGRU

What Does the Data Represent

The chart is presented as a side by side bar graph. Each data point represents a percentage CPU busy for the PR/SM Sysplex.



Graph(2X8):CNTL(DCAFDGRU)

DASM Subsystem Graphs

p60: DASM Space Available within Pool (PARMLIB=DASDPOOL)

Graph Description

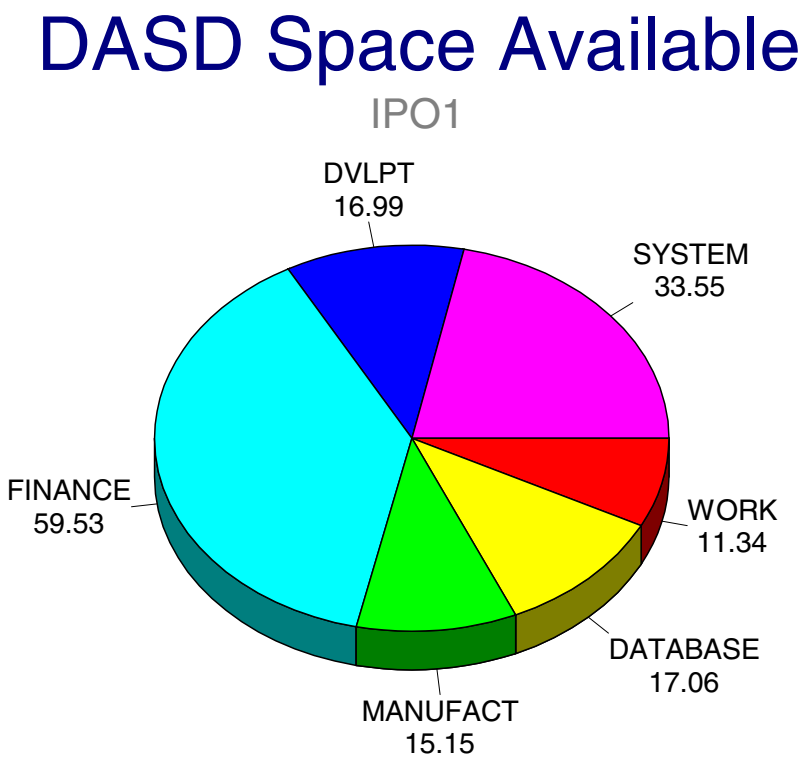
This pie chart shows the total amount of DASD space (Giga Bytes) in each of up to six named DASD Pools as specified in the DASDPOOL member of PARMLIB. Each DASD Pool is made up of one or more individual volumes of DASD, regardless of device type.

Which Program Builds the Data Point Member

PGM=SSA1DASP

What Does the Data Represent

The chart is a pie chart. Each slice of the pie shows the amount of space available within a specific DASD Pool.



Graph(360):CNTL(DASMPIE)

p61: DASM Space Allocated within Pool (PARMLIB=DASDPOOL)

Graph Description

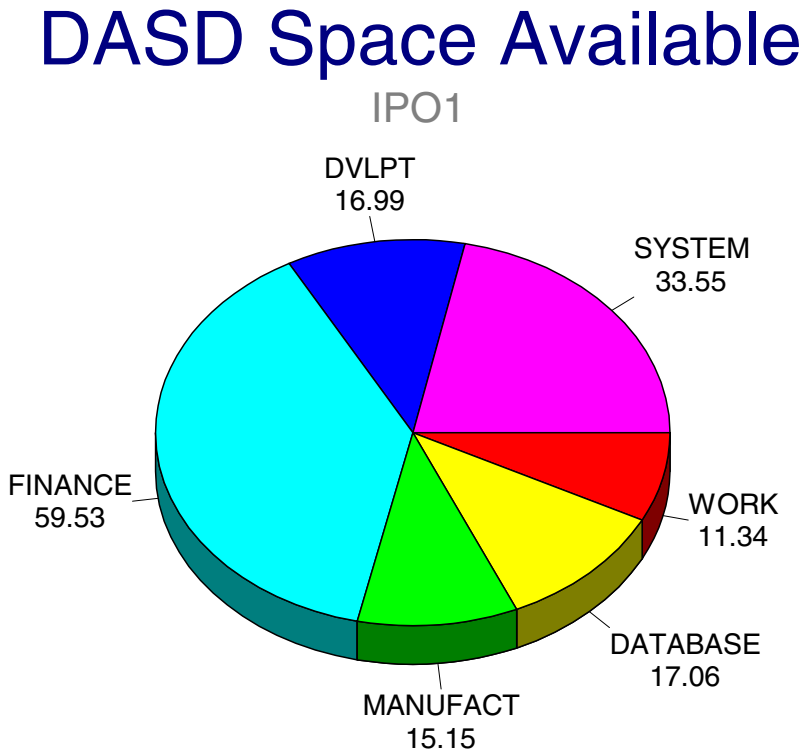
This pie chart shows the total amount of DASD space (KB) that has been allocated in each of up to six named DASD Pools as specified in the DASDPOOL member of PARMLIB. Each DASD Pool is made up of one or more individual volumes of DASD, regardless of device type.

Which Program Builds the Data Point Member

PGM=SSA1DASP

What Does the Data Represent

The chart is a pie chart. Each slice of the pie shows the amount of space allocated within a specific DASD Pool.



Graph(360):CNTL(DASMPIE)

p62: DASM Space Allocated vs. Available (PARMLIB=DASDPOOL)

Graph Description

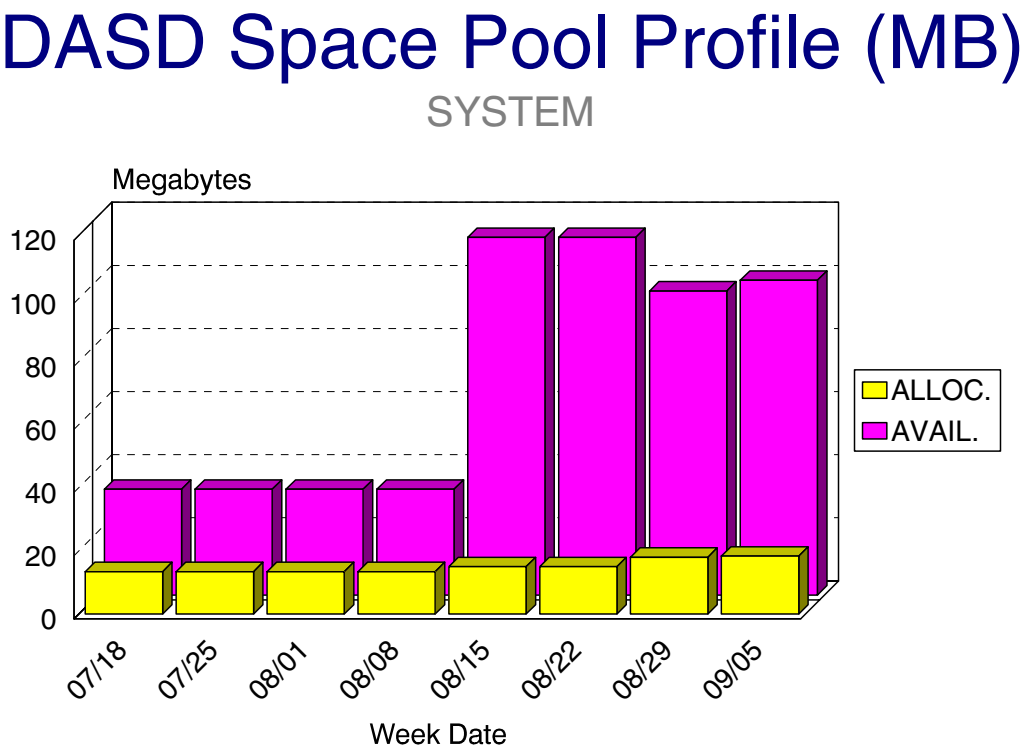
This bar chart shows, over time, a comparison of space allocated against space available within the first DASD Pool.

Which Program Builds the Data Point Member

PGM=SSA1DASG

What Does the Data Represent

The chart is an overlapping bar chart. Each bar in the front row shows the amount of space allocated within the first DASD Pool at a particular point in time. Each bar in the back row shows the total amount of space within that pool at the same point in time.



Graph(362):CNTL(DASMTRND)

p63: DASM Space Allocated vs. Available (PARMLIB=DASDPOOL)

Graph Description

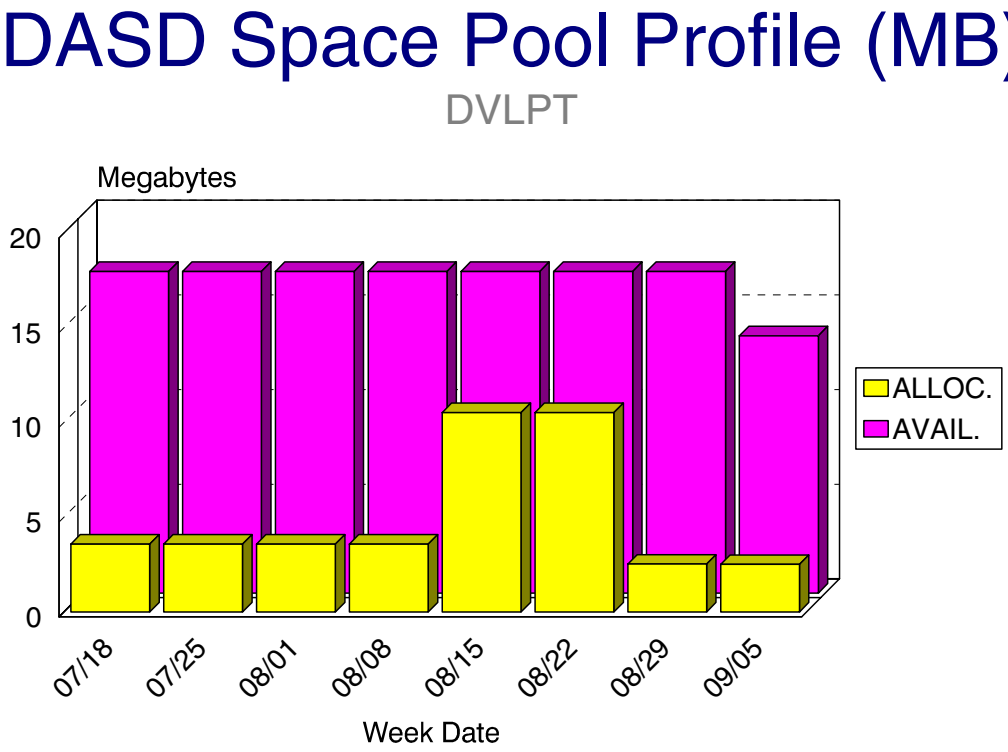
This bar chart shows, over time, a comparison of space allocated against space available within the second DASD Pool.

Which Program Builds the Data Point Member

PGM=SSA1DASG

What Does the Data Represent

The chart is an overlapping bar chart. Each bar in the front row shows the amount of space allocated within the second DASD Pool at a particular point in time. Each bar in the back row shows the total amount of space within that pool at the same point in time.



Graph(363):CNTL(DASMTRND)

p64: DASM Space Allocated vs. Available (PARMLIB=DASDPOOL)

Graph Description

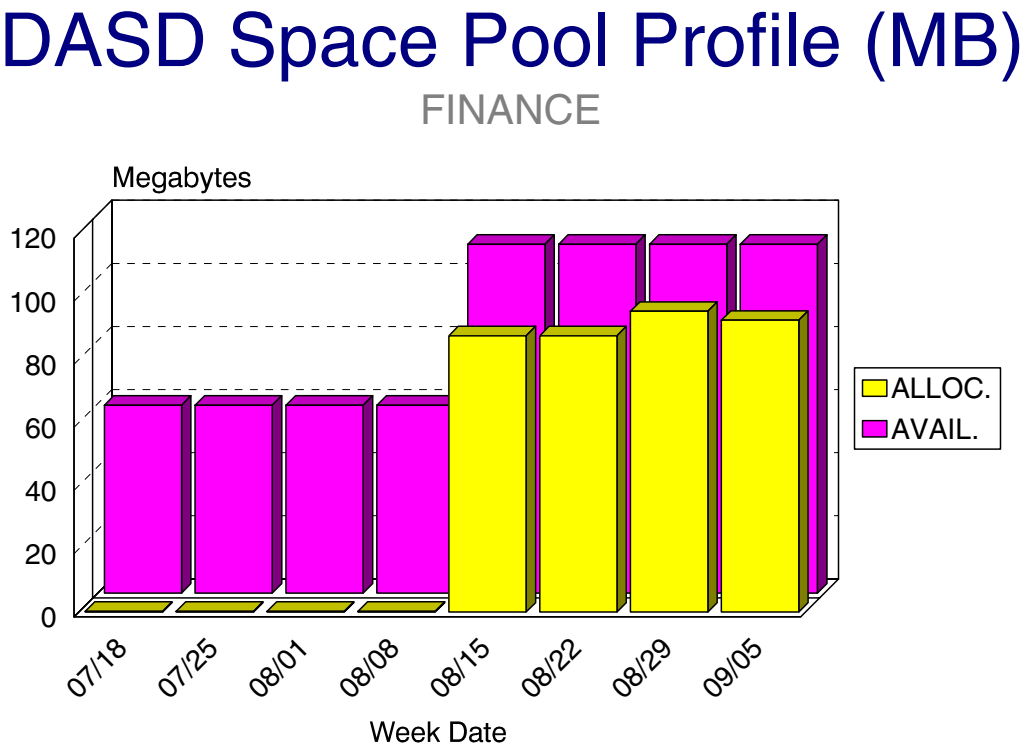
This bar chart shows, over time, a comparison of space allocated against space available within the third DASD Pool.

Which Program Builds the Data Point Member

PGM=SSA1DASG

What Does the Data Represent

The chart is an overlapping bar chart. Each bar in the front row shows the amount of space allocated within the third DASD Pool at a particular point in time. Each bar in the back row shows the total amount of space within that pool at the same point in time.



Graph(364):CNTL(DASMTRND)

p65: DASM Space Allocated vs. Available (PARMLIB=DASDPOOL)

Graph Description

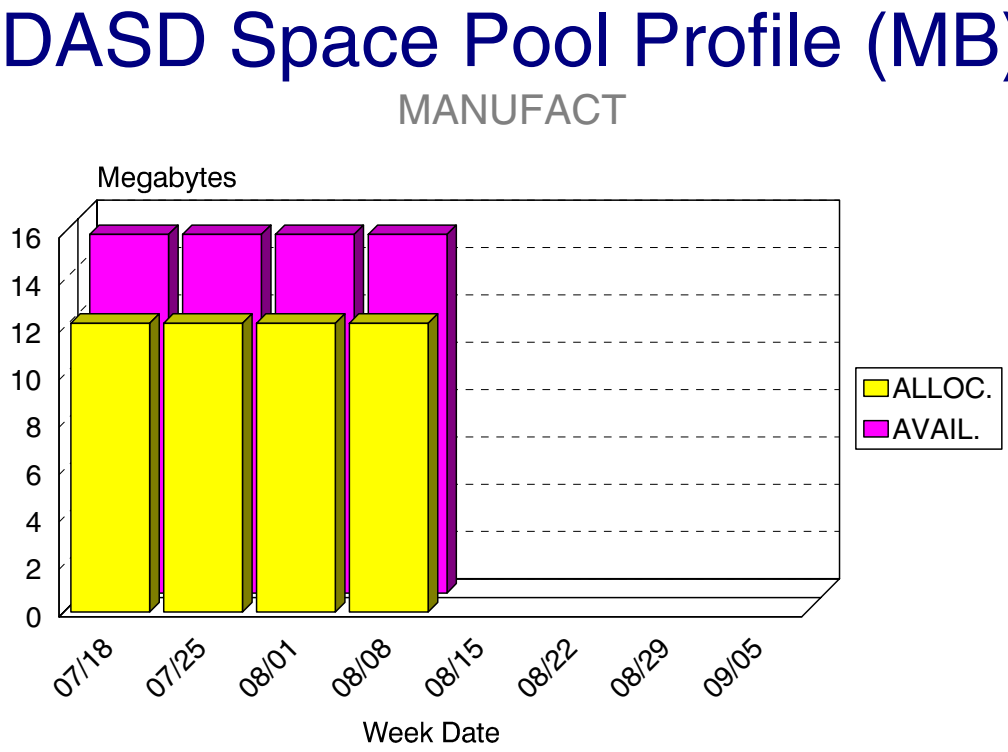
This bar chart shows, over time, a comparison of space allocated against space available within the fourth DASD Pool.

Which Program Builds the Data Point Member

PGM=SSA1DASG

What Does the Data Represent

The chart is an overlapping bar chart. Each bar in the front row shows the amount of space allocated within the fourth DASD Pool at a particular point in time. Each bar in the back row shows the total amount of space within that pool at the same point in time.



Graph(365):CNTL(DASMTRND)

p66: DASM Space Allocated vs. Available (PARMLIB=DASDPOOL)

Graph Description

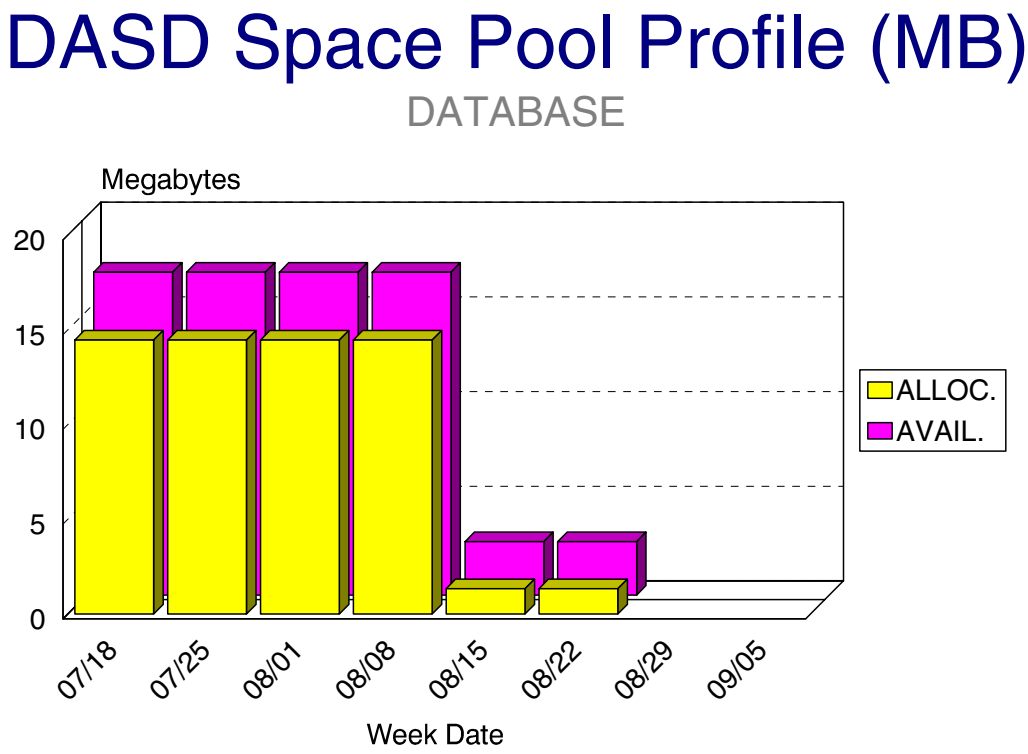
This bar chart shows, over time, a comparison of space allocated against space available within the fifth DASD Pool.

Which Program Builds the Data Point Member

PGM=SSA1DASG

What Does the Data Represent

The chart is an overlapping bar chart. Each bar in the front row shows the amount of space allocated within the fifth DASD Pool at a particular point in time. Each bar in the back row shows the total amount of space within that pool at the same point in time.



Graph(366):CNTL(DASMTRND)

p67: DASM Space Allocated vs. Available (PARMLIB=DASDPOOL)

Graph Description

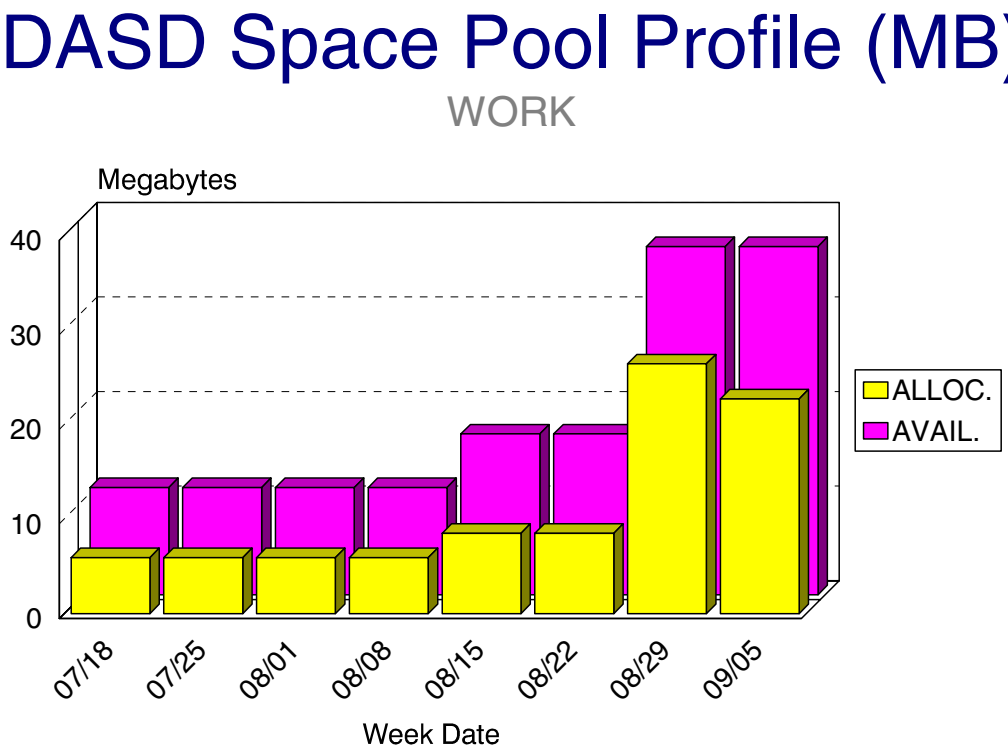
This bar chart shows, over time, a comparison of space allocated against space available within the sixth DASD Pool.

Which Program Builds the Data Point Member

PGM=SSA1DASG

What Does the Data Represent

The chart is an overlapping bar chart. Each bar in the front row shows the amount of space allocated within the sixth DASD Pool at a particular point in time. Each bar in the back row shows the total amount of space within that pool at the same point in time.



Graph(367):CNTL(DASMTRND)

p68: DASM Space Distribution within Pool (PARMLIB=DASDPOOL)

Graph Description

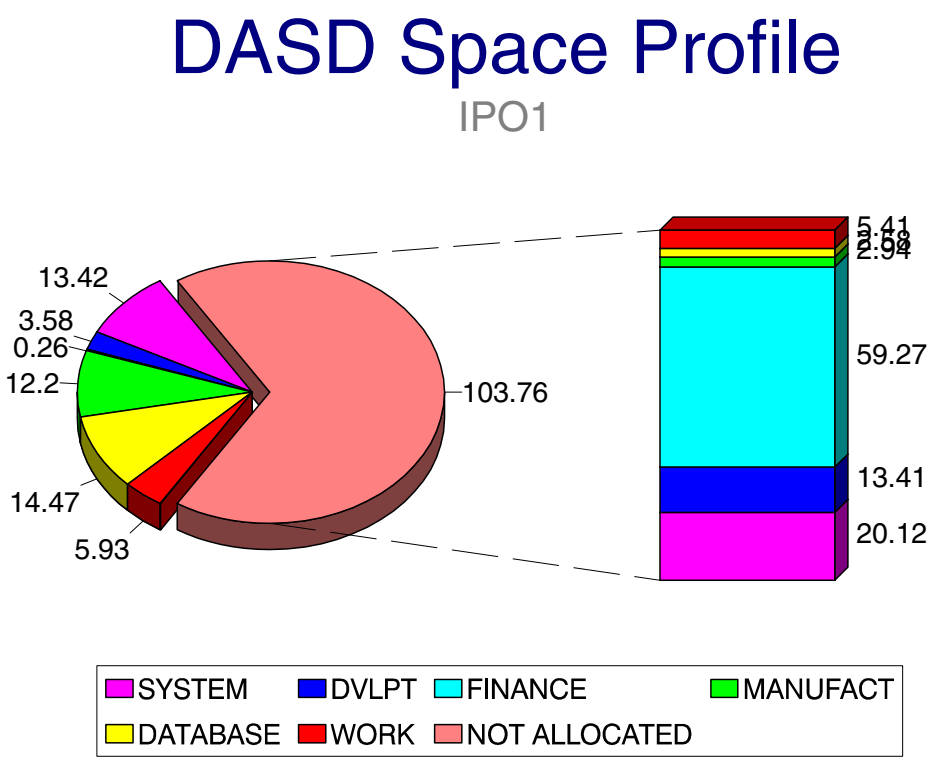
This mixed bar and pie chart shows the total amount of DASD space (KB) that has been allocated in each of up to six named DASD Pools as specified in the DASDPOOL member of PARMLIB, the amount of space that is available (not allocated), and how that unallocated space is distributed across the Pools.

Which Program Builds the Data Point Member

PGM=SSA1DASP

What Does the Data Represent

The chart is a mixed bar and pie chart. Each slice of the pie shows the amount of space allocated within a specific DASD Pool, with a single slice of the pie showing the amount of space that is unallocated. That slice (the unallocated slice) is then exploded into a stacked bar showing the amount of space available within each Pool.



Graph(368):CNTL(DASMPIE)

p69: DASM Space Wasted by Organization (PARMLIB=DASF)

Graph Description

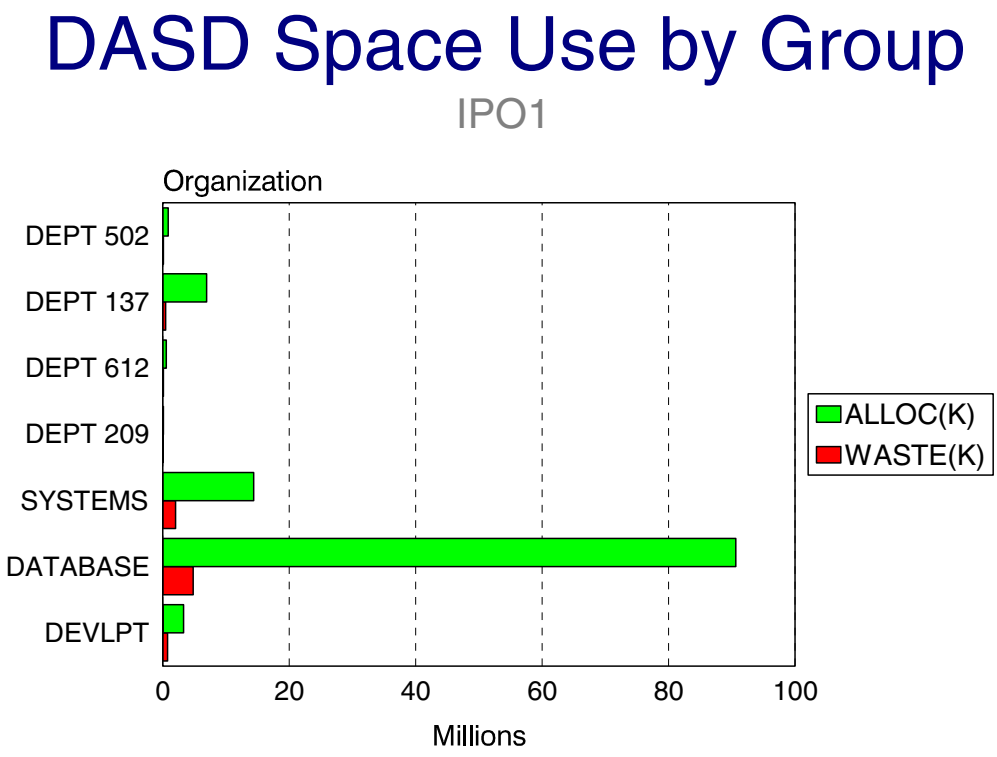
This horizontal bar chart shows, within organization, the total amount of space allocated (KB) and, of that allocated amount, the total space wasted. Wasted space is defined as space that has been allocated but is not used (i.e, end-of-file to end of extent). VSAM space is considered to be 100% used. The DASF member of PARMLIB allows you to specify which OWNERIDs (high level qualifiers) are included in each of up to 64 organizations.

Which Program Builds the Data Point Member

PGM=SSA1DASJ

What Does the Data Represent

The chart is a horizontal bar chart. Each organization is listed along the "Y" axis and has two individual bars: the top bar shows the amount of space allocated and the bottom bar shows the amount of space that is wasted.



Graph(369):CNTL(DASMOWNR)

p6A: DASM Space Wasted % by Organization (PARMLIB=DASF)

Graph Description

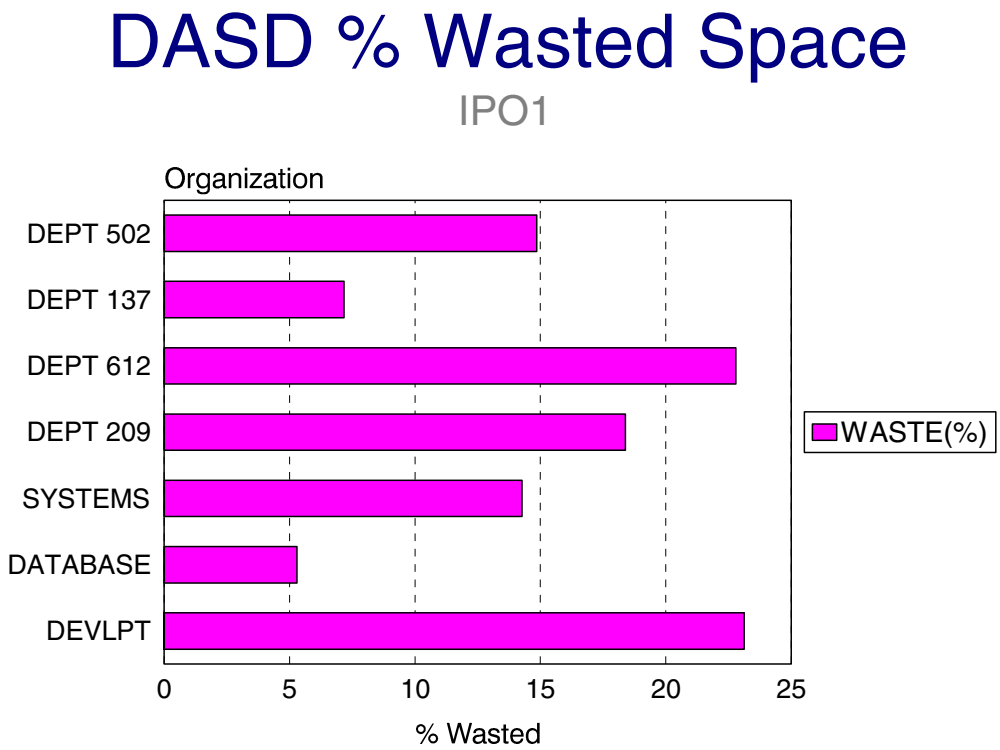
This horizontal bar chart shows, within organization, the total percentage of space allocated (KB) that is wasted. Wasted space is defined as space that has been allocated but is not used (i.e, end-of-file to end of extent). VSAM space is considered to be 100% used. The DASF member of PARMLIB allows you to specify which OWNERIDs (high level qualifiers) are included in each of up to 64 organizations.

Which Program Builds the Data Point Member

PGM=SSA1DASJ

What Does the Data Represent

The chart is a horizontal bar chart. Each organization is listed on the "Y" axis with a single bar showing the percentage of allocated space that is wasted.



Graph(36A):CNTL(DASMOWNR)

p6B: DASM Space Unreferenced by Organization (PARMLIB=DASF)

Graph Description

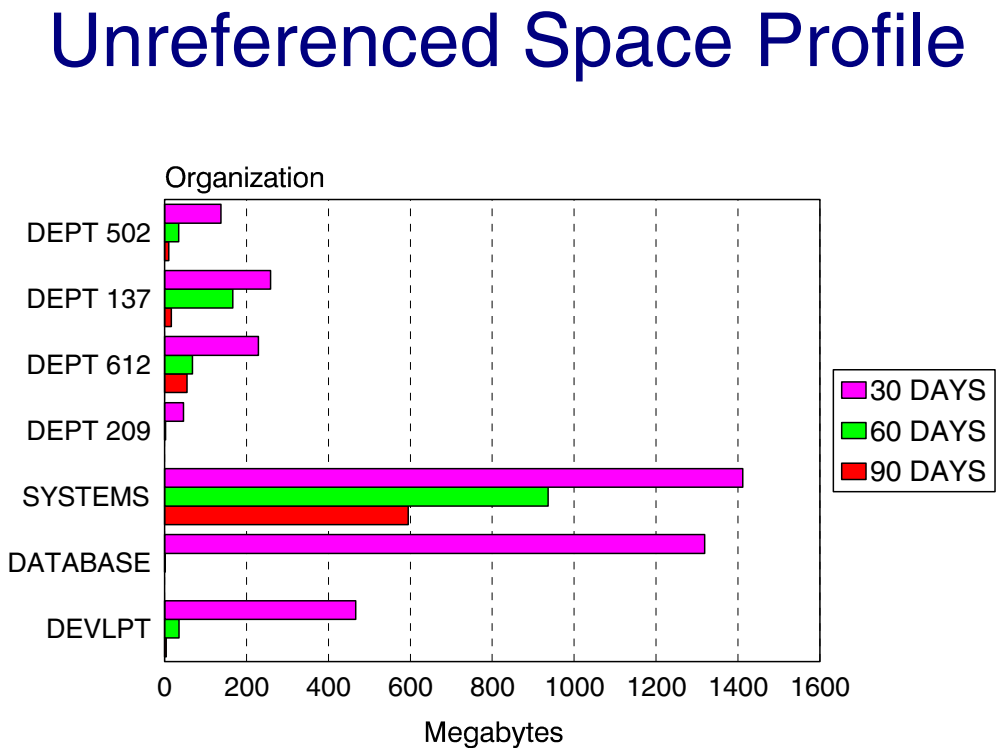
This horizontal bar chart shows, within organization, the total amount of allocated space (KB) that has gone unreferenced in 30, 60 and 90 days. The DASF member of PARMLIB allows you to specify which OWNERIDs (high level qualifiers) are included in each of up to 64 organizations.

Which Program Builds the Data Point Member

PGM=SSA1DASJ

What Does the Data Represent

The chart is a horizontal bar chart. Each organization is listed along the "Y" axis and has three individual bars: the top bar shows the amount of allocated space unreferenced in 30 days, the middle bar shows the amount of space unreferenced in 60 days and the bottom bar shows the amount of space unreferenced in 90 days.



Graph(36B):CNTL(DASMOWNR)

p6C: DASM Space Allocated by Organization (PARMLIB=DASF)

Graph Description

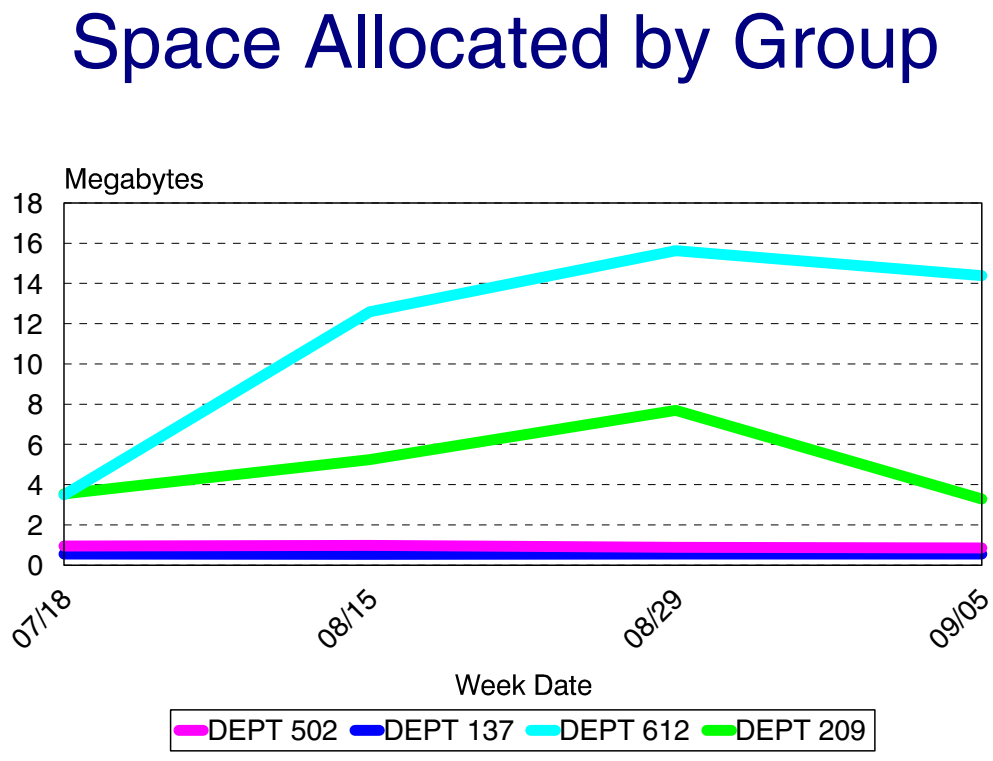
This line chart shows, within organization, the total amount of allocated space (in Megabytes) from one week (or month) to the next. The first six entries in the DASF member of PARMLIB are used to determine the organizations that is portrayed on this graph. It is possible to produce a graph, change the DASF member of PARMLIB, run this program a second time and produce a second graph for an entirely different set of organizations.

Which Program Builds the Data Point Member

PGM=SSA1DAST

What Does the Data Represent

The chart is a line graph. Each organization is represented by a separate line that shows Megabytes Allocated. The "X" axis is a range of dates during which the space was actually allocated by that organization.



Graph(36C):CNTL(DASMWGRT)

p6D: DASM Space Wasted by Organization (PARMLIB=DASF)

Graph Description

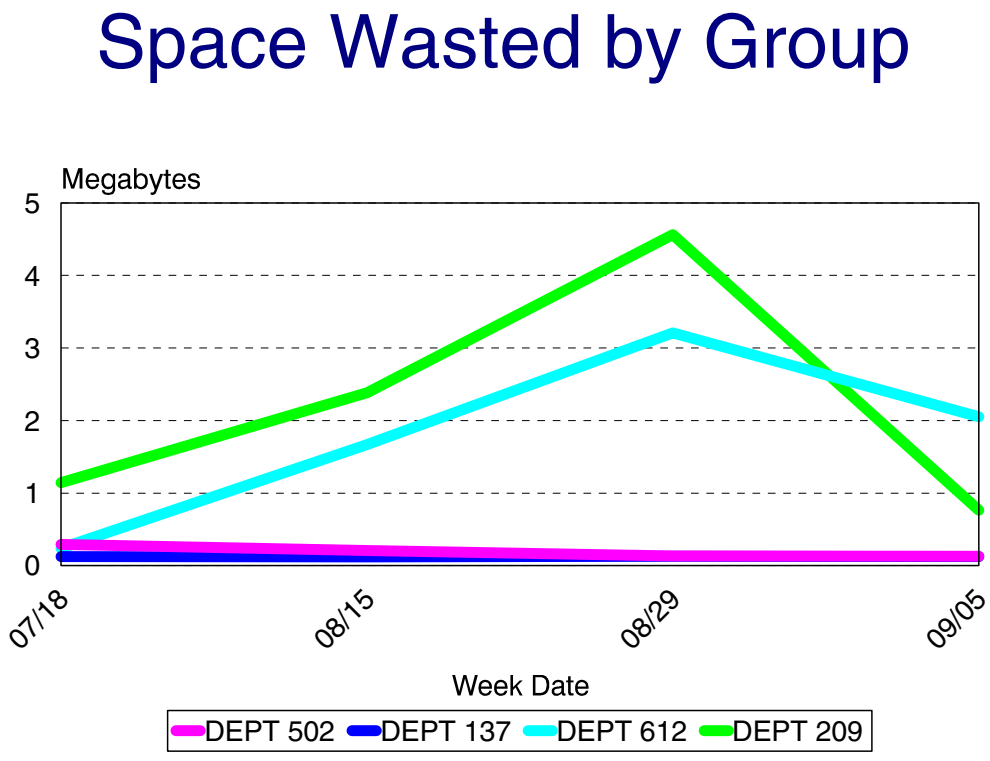
This line chart shows, within organization, the total amount of wasted space (in Megabytes) from one week (or month) to the next. The first six entries in the DASF member of PARMLIB are used to determine the organizations that is portrayed on this graph. It is possible to produce a graph, change the DASF member of PARMLIB, run this program a second time and produce a second graph for an entirely different set of organizations.

Which Program Builds the Data Point Member

PGM=SSA1DAST

What Does the Data Represent

The chart is a line graph. Each organization is represented by a separate line that shows Megabytes Wasted. The "X" axis is a range of dates during which the space was actually allocated but not used by that organization.



Graph(36D):CNTL(DASMWGRT)

p6E: DASM Space Unreferenced by Organization (PARMLIB=DASF)

Graph Description

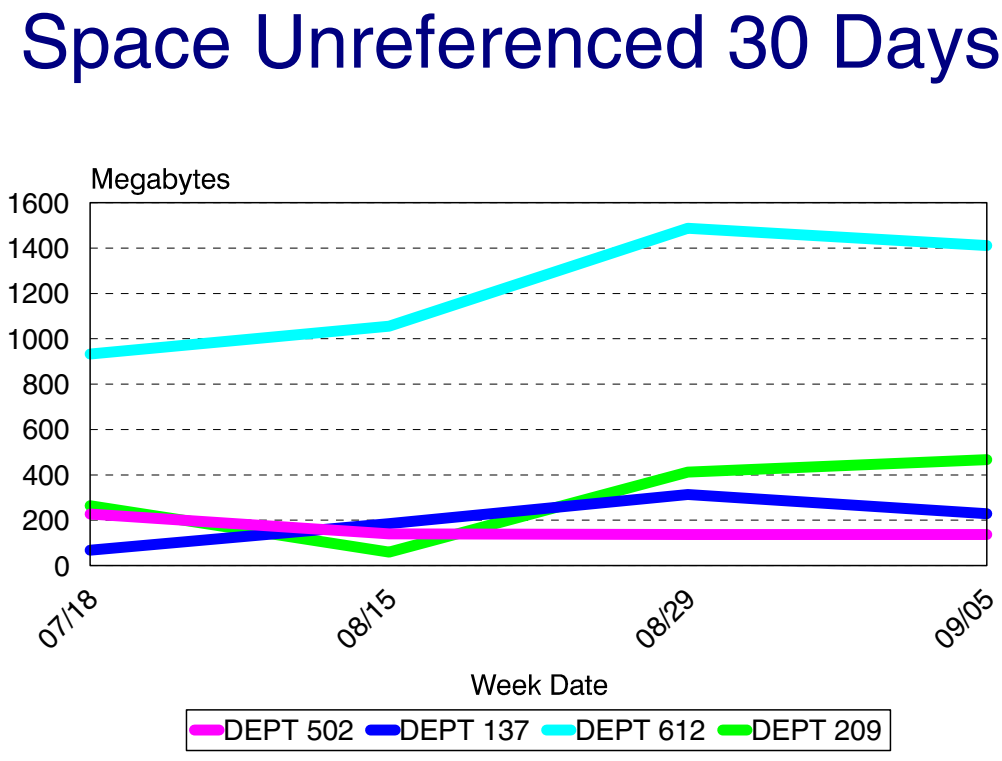
This line chart shows, within organization, the total amount of space unreferenced for 30 days (in Megabytes) from one week (or month) to the next. The first six entries in the DASF member of PARMLIB are used to determine the organizations that are portrayed on this graph. It is possible to produce a graph, change the DASF member of PARMLIB, run this program a second time and produce a second graph for an entirely different set of organizations.

Which Program Builds the Data Point Member

PGM=SSA1DAST

What Does the Data Represent

The chart is a line graph. Each organization is represented by a separate line that shows Megabytes Allocated. The "X" axis is a range of dates during which the space went unreferenced for 30 days by that organization.



Graph(36E):CNTL(DASMWGRT)

p6F: DASM Space Unreferenced by Organization (PARMLIB=DASF)

Graph Description

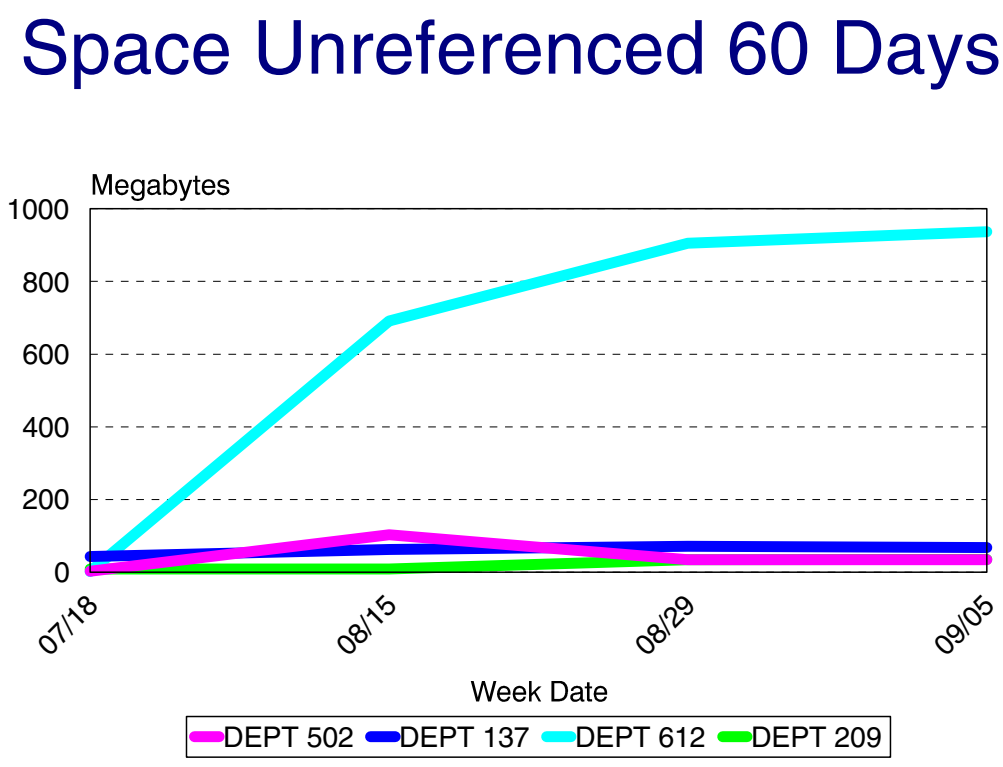
This line chart shows, within organization, the total amount of space unreferenced for 60 days (in Megabytes) from one week (or month) to the next. The first six entries in the DASF member of PARMLIB are used to determine the organizations that are portrayed on this graph. It is possible to produce a graph, change the DASF member of PARMLIB, run this program a second time and produce a second graph for an entirely different set of organizations.

Which Program Builds the Data Point Member

PGM=SSA1DAST

What Does the Data Represent

The chart is a line graph. Each organization is represented by a separate line that shows Megabytes Allocated. The "X" axis is a range of dates during which the space went unreferenced for 60 days by that organization.



Graph(36F):CNTL(DASMWGRT)

p6G: DASM Space Unreferenced by Organization (PARMLIB=DASF)

Graph Description

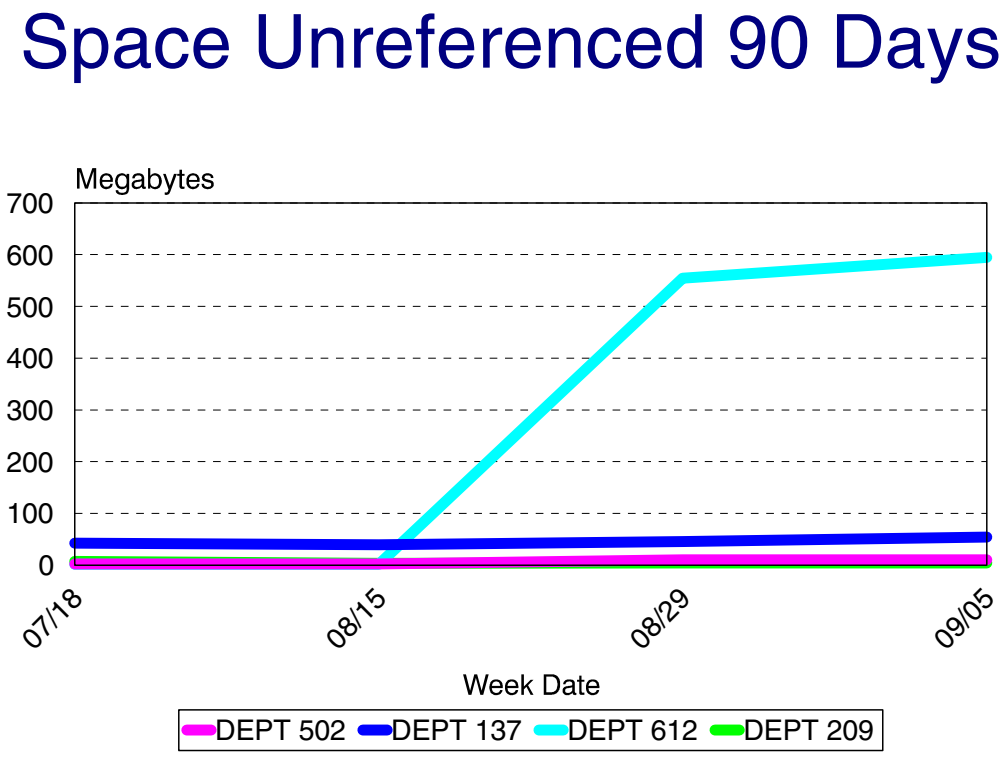
This line chart shows, within organization, the total amount of space unreferenced for 90 days (in Megabytes) from one week (or month) to the next. The first six entries in the DASF member of PARMLIB are used to determine the organizations that are portrayed on this graph. It is possible to produce a graph, change the DASF member of PARMLIB, run this program a second time and produce a second graph for an entirely different set of organizations.

Which Program Builds the Data Point Member

PGM=SSA1DAST

What Does the Data Represent

The chart is a line graph. Each organization is represented by a separate line that shows Megabytes Allocated. The "X" axis is a range of dates during which the space went unreferenced for 90 days by that organization.



Graph(36G):CNTL(DASMWGRT)

P6X: DASM Space Profile within Storage Group (PARMLIB=none)

Graph Description

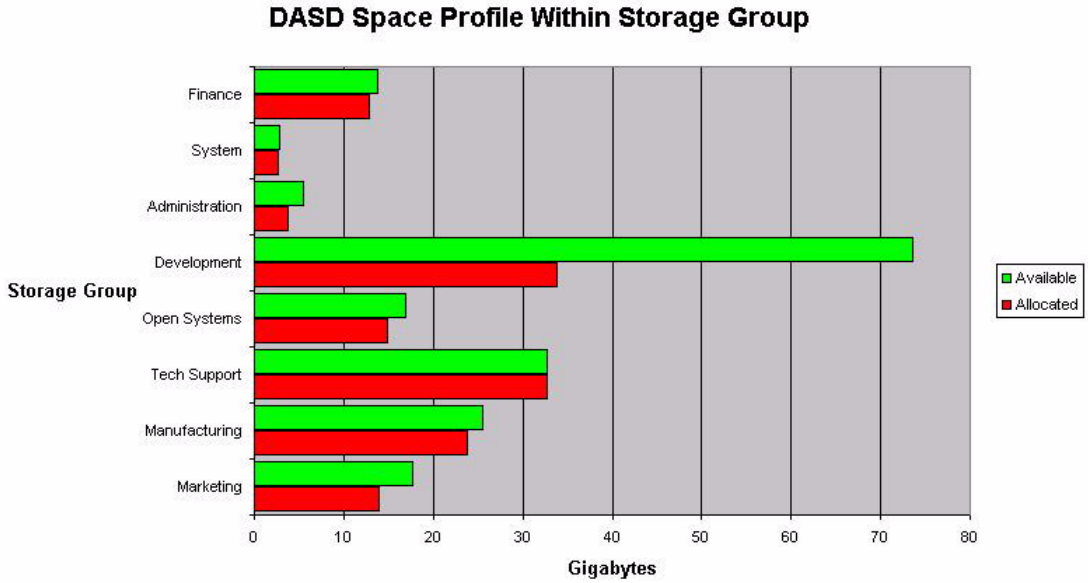
This horizontal bar chart shows, within Storage Group, how much DASD space is allocated and how much DASD space is available. All space values are presented in Gigabytes. The Storage Group name is derived from an internal Capacity Planner Table built during the data reduction of DCOLLECT input data. Only DCOLLECT input data provides this graphing capability.

Which Program Builds the Data Point Member

PGM=SSA1DASX

What Does the Data Represent

The data is presented as a horizontal bar chart. Each Storage Group has 2 individual bars. The top bar within each Storage Group represents the total amount of DASD space available in terms of Gigabytes. The bottom bar within each Storage Group represents the total amount of DASD space allocated in terms of Gigabytes.



CICS Subsystem Graphs

p70: CICS Transaction Response (PARMLIB=No PARMLIB Members)

Graph Description

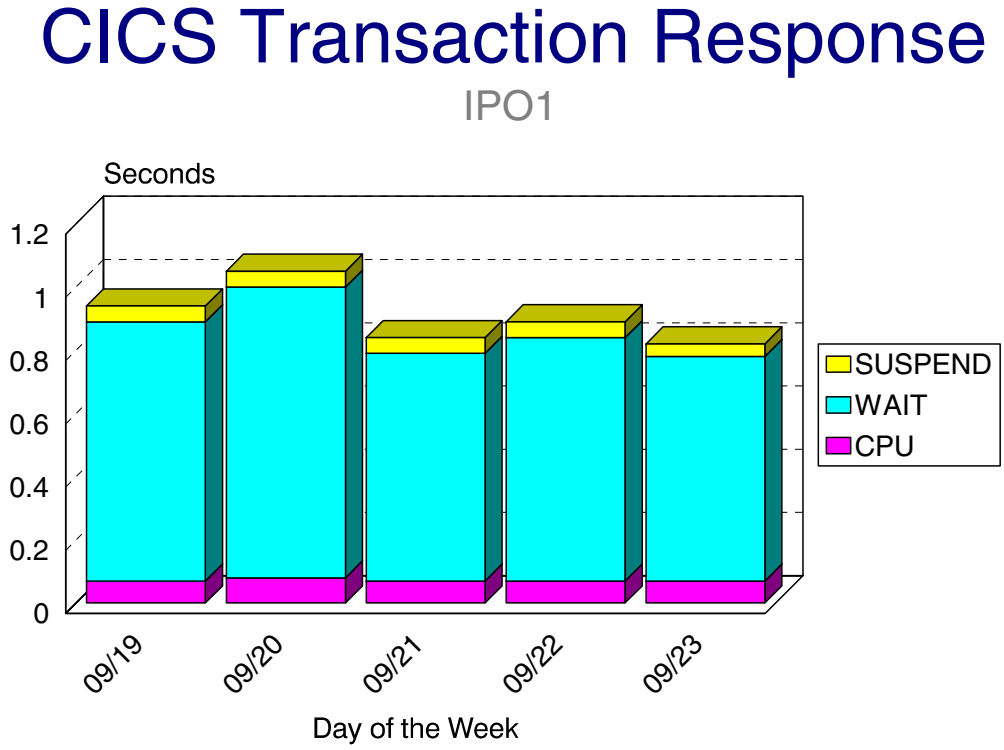
This bar graph shows average CICS Transaction response time, divided into CPU time, WAIT time and Suspend Time, for all transactions in the Region(s).

Which Program Builds the Data Point Member

PGM=SSA1CICG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average Transaction Response time.



Graph(270):CNTL(DCICDGRF)

p71: CICS Transaction Volume (PARMLIB=No PARMLIB Members)

Graph Description

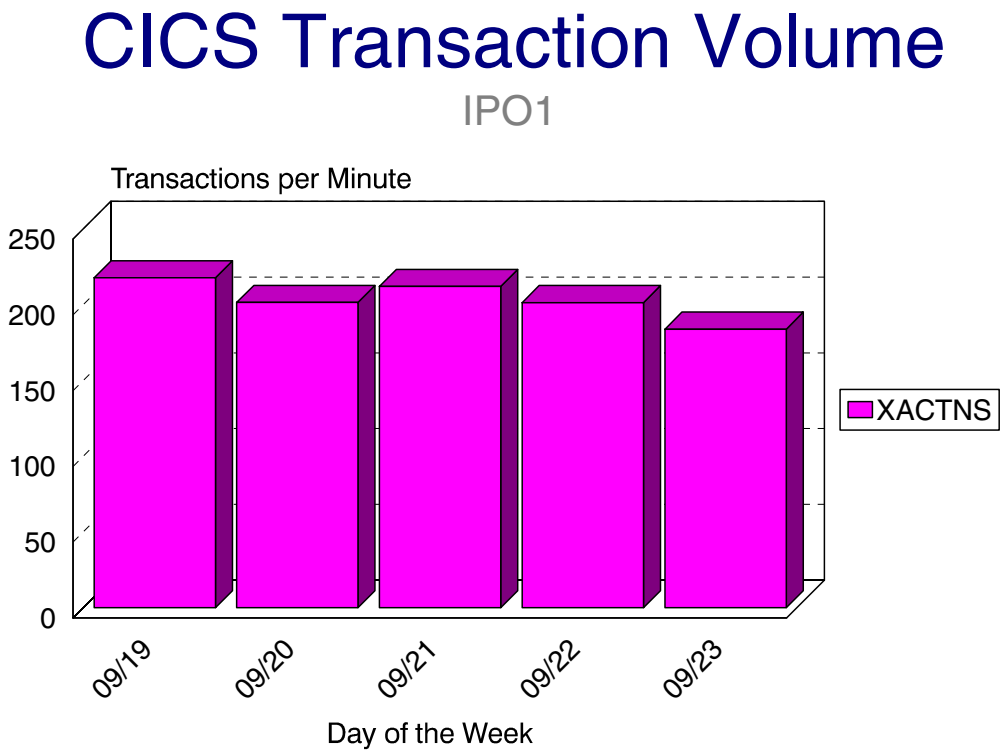
This bar graph shows the average number of CICS Transactions per minute during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1CICG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of CICS transactions per minute.



Graph(271):CNTL(DCICDGRF)

p72: CICS % CPU Busy (PARMLIB=No PARMLIB Members)

Graph Description

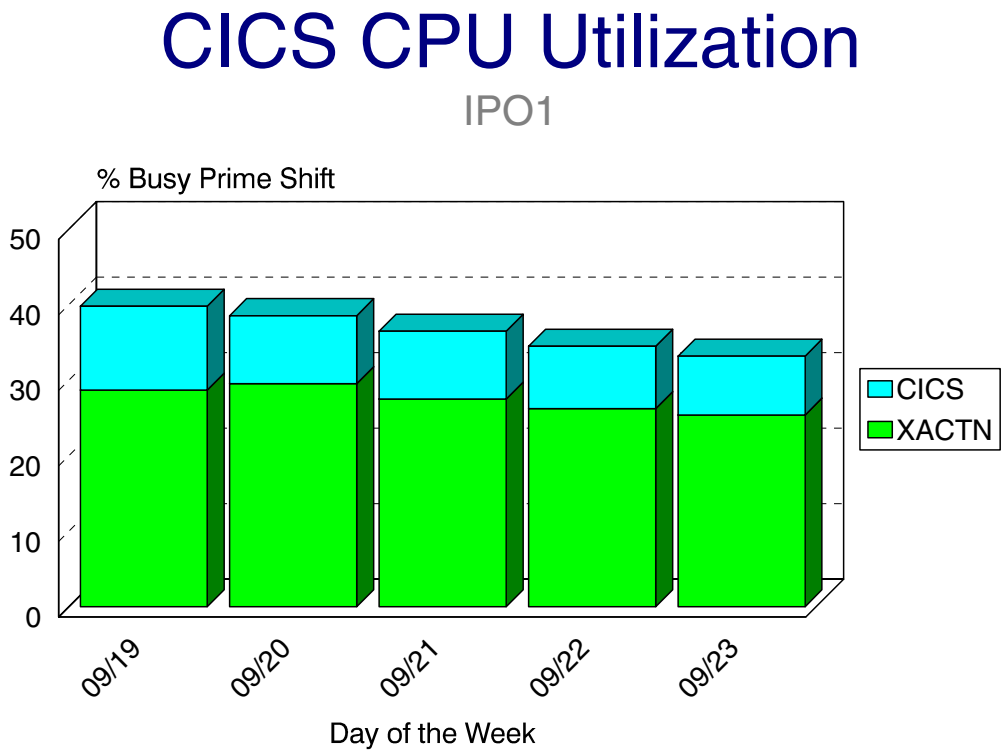
This bar graph shows the CPU % busy for this CICS region in terms of transaction time (XACTN) and CICS overhead (CICS) during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1CICG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average percentage busy for XACTN and CICS.



Graph(272):CNTL(DCICDGRF)

p73: CICS EXCPs per Second (PARMLIB=No PARMLIB Members)

Graph Description

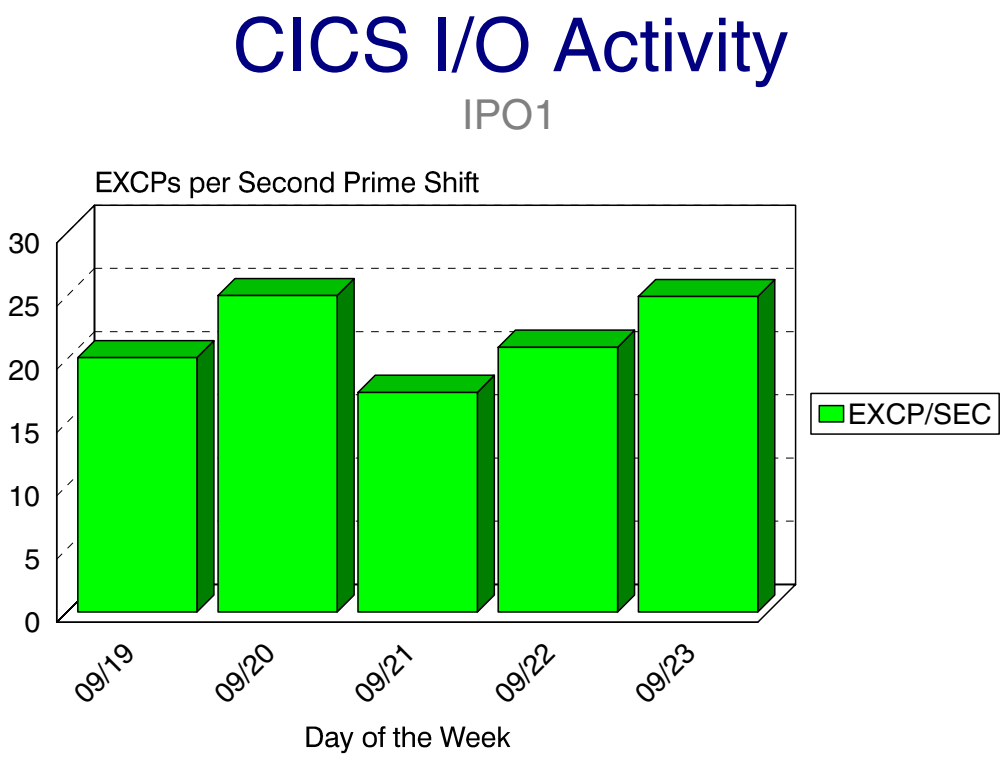
This bar graph shows the average number of I/O operations per second for this CICS region during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1CICG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of I/O operations per second.



Graph(273):CNTL(DCICDGRF)

p74: CICS Terminals Active (PARMLIB=No PARMLIB Members)

Graph Description

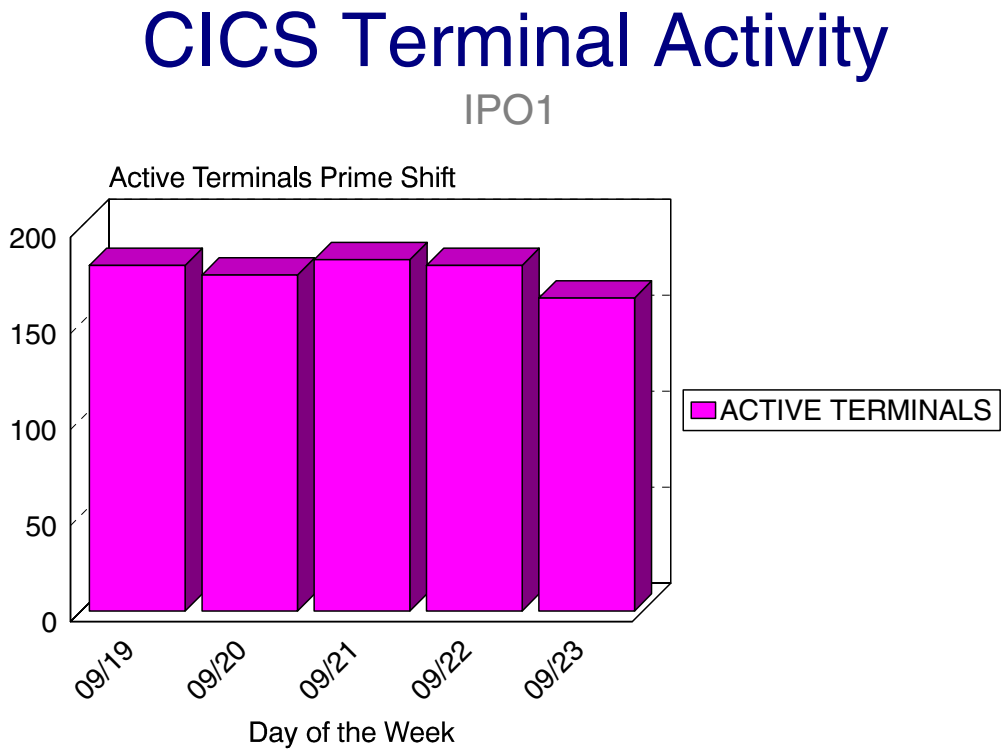
This bar graph shows the average number of CICS Terminals Active during Prime shift for the period. An active terminal is one that has actually executed one or more transactions during any given fifteen minute period.

Which Program Builds the Data Point Member

PGM=SSA1CICG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of CICS terminals that were active.



Graph(274):CNTL(DCICDGRF)

p75: CICS Transactions per Terminal (No PARMLIB Members)

Graph Description

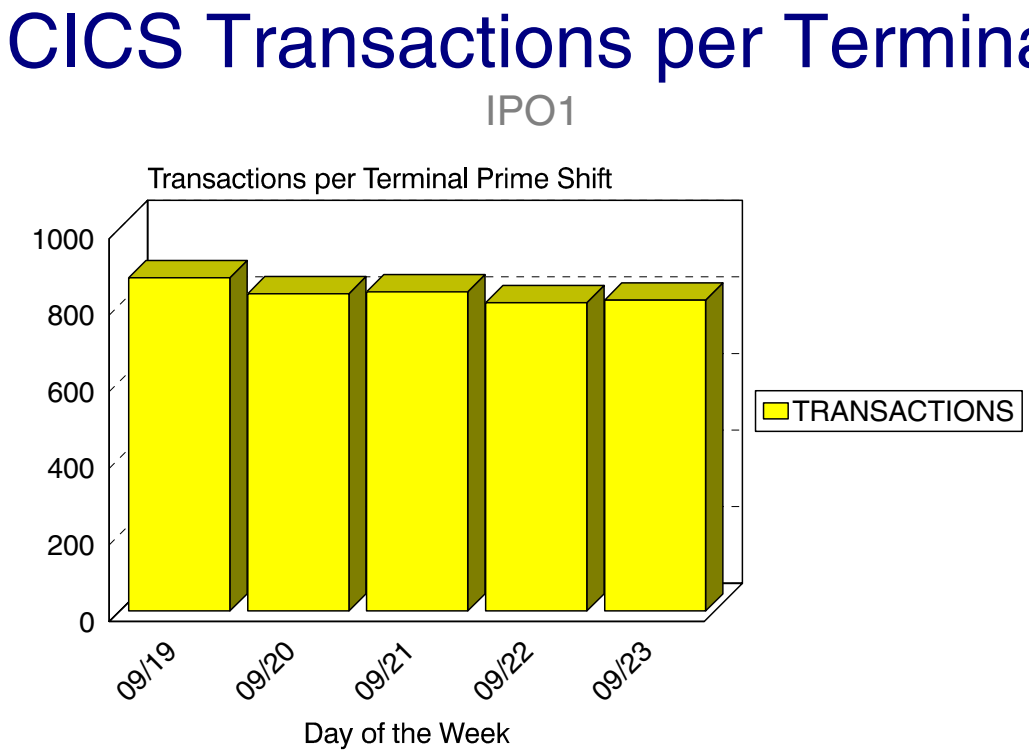
This bar graph shows the average number of CICS Transactions per active terminal during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1CICG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of CICS transactions per active terminal.



Graph(275):CNTL(DCICDGRF)

p76: CICS Transaction Volume (PARMLIB=No PARMLIB Members)

Graph Description

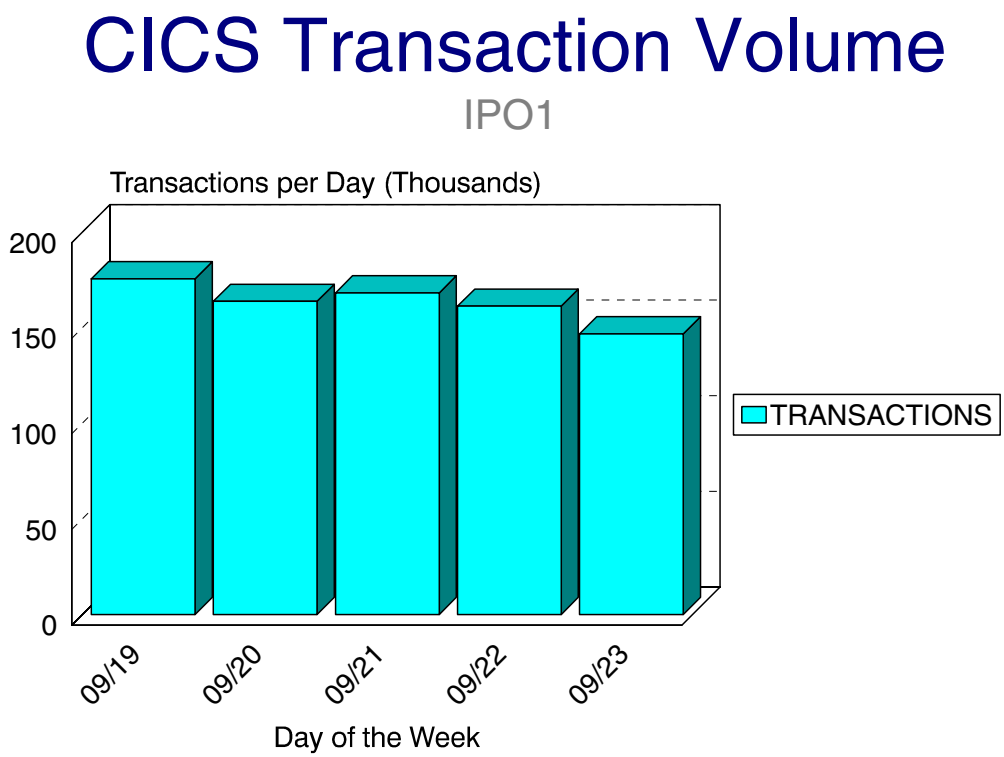
This bar graph shows the average daily number of CICS Transactions processed for the period.

Which Program Builds the Data Point Member

PGM=SSA1CICG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of CICS transactions per day.



Graph(276):CNTL(DCICDGRF)

p77: CICS Transaction Volume (PARMLIB=No PARMLIB Members)

Graph Description

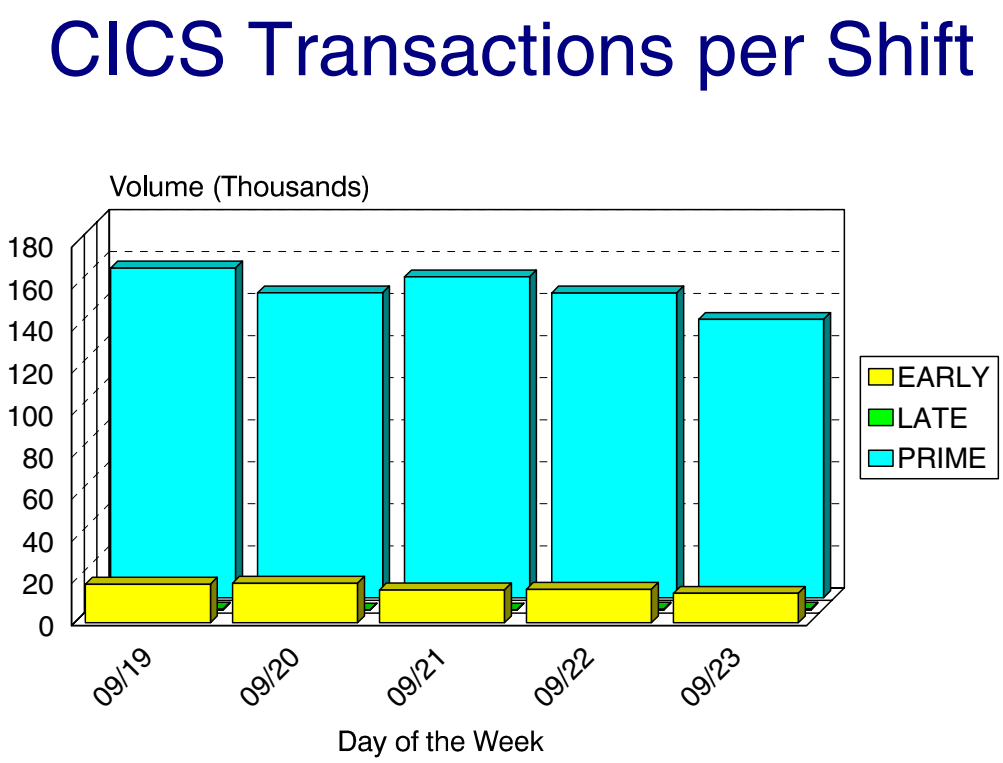
This bar graph shows the average number of CICS Transactions per shift (EARLY/LATE/PRIME) for the period.

Which Program Builds the Data Point Member

PGM=SSA1CICG

What Does the Data Represent

The chart is in an overlapped bar form. Each bar shows the number of CICS transactions per shift per day.



Graph(277):CNTL(DCICDGRF)

p78: CICS Terminal Activity (PARMLIB=No PARMLIB Members)

Graph Description

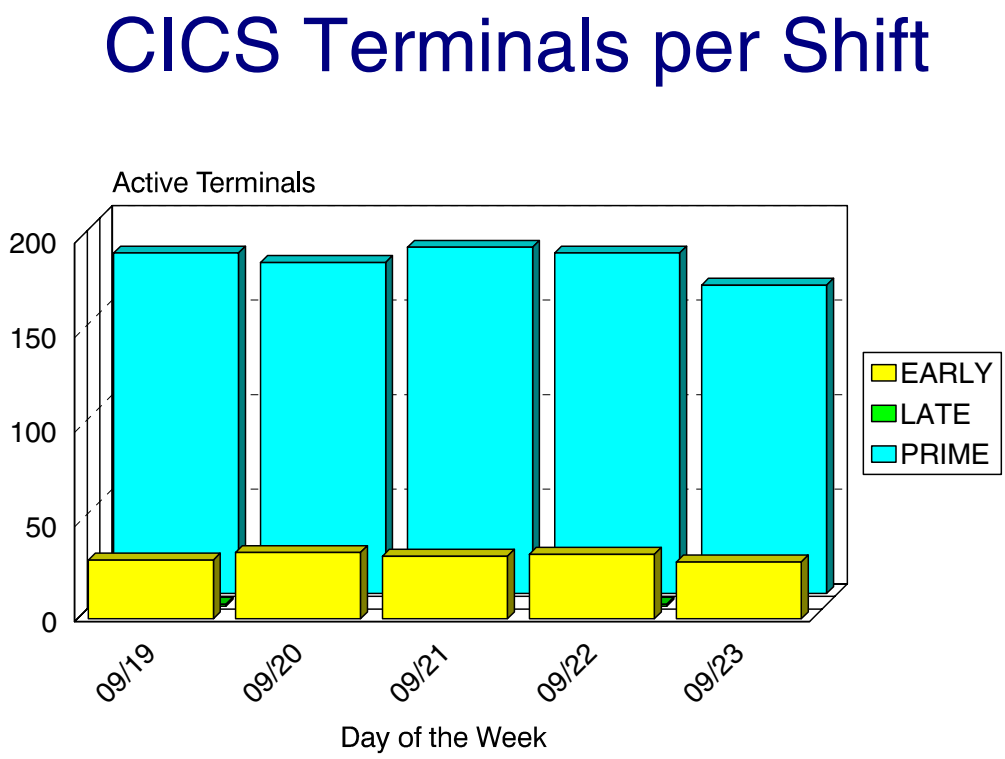
This bar graph shows the average number of Active CICS Terminals per shift (EARLY/LATE/PRIME) for the period.

Which Program Builds the Data Point Member

PGM=SSA1CICG

What Does the Data Represent

The chart is in an overlapped bar form. Each bar shows the average number of active CICS terminals per shift per day.



Graph(278):CNTL(DCICDGRF)

p79: CICS Terminal Response (PARMLIB=No PARMLIB Members)

Graph Description

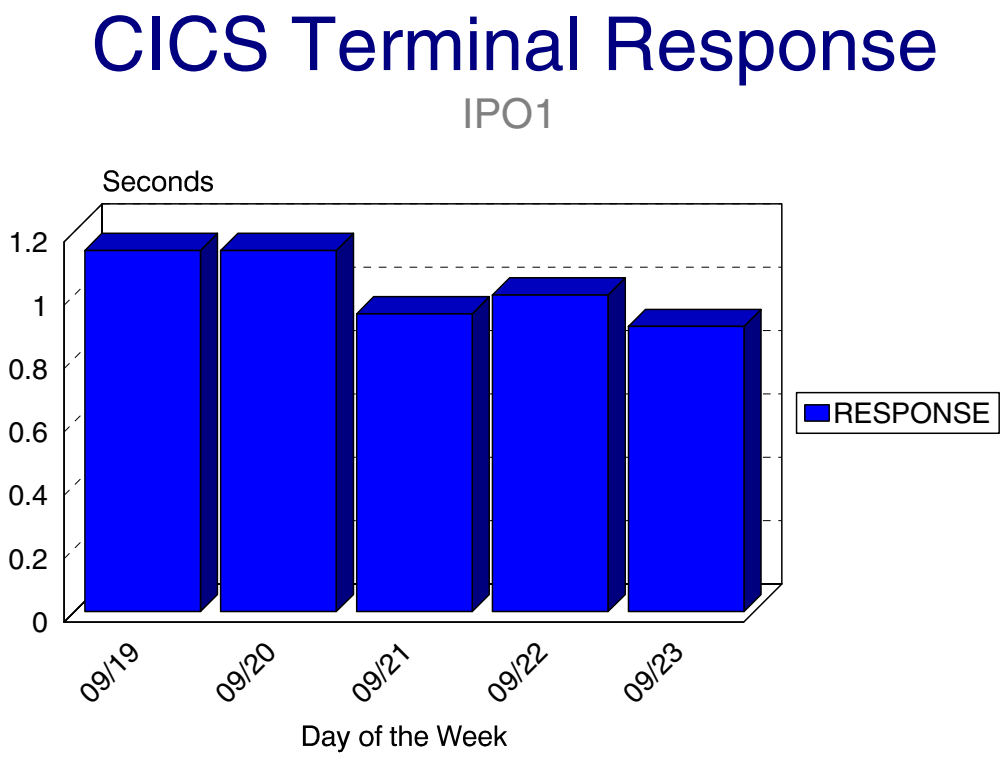
This bar graph shows average CICS Transaction response time, for all transactions directed to terminals (not printers or internal transactions), for all transactions in the Region(s).

Which Program Builds the Data Point Member

PGM=SSA1CICG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average Terminal Response time.



Graph(279):CNTL(DCICDGRF)

p7A: CICS Pages:Dispatch Sec (PARMLIB=No PARMLIB Members)

Graph Description

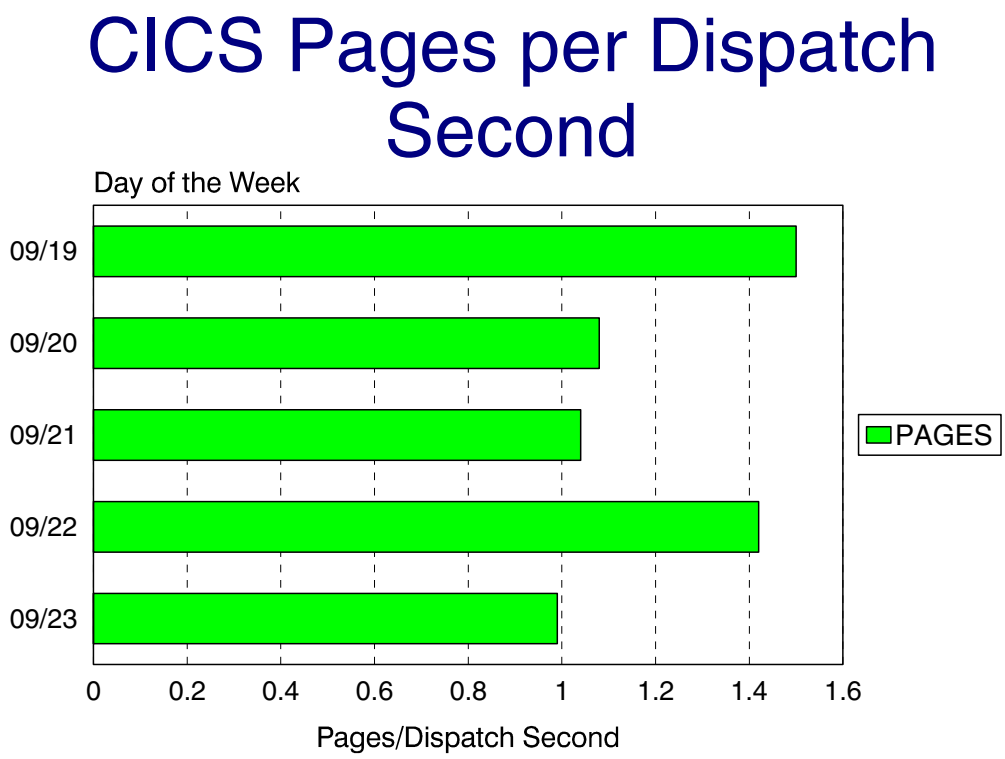
This horizontal bar graph shows the average number of Pages per Dispatch Second (based on Paging Activity within the CICS Region), for all transactions in the Region(s).

Which Program Builds the Data Point Member

PGM=SSA1CICY

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the average number of Pages per Dispatch Second.



Graph(27A):CNTL(DCICDGRY)

p7B: CICS Total Dispatch Sec (PARMLIB=No PARMLIB Members)

Graph Description

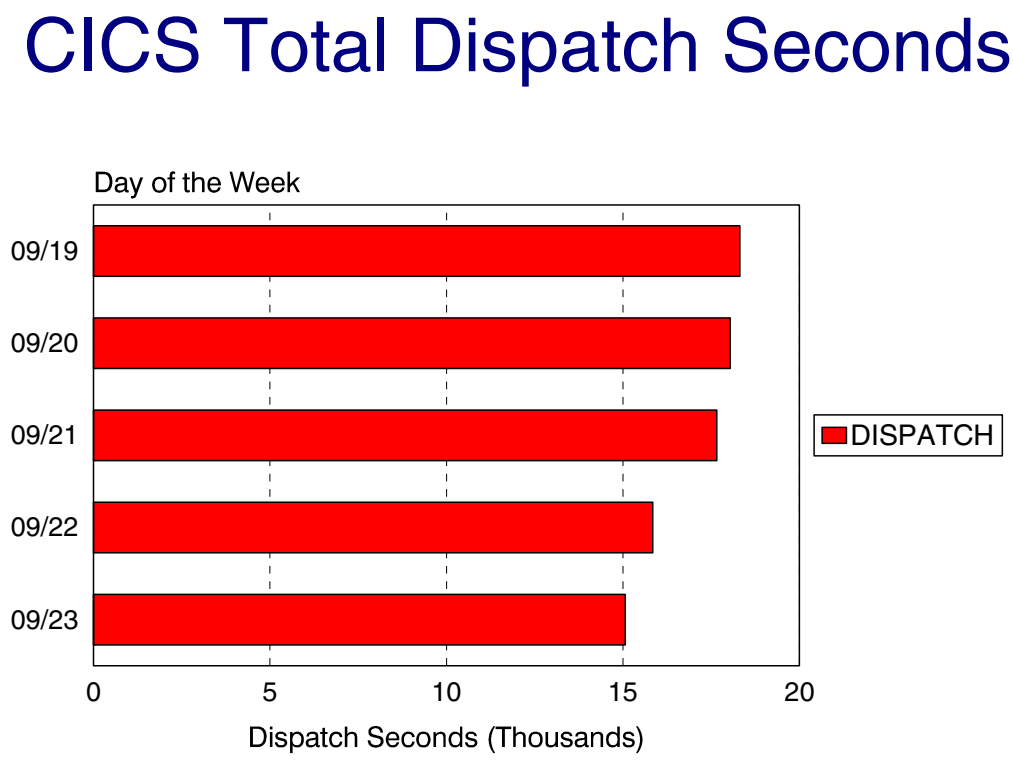
This horizontal bar graph shows the total number of Dispatch Seconds for all transactions in the Region(s).

Which Program Builds the Data Point Member

PGM=SSA1CICY

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the total number of Dispatch Seconds.



Graph(27B):CNTL(DCICDGRY)

p7C: CICS Total CPU Seconds (PARMLIB=No PARMLIB Members)

Graph Description

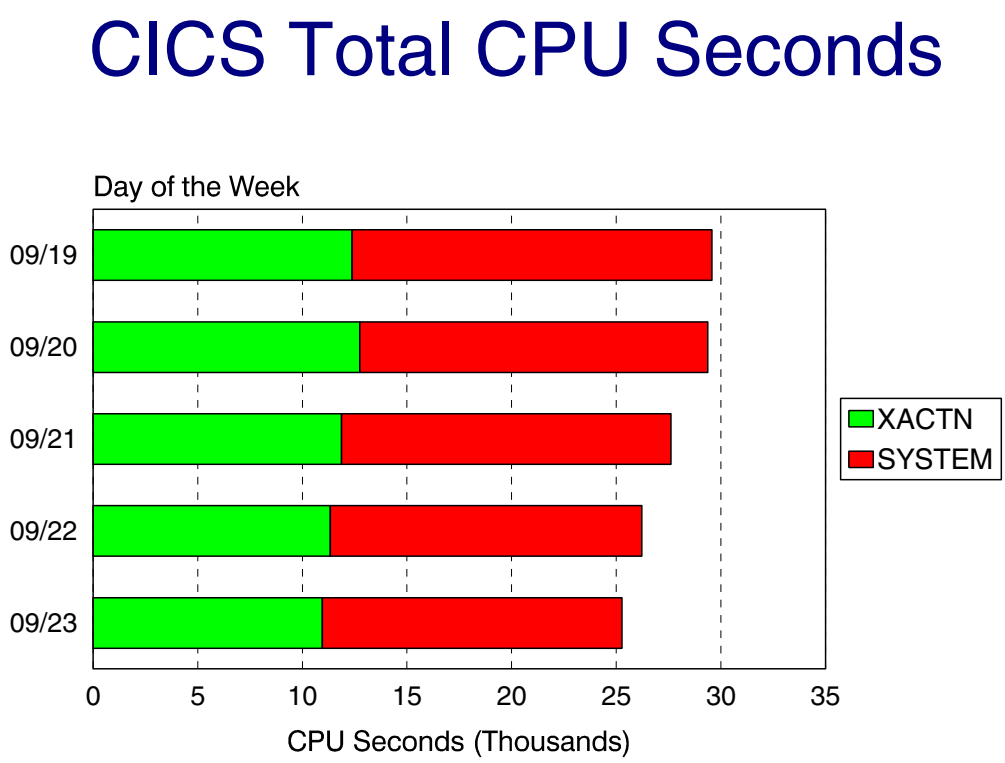
This horizontal bar graph shows the total number of CPU seconds used by Transactions and CICS, for all transactions in the Region(s).

Which Program Builds the Data Point Member

PGM=SSA1CICY

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the total number of CPU Seconds.



Graph(27C):CNTL(DCICDGRY)

p7D: CICS Application % CPU (PARMLIB=No PARMLIB Members)

Graph Description

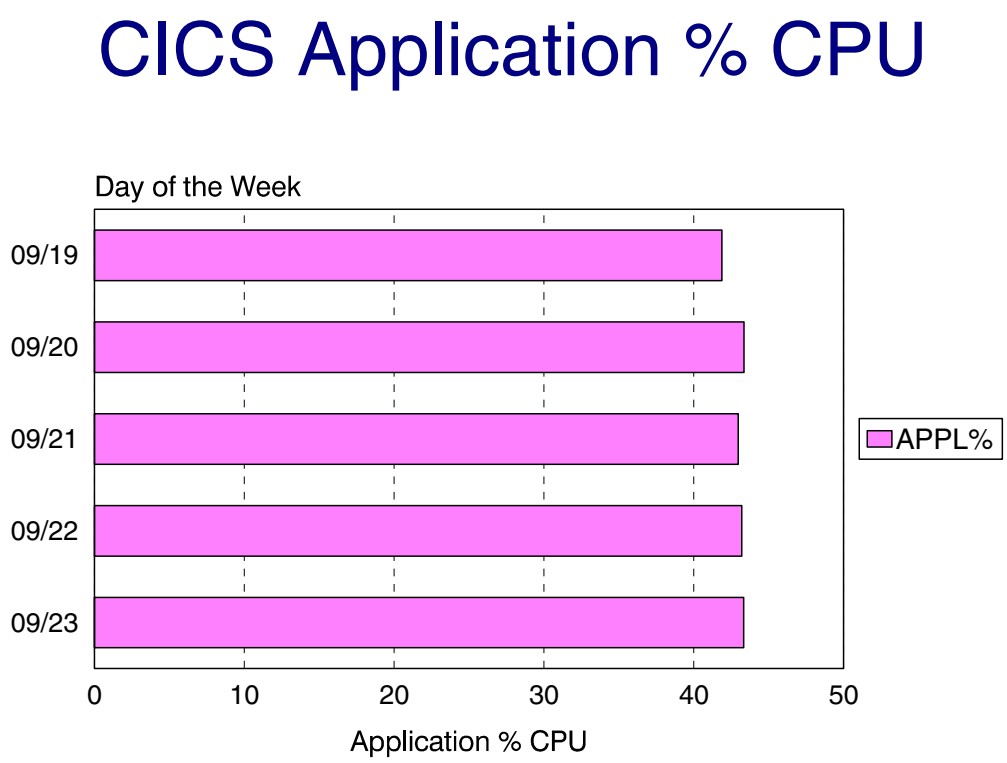
This horizontal bar graph shows the percentage of CPU time used by the region that could be accounted for by specific transactions (not internal CICS time).

Which Program Builds the Data Point Member

PGM=SSA1CICY

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the percentage of CPU time used by the Applications.



Graph(27D):CNTL(DCICDGRY)

pC0: CICS Response:Volume by Org. (PARMLIB=CICF,CICR)

Graph Description

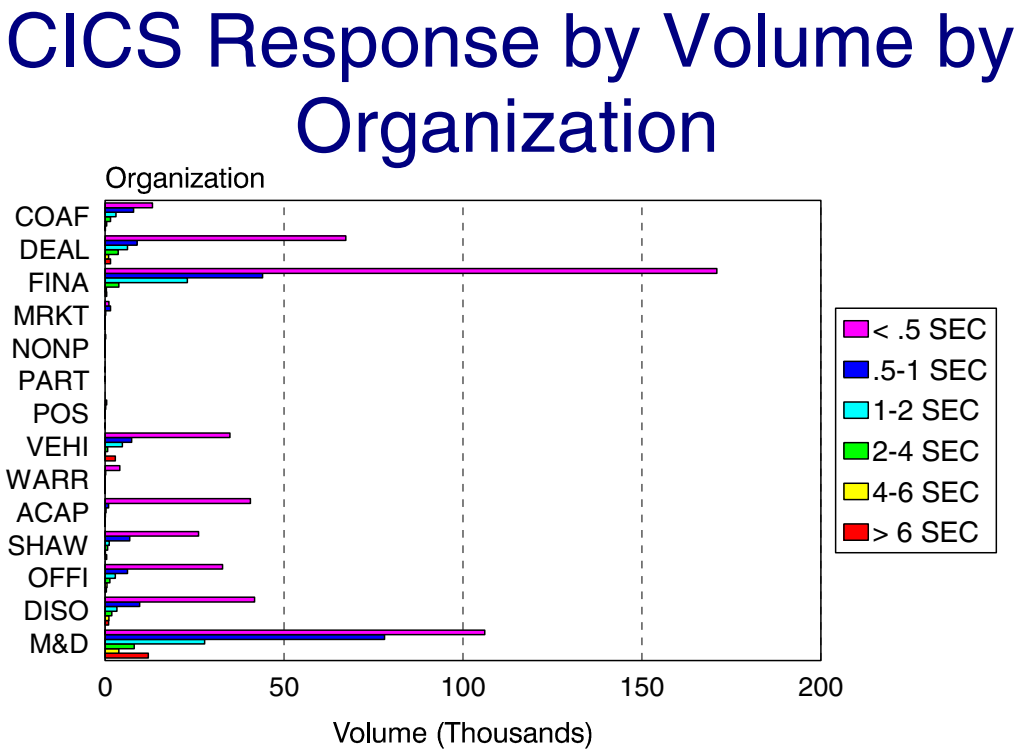
This horizontal bar graph divides the CICS transactions into up to 64 categories based on the CICF member of PARMLIB and shows, for each category, the total volume of transactions and the response breakdown for each of the response thresholds defined in the CICR member of PARMLIB.

Which Program Builds the Data Point Member

PGM=SSA1CICF

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the response time by volume by organization.



Graph(2C0):CNTL(DCICDGRD)

pC1: CICS I/O by Org. (PARMLIB=CICF)

Graph Description

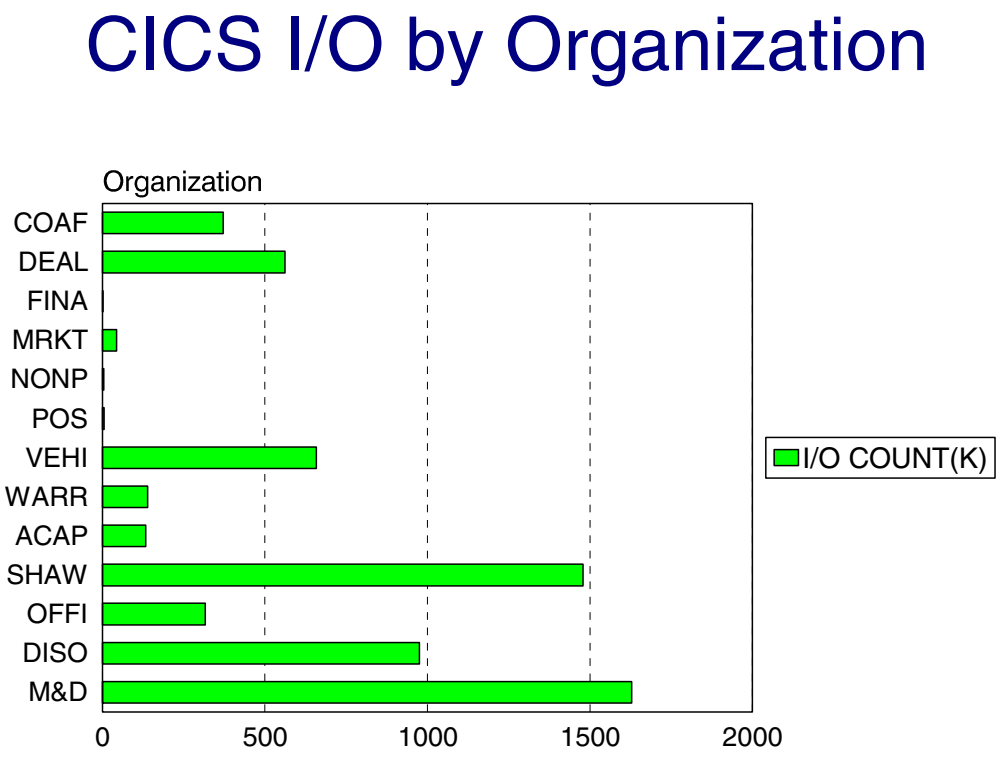
This horizontal bar graph divides the CICS transactions into up to 64 categories based on the CICF member of PARMLIB and shows, for each category, the total number of I/O operations for the period.

Which Program Builds the Data Point Member

PGM=SSA1CICF

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the total I/O operations by organization.



Graph(2C1):CNTL(DCICDGRD)

pC2: CICS Dispatch Seconds by Org. (PARMLIB=CICF)

Graph Description

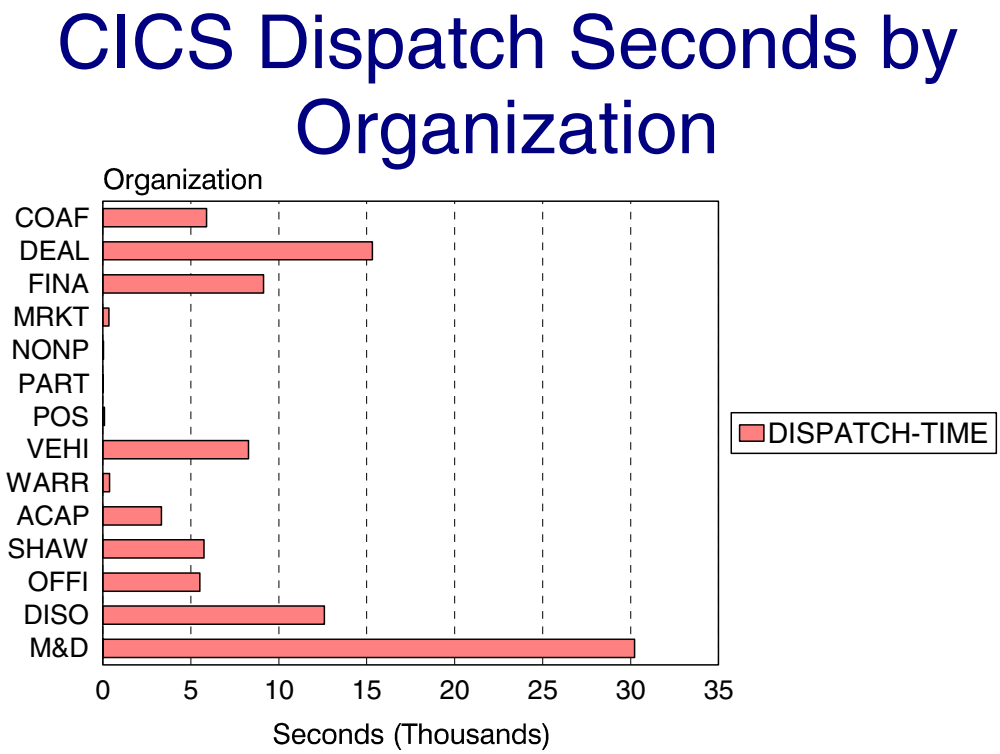
This horizontal bar graph divides the CICS transactions into up to 64 categories based on the CICF member of PARMLIB and shows, for each category, the total dispatch seconds for the period.

Which Program Builds the Data Point Member

PGM=SSA1CICF

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the dispatch seconds by organization.



Graph(2C2):CNTL(DCICDGRD)

pC3: CICS CPU Seconds:Shift by Org. (PARMLIB=CICF)

Graph Description

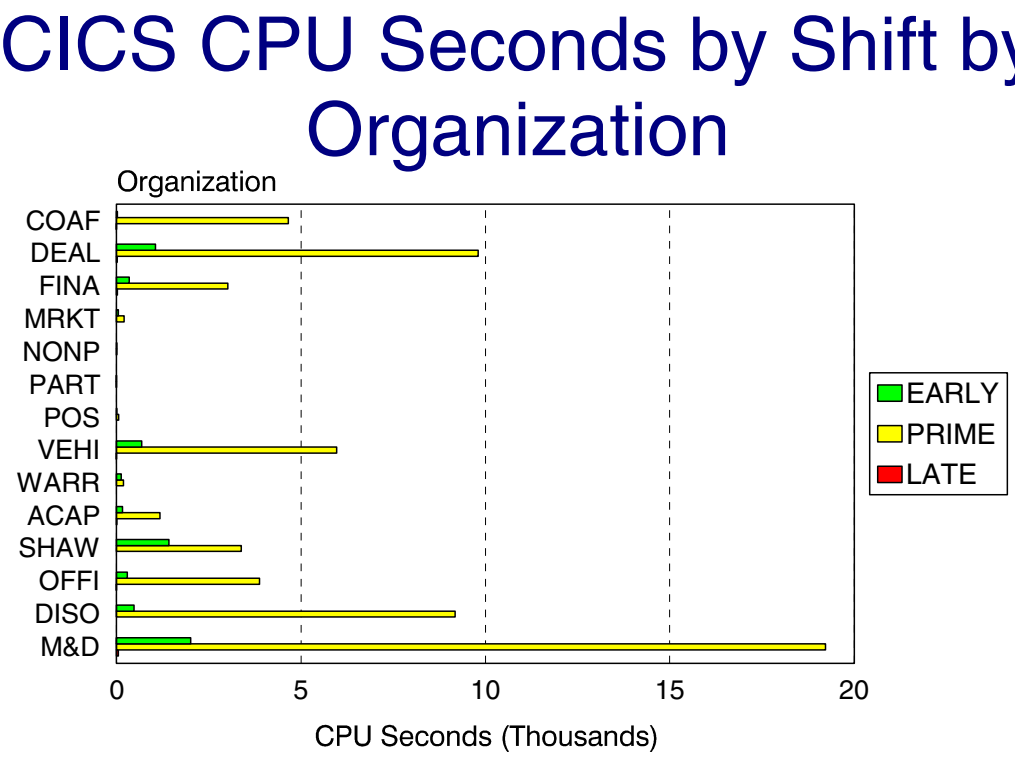
This horizontal bar graph divides the CICS transactions into up to 64 categories based on the CICF member of PARMLIB and shows, for each category, the total CPU Seconds for each defined shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1CICF

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the CPU seconds per shift by organization.



Graph(2C3):CNTL(DCICDGRD)

pC4: CICS Volume by Shift by Org. (PARMLIB=CICF)

Graph Description

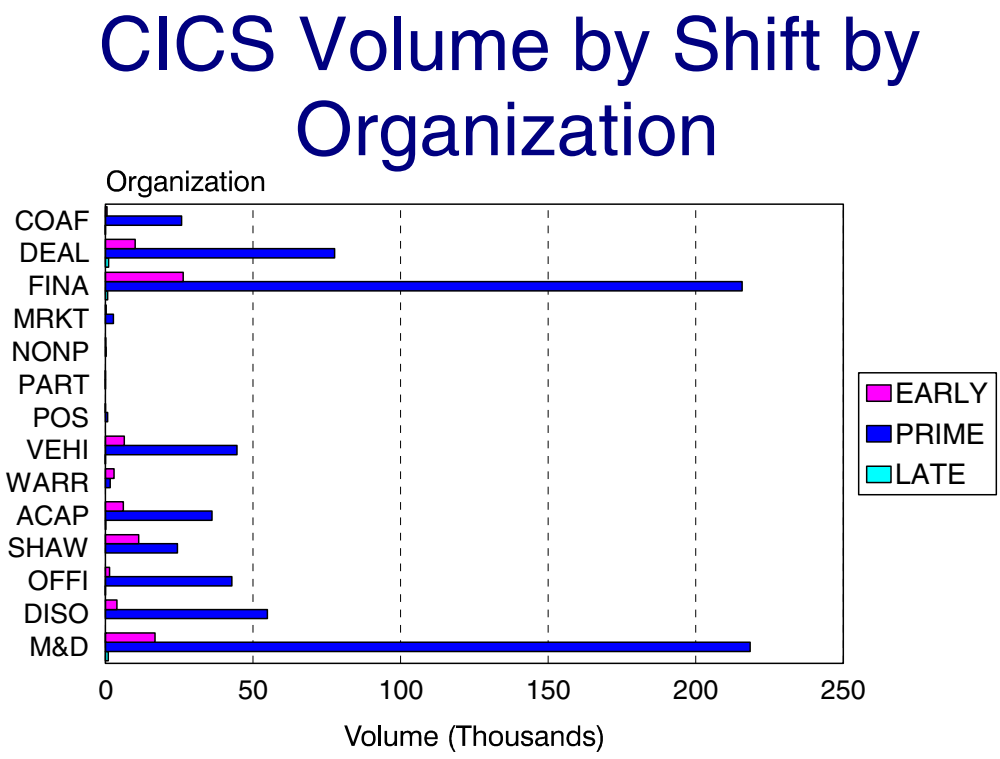
This horizontal bar graph divides the CICS transactions into up to 64 categories based on the CICF member of PARMLIB and shows, for each category, the total volume of transactions executed during Early, Late and Prime shifts.

Which Program Builds the Data Point Member

PGM=SSA1CICF

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the transaction volume within shift by organization.



Graph(2C4):CNTL(DCICDGRD)

pE1s: CICS Volume:CPU Busy (PARMLIB=CPUV)

Graph Description

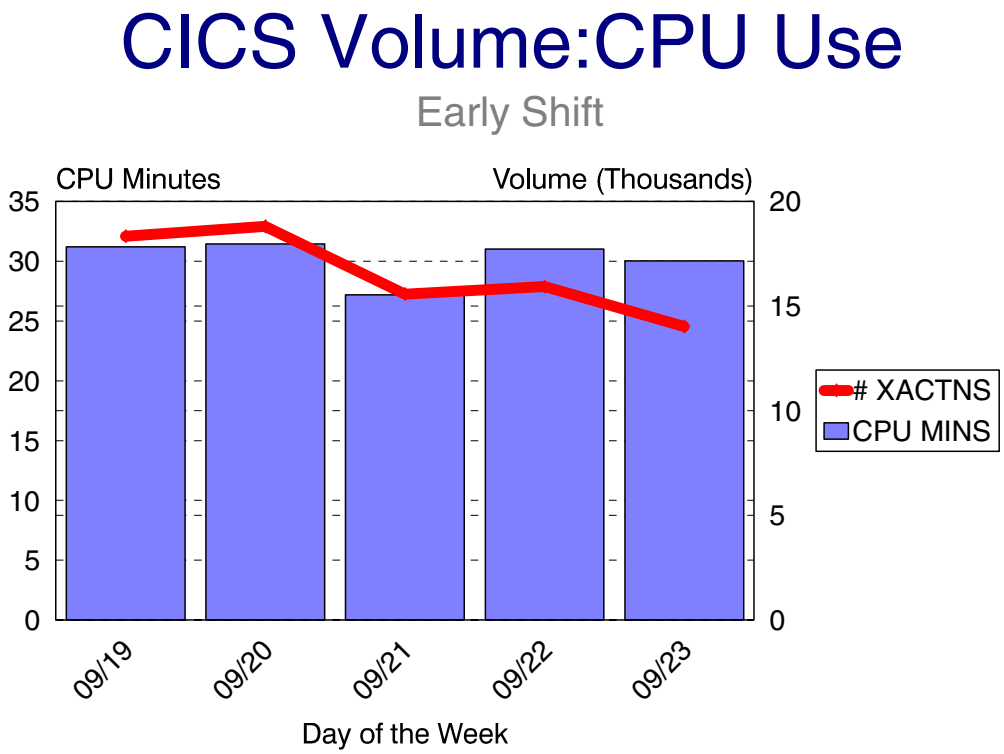
This mixed area/line graph shows the total volume of transactions for a given shift plotted against CPU busy values as defined in the CPUV member of PARMLIB. A separate member is built for each of the three shifts. That is, the early shift member would be named xE1E, the Prime shift member named xE1P, and the Late shift member named xE1L. The successful construction of this graph presumes that the CICS and Workload Tables reside in a single database. See the discussion of SSA1LOAD in the Utilities section of this Users Guide.

Which Program Builds the Data Point Member

PGM=SSA1CICE

What Does the Data Represent

The chart is in a mixed area/line form. The area portion of the graph shows the number of minutes per hour (Hourly) or hours per shift (Daily, Weekly, Monthly) the average CPU utilization was above one of the thresholds specified in the CPUV PARMLIB member. The line portion of the graph shows the number of CICS transactions that were executed.



Graph(2E1E):CNTL(DCICDGRE)

pE2: CICS Response:Volume by Org. (PARMLIB=CICO,CICR)

Graph Description

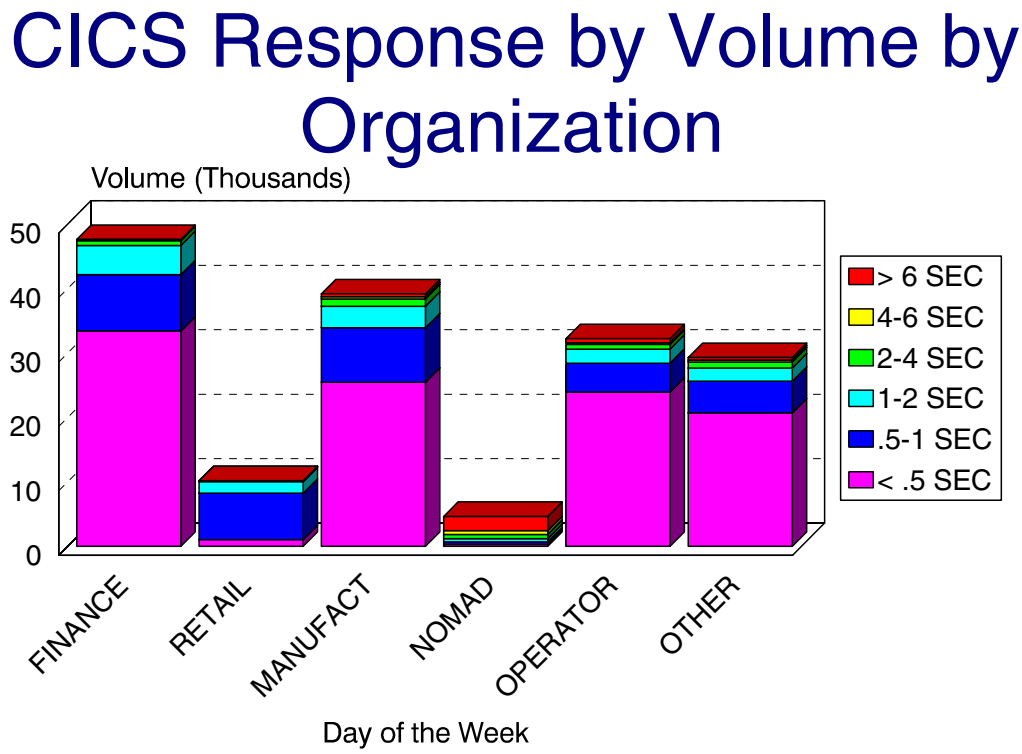
This bar graph divides the CICS transactions into up to six categories based on the CICO member of PARMLIB and shows, for each category, the total volume of transactions and the response breakdown for each of the response thresholds defined in the CICR member of PARMLIB.

Which Program Builds the Data Point Member

PGM=SSA1CICE

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the response time by volume by organization..



Graph(2E2):CNTL(DCICDGRE)

pE3: CICS Volume by Organization (PARMLIB=CICT)

Graph Description

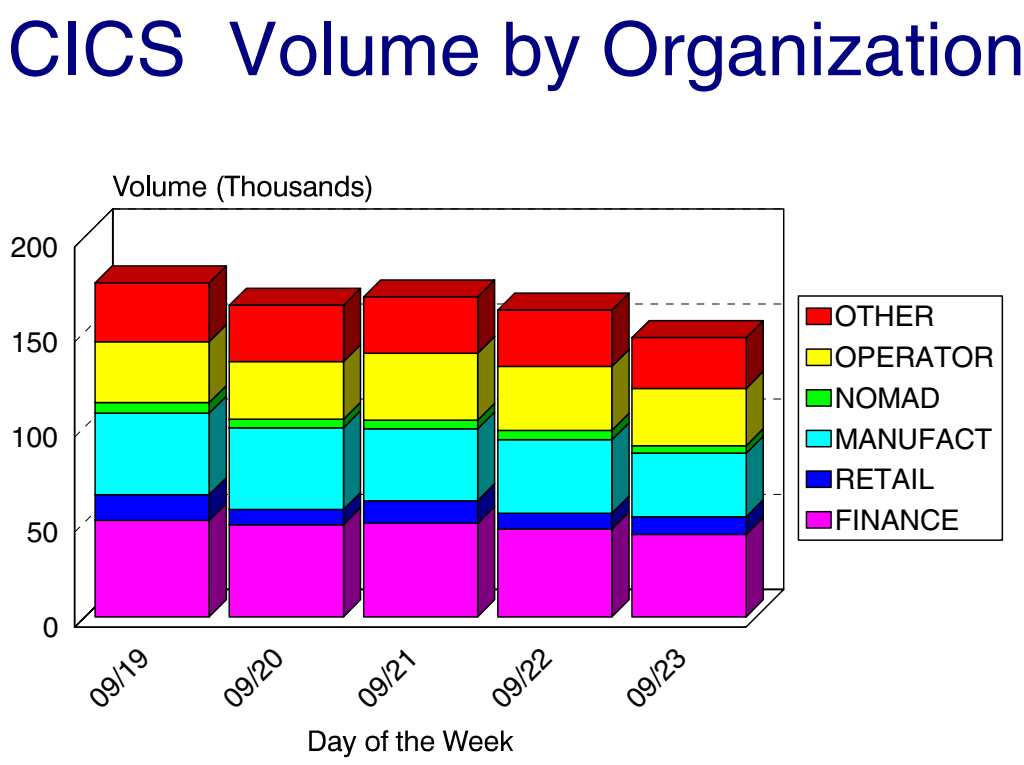
This bar graph divides the CICS transactions into up to six categories based on the CICT member of PARMLIB and shows, for each category, the total volume of transactions.

Which Program Builds the Data Point Member

PGM=SSA1CICE

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the volume by organization.



Graph(2E3):CNTL(DCICDGRE)

pE4: CICS Volume by Response (PARMLIB=CICR)

Graph Description

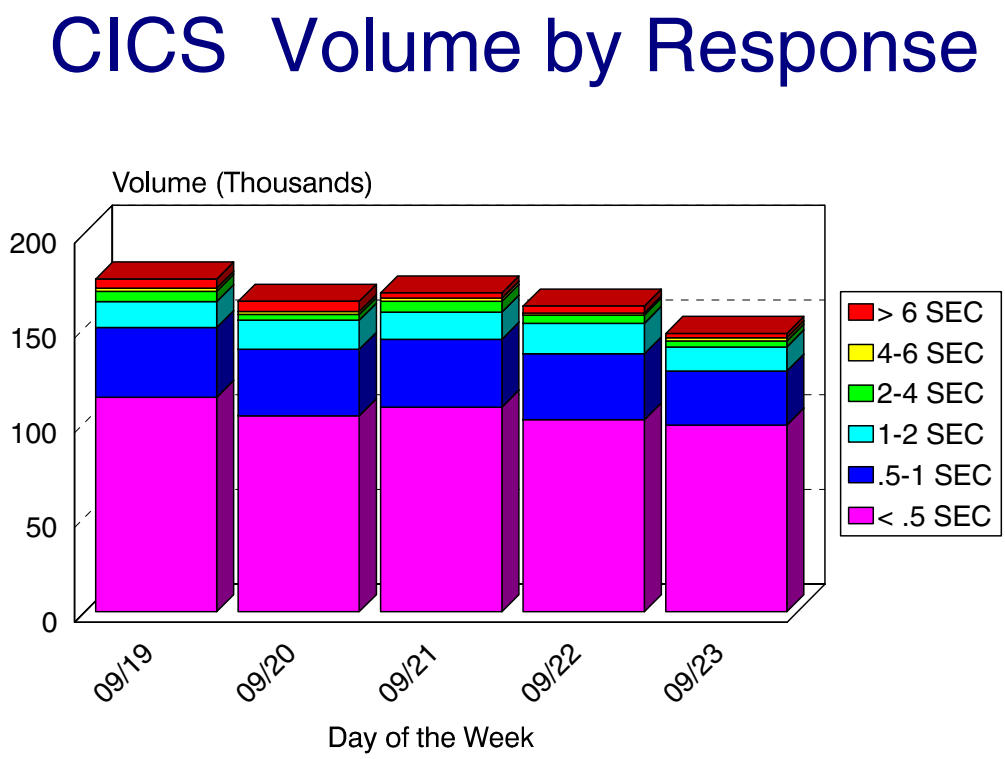
This bar graph shows the total volume of transactions and the response breakdown for each of the response thresholds defined in the CICR member of PARMLIB.

Which Program Builds the Data Point Member

PGM=SSA1CICE

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the response time by volume.



Graph(2E4):CNTL(DCICDGRE)

IDMS Subsystem Graphs

p80: IDMS Terminal Response (PARMLIB=No PARMLIB Members)

Graph Description

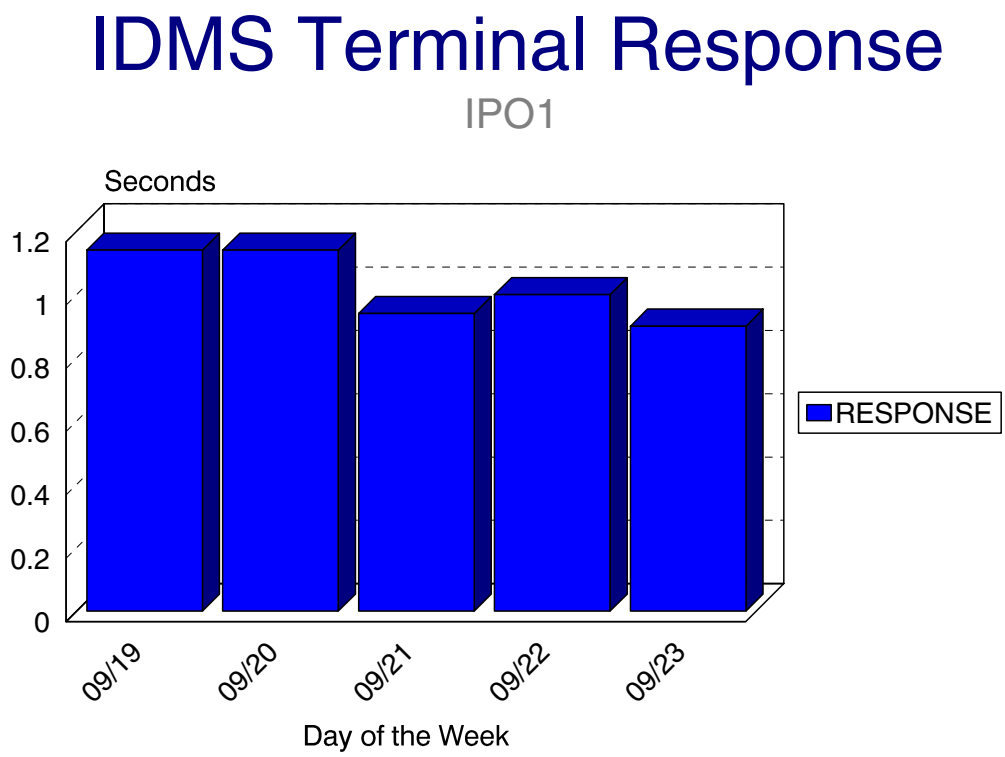
This bar graph shows average IDMS Transaction response time, for all transactions directed to terminals (not printers or internal transactions), for all transactions in the Region(s).

Which Program Builds the Data Point Member

PGM=SSA1IDMG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average Terminal Response time.



Graph(280):CNTL(DIDMDGRF)

p81: IDMS Transaction Volume (PARMLIB=No PARMLIB Members)

Graph Description

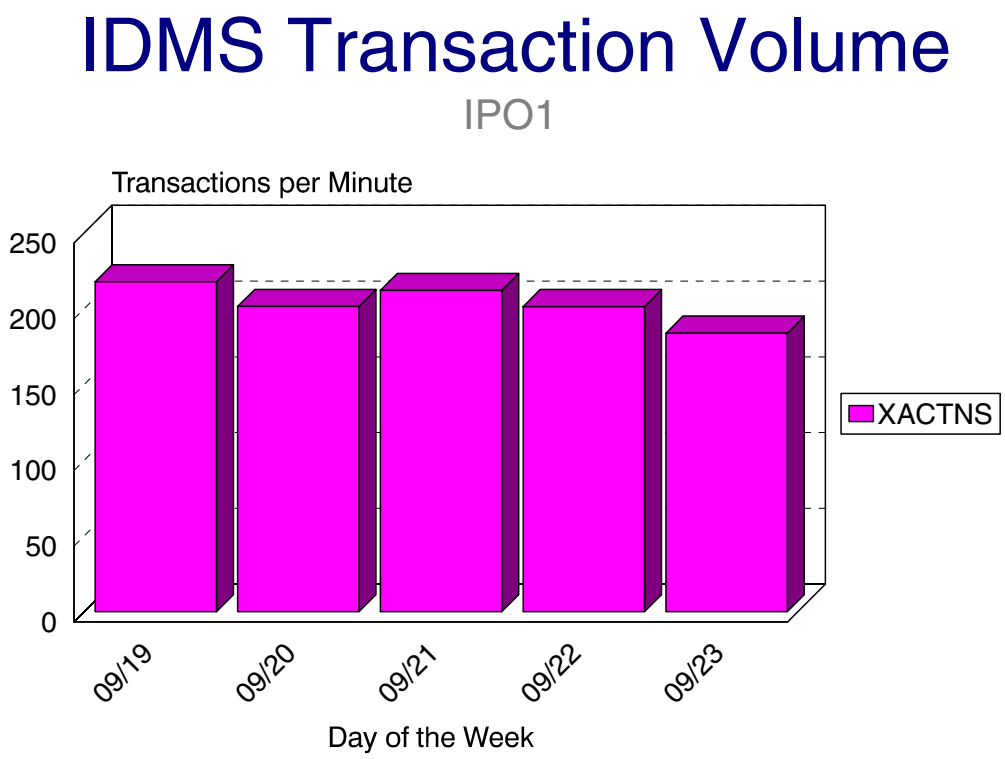
This bar graph shows the average number of IDMS Transactions per minute during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1IDMG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of IDMS transactions per minute.



Graph(281):CNTL(DIMDGRF)

p82: IDMS % CPU Busy (PARMLIB=No PARMLIB Members)

Graph Description

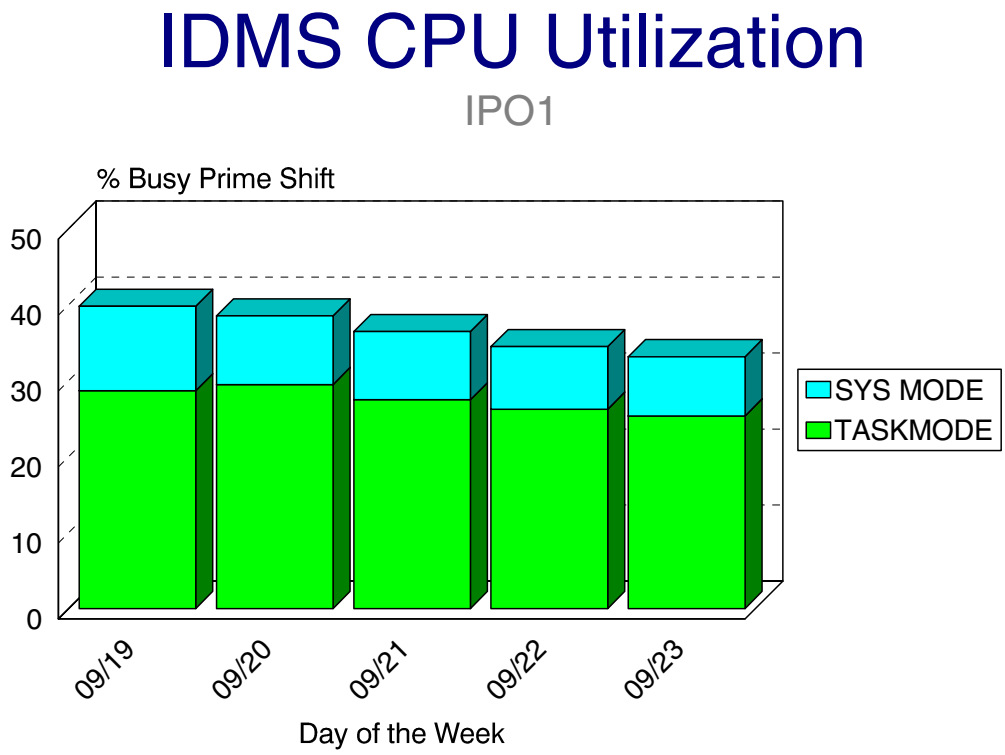
This bar graph shows the CPU % busy for this IDMS region in terms of transaction time (TASKMODE) and IDMS overhead (SYSMODE) during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1IDMG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average percentage busy for TASK MODE and SYS MODE.



Graph(282):CNTL(DIDMDGRF)

p83: IDMS DB Calls per Second (PARMLIB=No PARMLIB Members)

Graph Description

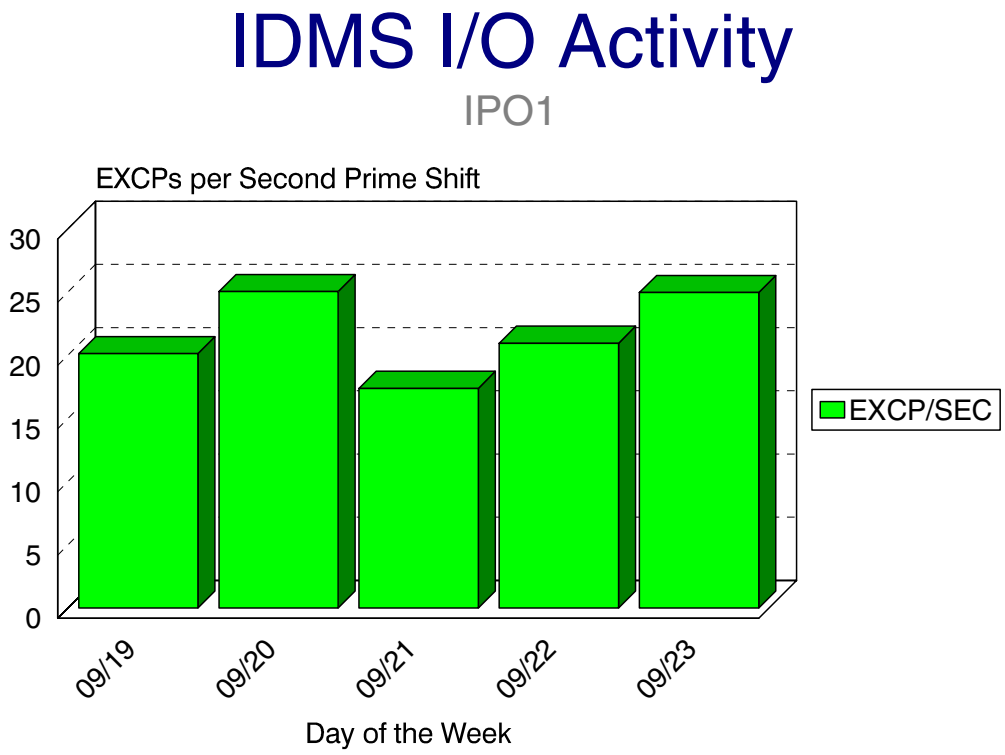
This bar graph shows the average number of Data Base Calls per second for this IDMS region during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1IDMG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of Data Base Calls per second.



Graph(283):CNTL(DIDMDGRF)

p84: IDMS Terminals Active (PARMLIB=No PARMLIB Members)

Graph Description

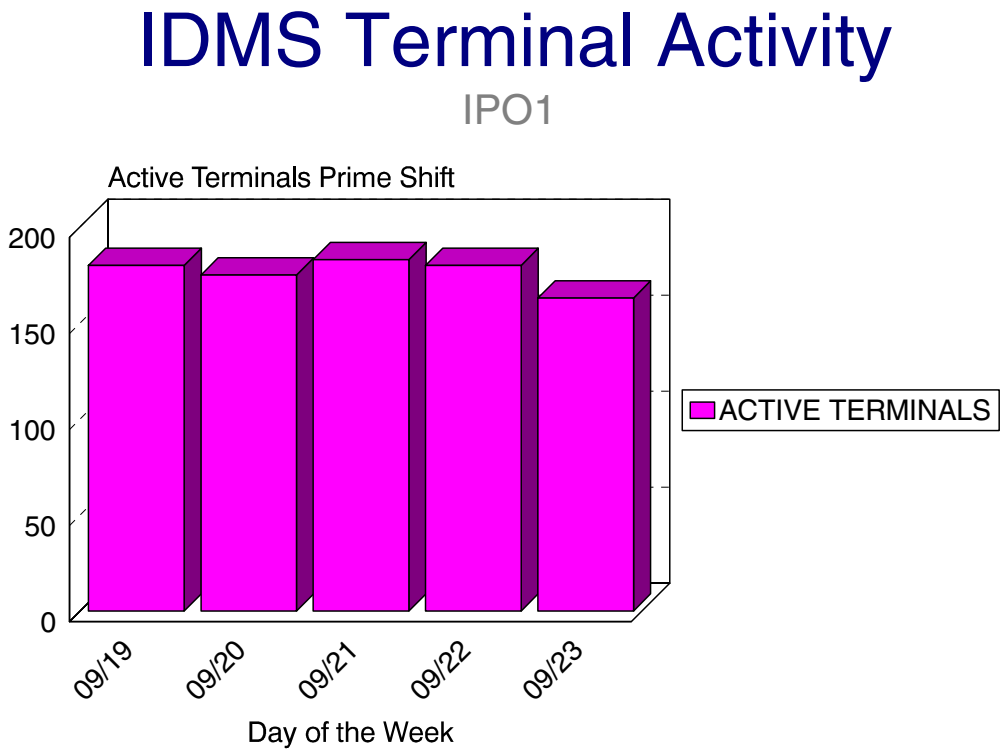
This bar graph shows the average number of IDMS Terminals Active during Prime shift for the period. An active terminal is one that has actually executed one or more transactions during any given fifteen minute period.

Which Program Builds the Data Point Member

PGM=SSA1IDMG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of IDMS terminals that were active.



Graph(284):CNTL(DIDMDGRF)

p85: IDMS Transactions per Terminal (No PARMLIB Members)

Graph Description

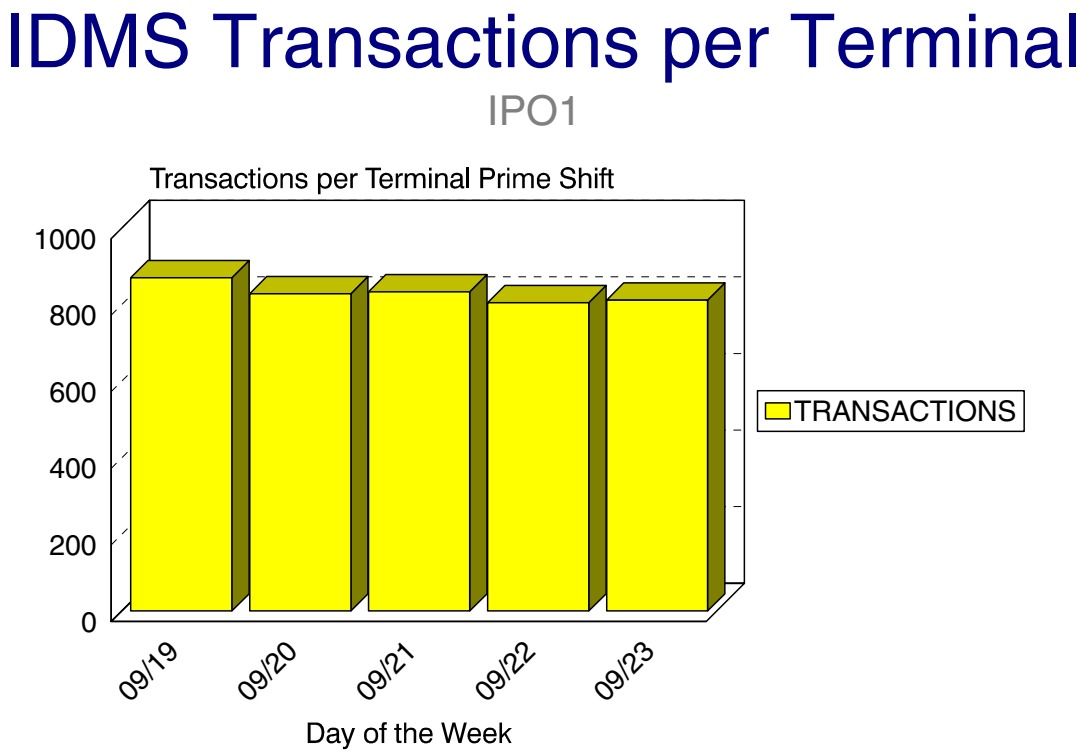
This bar graph shows the average number of IDMS Transactions per active terminal during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1IDMG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of IDMS transactions per active terminal.



Graph(285):CNTL(DIDMDGRF)

p86: IDMS Transaction Volume (PARMLIB=No PARMLIB Members)

Graph Description

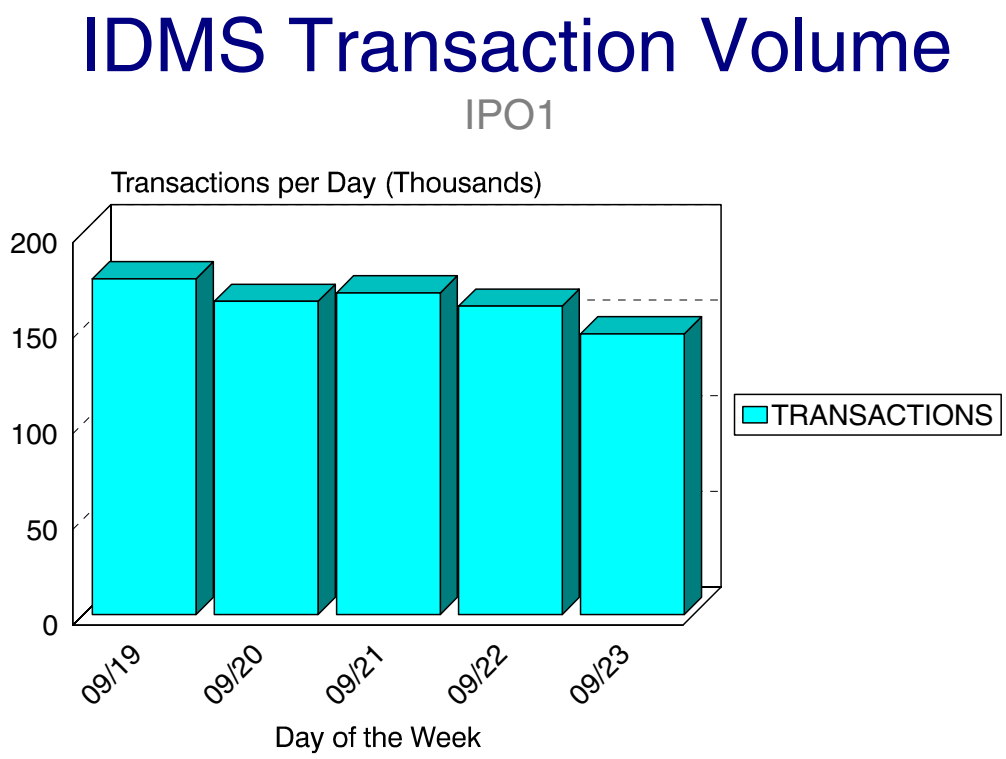
This bar graph shows the average daily number of IDMS Transactions processed for the period.

Which Program Builds the Data Point Member

PGM=SSA1IDMG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of IDMS transactions per day.



Graph(286):CNTL(DIDMDGRF)

p87: IDMS Transaction Volume (PARMLIB=No PARMLIB Members)

Graph Description

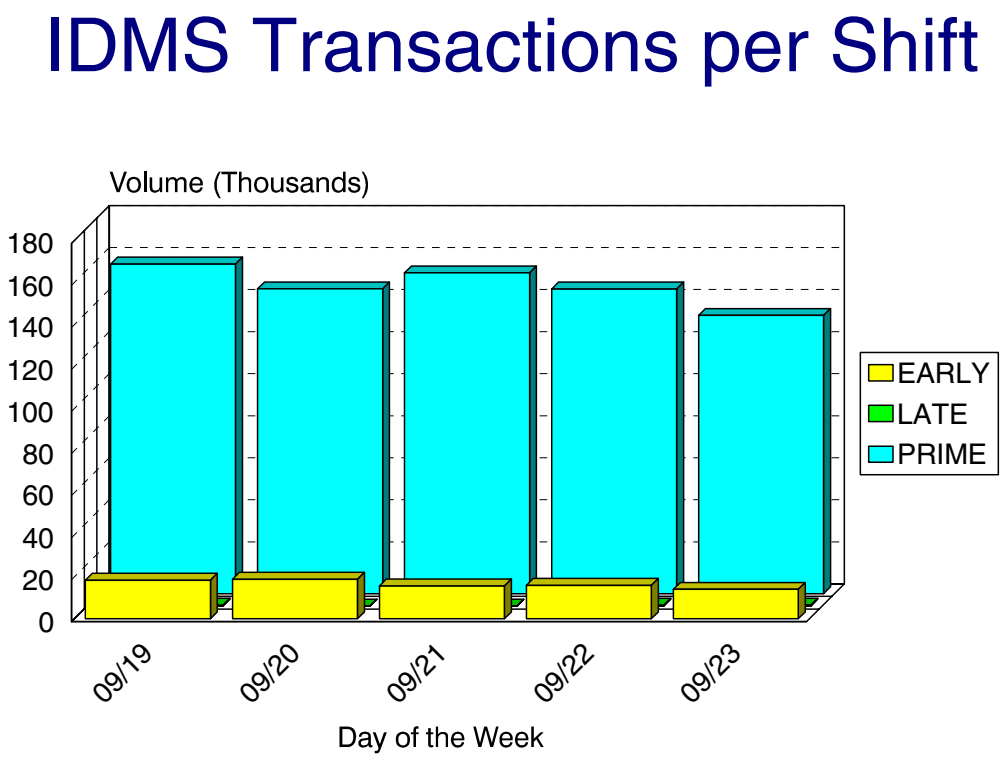
This bar graph shows the average number of IDMS Transactions per shift (EARLY/LATE/PRIME) for the period.

Which Program Builds the Data Point Member

PGM=SSA1IDMG

What Does the Data Represent

The chart is in an overlapped bar form. Each bar shows the number of IDMS transactions per shift per day.



Graph(287):CNTL(DIDMDGRF)

p88: IDMS Terminal Activity (PARMLIB=No PARMLIB Members)

Graph Description

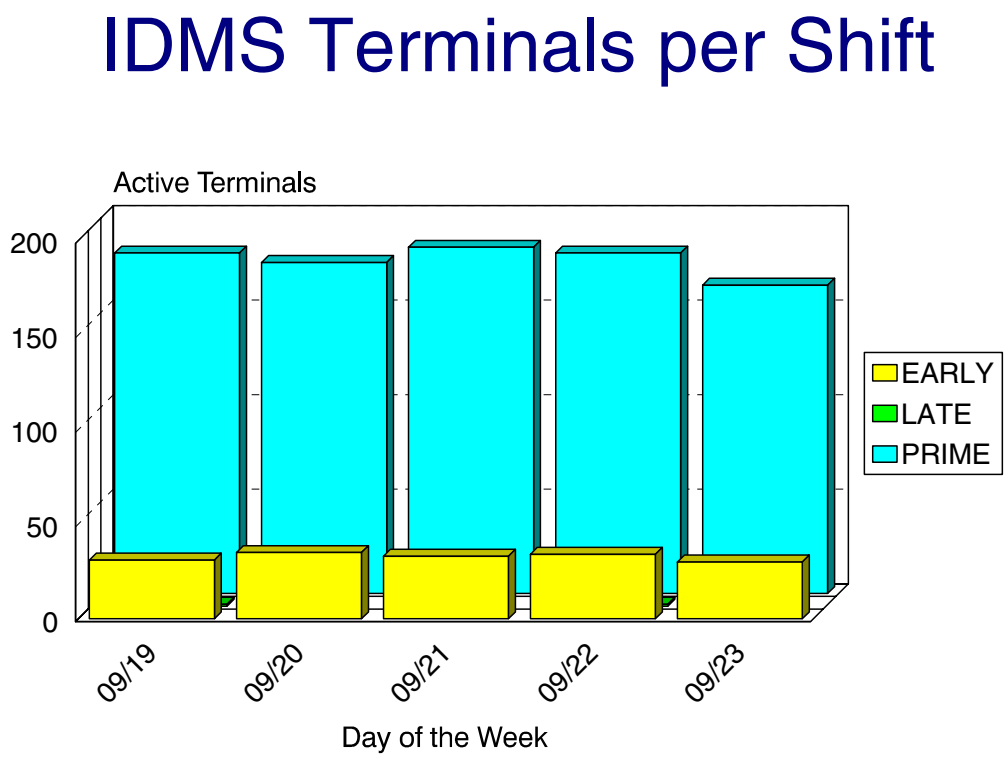
This bar graph shows the average number of Active IDMS Terminals per shift (EARLY/LATE/PRIME) for the period.

Which Program Builds the Data Point Member

PGM=SSA1IDMG

What Does the Data Represent

The chart is in an overlapped bar form. Each bar shows the average number of active IDMS terminals per shift per day.



Graph(288):CNTL(DIDMDGRF)

p89: IDMS Transaction Response (PARMLIB=No PARMLIB Members)

Graph Description

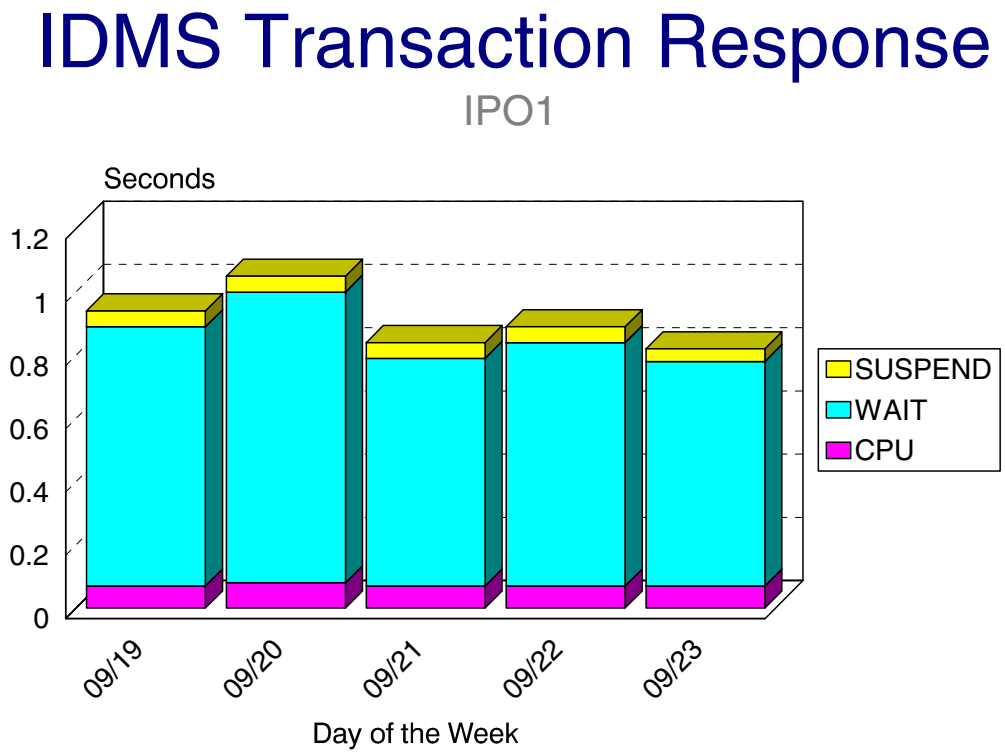
This bar graph shows average IDMS Transaction response time, divided into CPU time, WAIT time and Suspend Time, for all transactions in the Region(s).

Which Program Builds the Data Point Member

PGM=SSA1IDMG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average Transaction Response time.



Graph(289):CNTL(DIDMDGRF)

p8A: IDMS Pages:Dispatch Sec (PARMLIB=No PARMLIB Members)

Graph Description

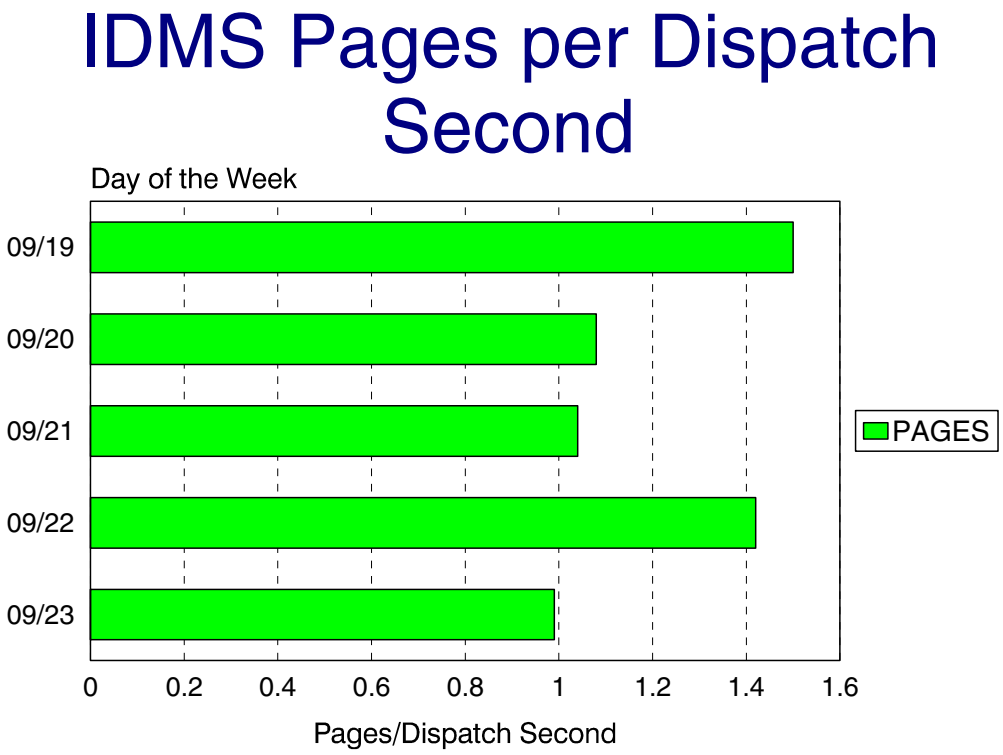
This horizontal bar graph shows the average number of Pages per Dispatch Second (based on Paging Activity within the IDMS Region), for all transactions in the Region(s).

Which Program Builds the Data Point Member

PGM=SSA1IDMY

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the average number of Pages per Dispatch Second.



Graph(28A):CNTL(DIDMDGRY)

p8B: IDMS Total Dispatch Sec (PARMLIB=No PARMLIB Members)

Graph Description

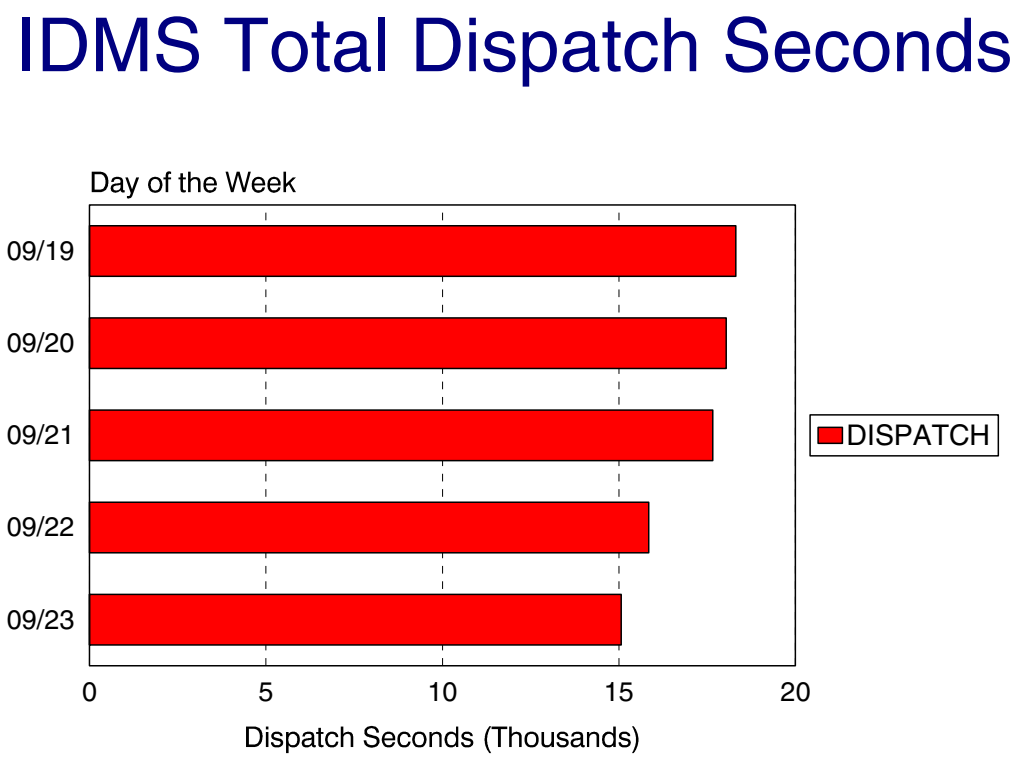
This horizontal bar graph shows the total number of Dispatch Seconds for all transactions in the Region(s).

Which Program Builds the Data Point Member

PGM=SSA1IDMY

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the total number of Dispatch Seconds.



Graph(28B):CNTL(DIDMDGRY)

p8C: IDMS Total CPU Seconds (PARMLIB=No PARMLIB Members)

Graph Description

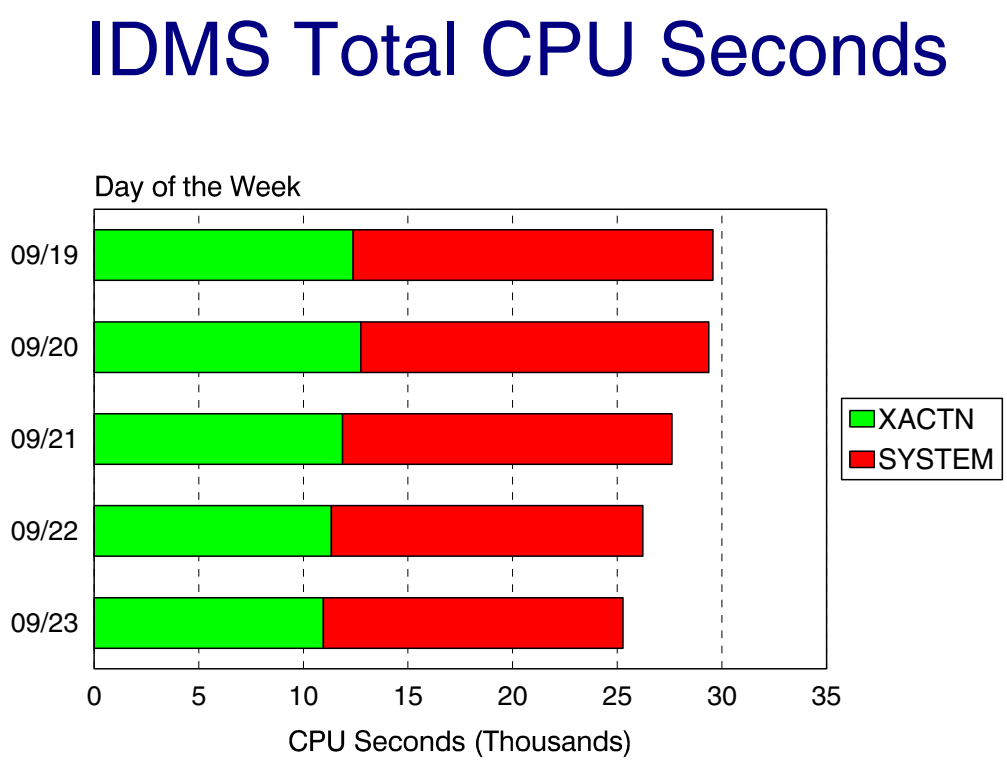
This horizontal bar graph shows the total number of CPU seconds used by Transactions and IDMS, for all transactions in the Region(s).

Which Program Builds the Data Point Member

PGM=SSA1IDMY

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the total number of CPU Seconds.



Graph(28C):CNTL(DIDMDGRY)

p8D: IDMS Application % CPU (PARMLIB=No PARMLIB Members)

Graph Description

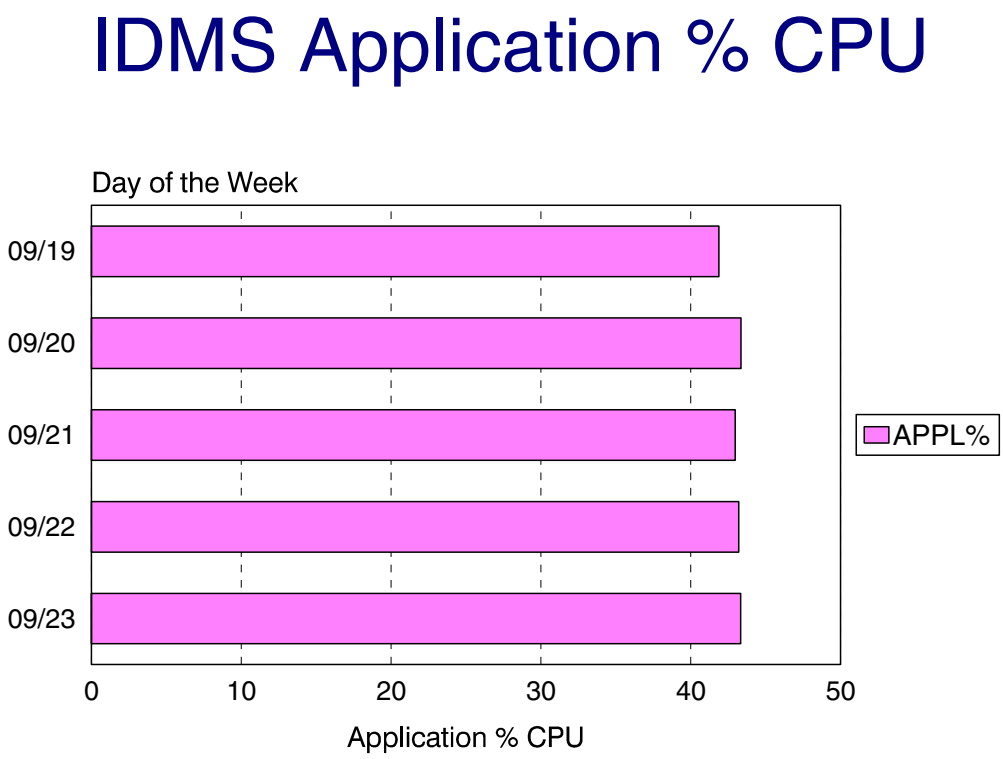
This horizontal bar graph shows the percentage of CPU time used by the region that could be accounted for by specific transactions (not internal IDMS time).

Which Program Builds the Data Point Member

PGM=SSA1IDMY

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the percentage of CPU time used by the Applications.



Graph(28D):CNTL(DIDMDGRY)

pE6: IDMS Response:Volume by Org. (PARMLIB=IDMO,IDMR)

Graph Description

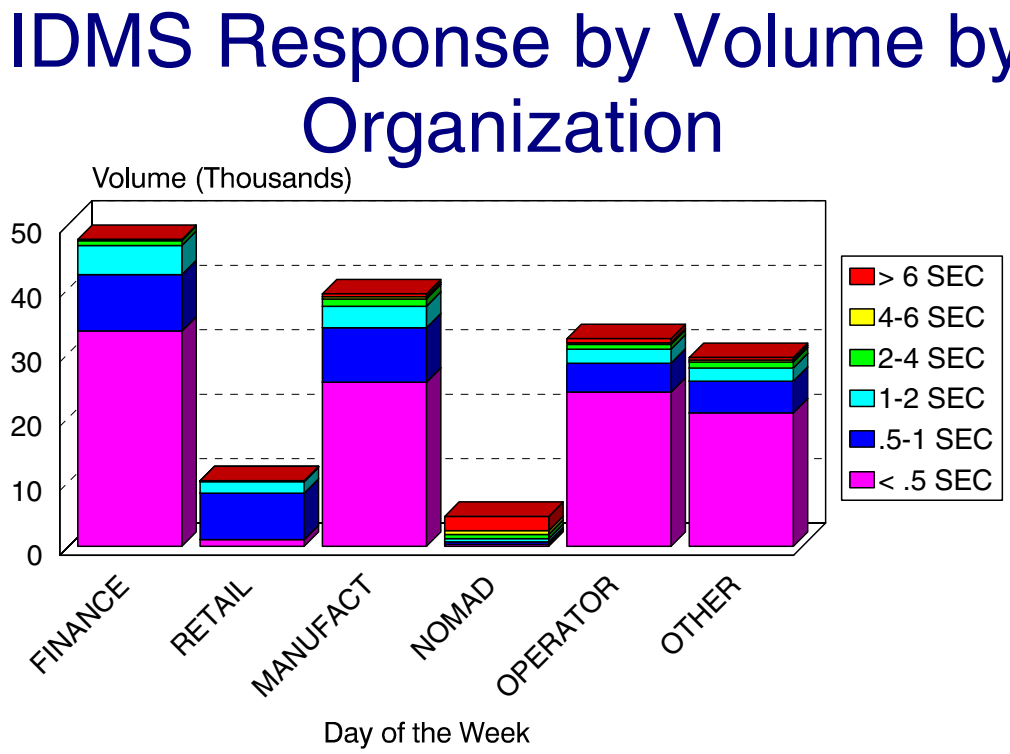
This bar graph divides the IDMS transactions into up to six categories based on the IDMO member of PARMLIB and shows, for each category, the total volume of transactions and the response breakdown for each of the response thresholds defined in the IDMR member of PARMLIB.

Which Program Builds the Data Point Member

PGM=SSA1IDME

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the response time by volume by organization.



Graph(2E6):CNTL(DIDMDGRE)

pE7: IDMS Volume by Organization (PARMLIB=IDMT)

Graph Description

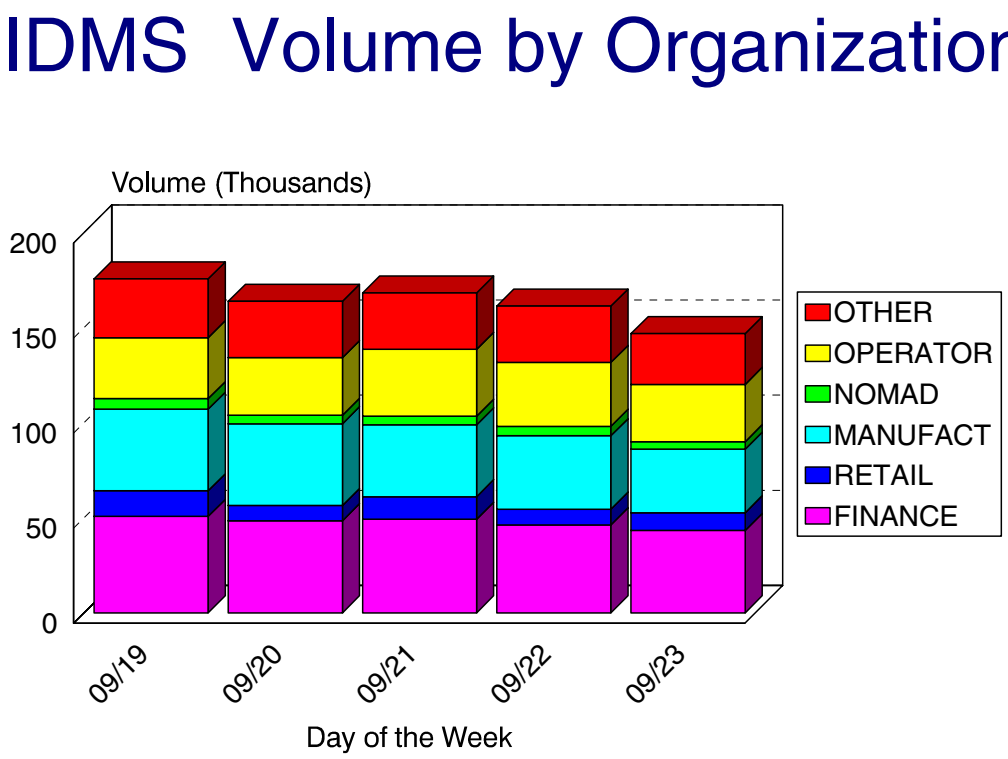
This bar graph divides the IDMS transactions into up to six categories based on the IDMT member of PARMLIB and shows, for each category, the total volume of transactions.

Which Program Builds the Data Point Member

PGM=SSA1IDME

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the volume by organization.



Graph(2E7):CNTL(DIDMDGRE)

pE8: IDMS Volume by Response (PARMLIB=IDMR)

Graph Description

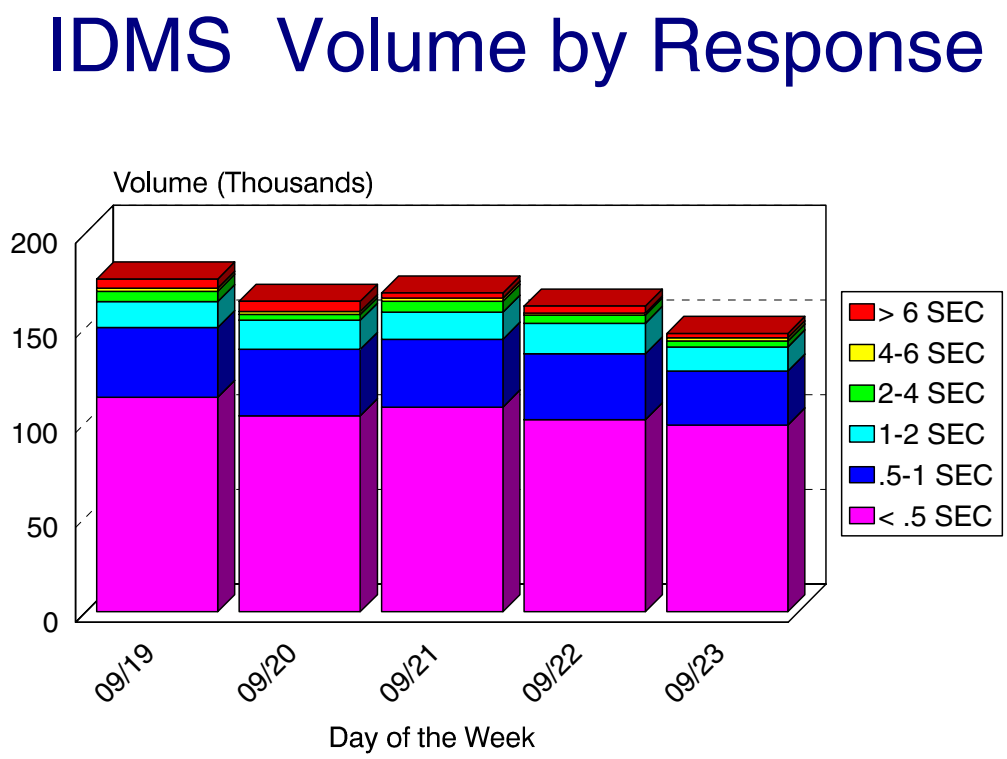
This bar graph shows the total volume of transactions and the response breakdown for each of the response thresholds defined in the IDMR member of PARMLIB.

Which Program Builds the Data Point Member

PGM=SSA1IDME

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the response time by volume.



Graph(2E8):CNTL(DIDMDGRE)

IMS Subsystem Graphs

p90: IMS Transaction Response (PARMLIB=No PARMLIB Members)

Graph Description

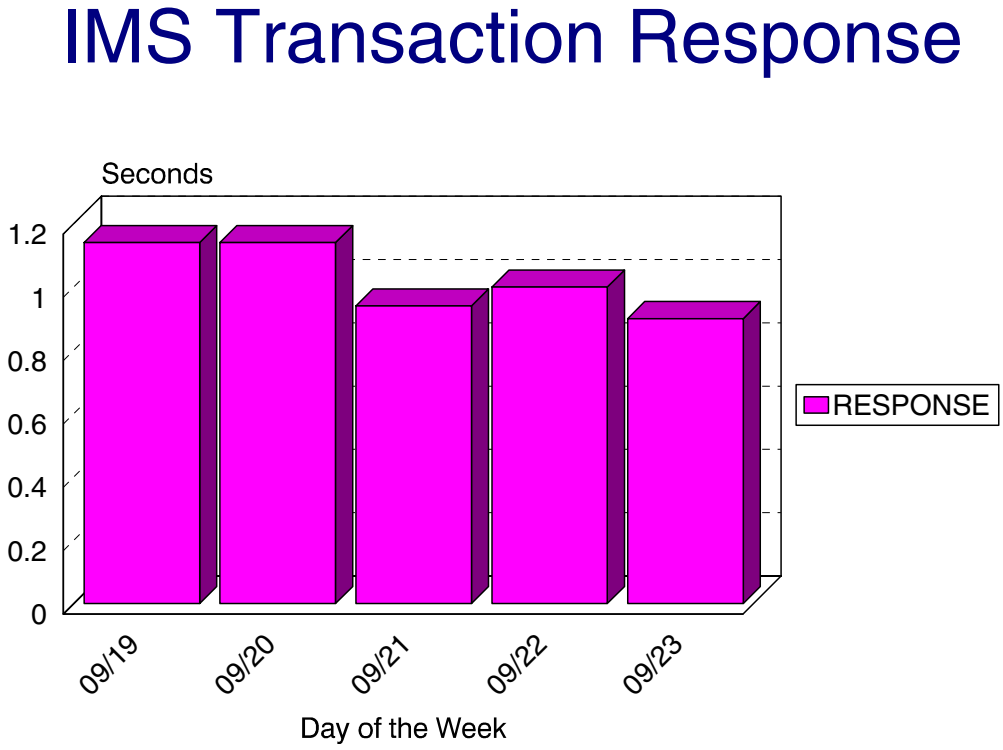
This bar graph shows average IMS Transaction response time, for all transactions in the Region(s).

Which Program Builds the Data Point Member

PGM=SSA1IMSG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average Transaction Response time.



Graph(290):CNTL(DIMSDGRF)

p91: IMS Transaction Volume (PARMLIB=No PARMLIB Members)

Graph Description

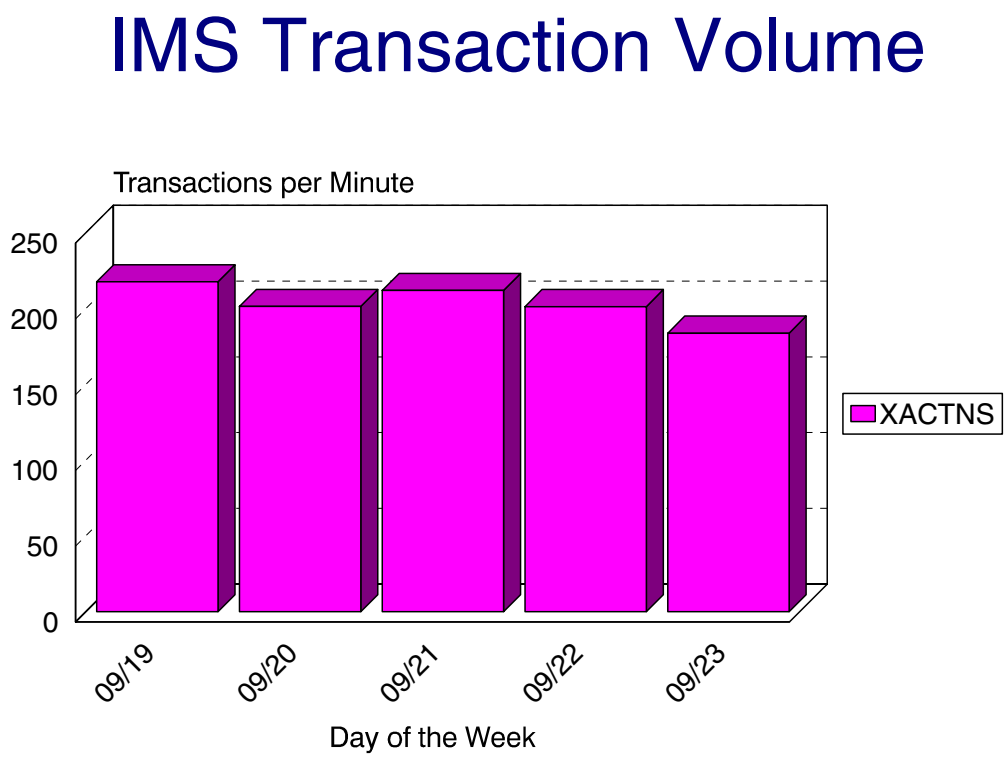
This bar graph shows the average number of IMS Transactions per minute during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1IMSG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of IMS transactions per minute.



Graph(291):CNTL(DIMSDGRF)

p92: IMS % CPU Busy (PARMLIB=No PARMLIB Members)

Graph Description

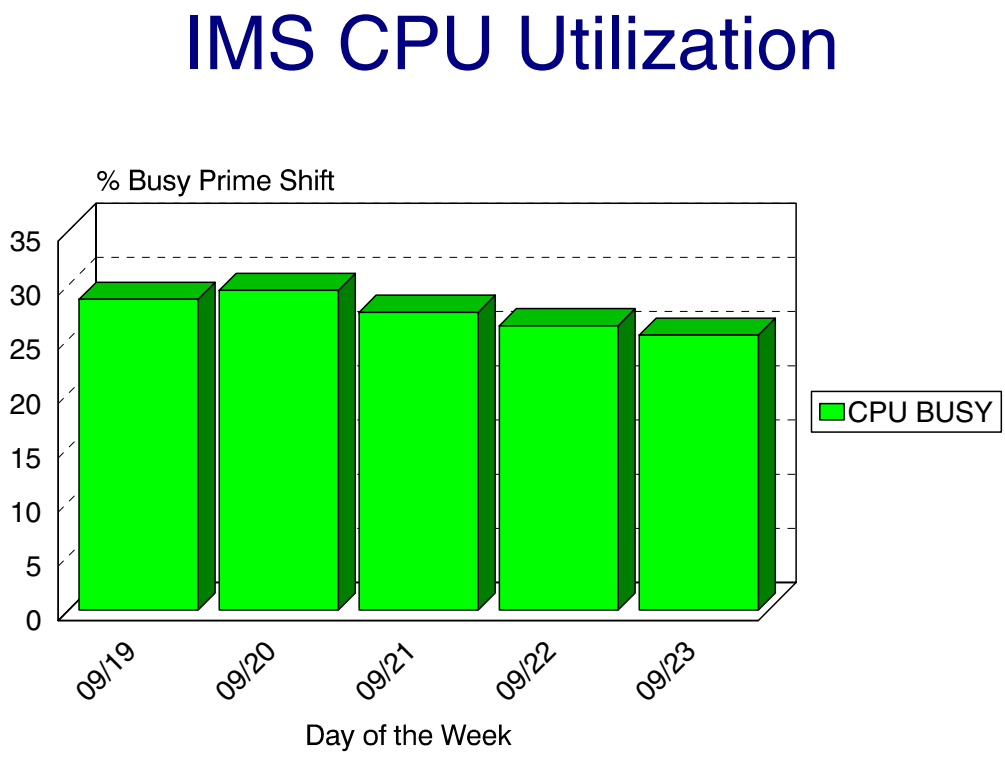
This bar graph shows the CPU % busy for this IMS region during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1IMSG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average percentage busy for the region.



Graph(292):CNTL(DIMSDGRF)

p93: IMS EXCPs per Second (PARMLIB=No PARMLIB Members)

Graph Description

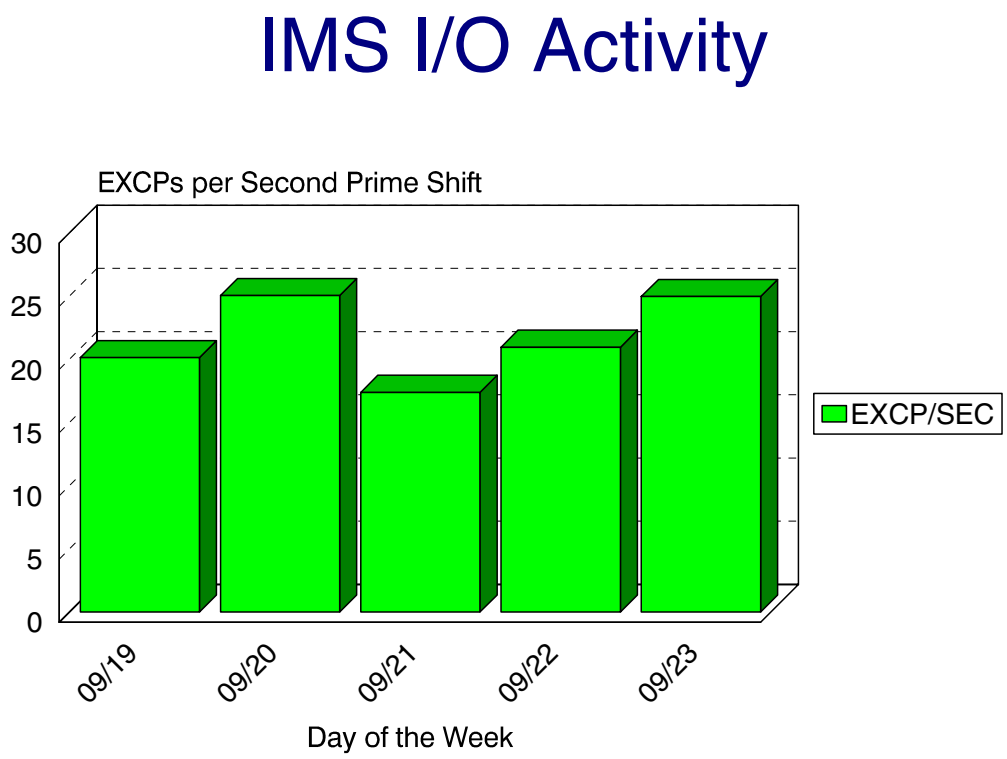
This bar graph shows the average number of I/O operations per second for this IMS region during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1IMSG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of I/O operations per second.



Graph(293):CNTL(DIMSDGRF)

p94: IMS Terminals Active (PARMLIB=No PARMLIB Members)

Graph Description

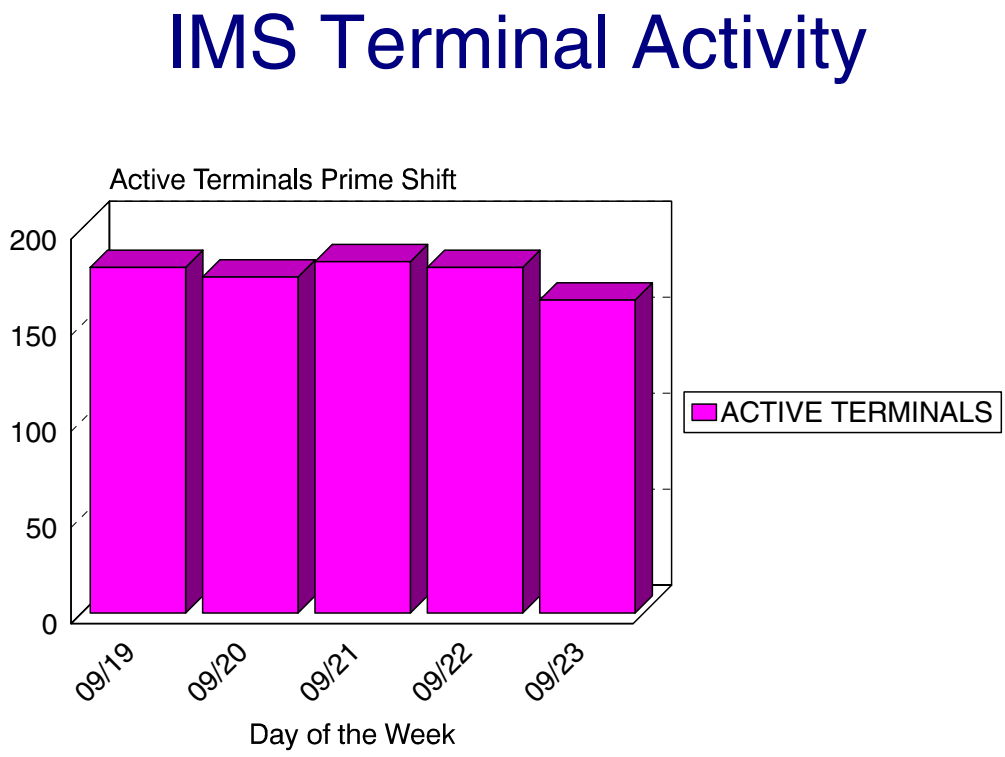
This bar graph shows the average number of IMS Terminals Active during Prime shift for the period. An active terminal is one that has actually executed one or more transactions during any given fifteen minute period.

Which Program Builds the Data Point Member

PGM=SSA1IMSG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of IMS terminals that were active.



Graph(294):CNTL(DIMSDGRF)

p95: IMS Transactions per Terminal (No PARMLIB Members)

Graph Description

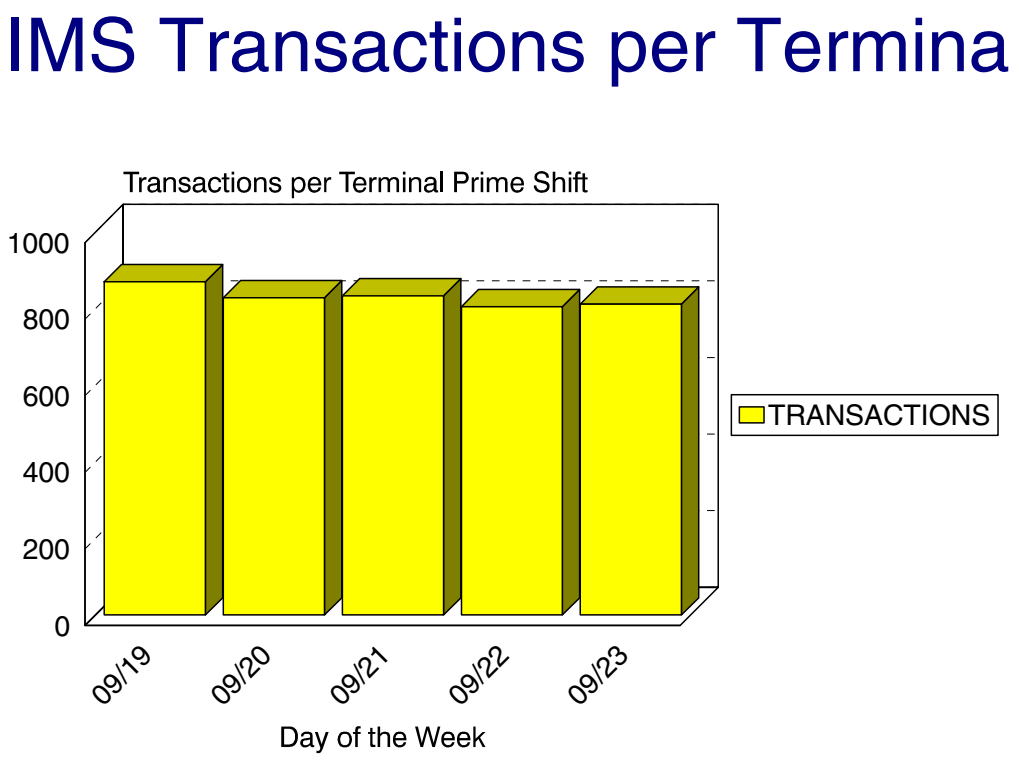
This bar graph shows the average number of IMS Transactions per active terminal during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1IMSG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of IMS transactions per active terminal.



Graph(295):CNTL(DIMSDGRF)

p96: IMS Transaction Volume (PARMLIB=No PARMLIB Members)

Graph Description

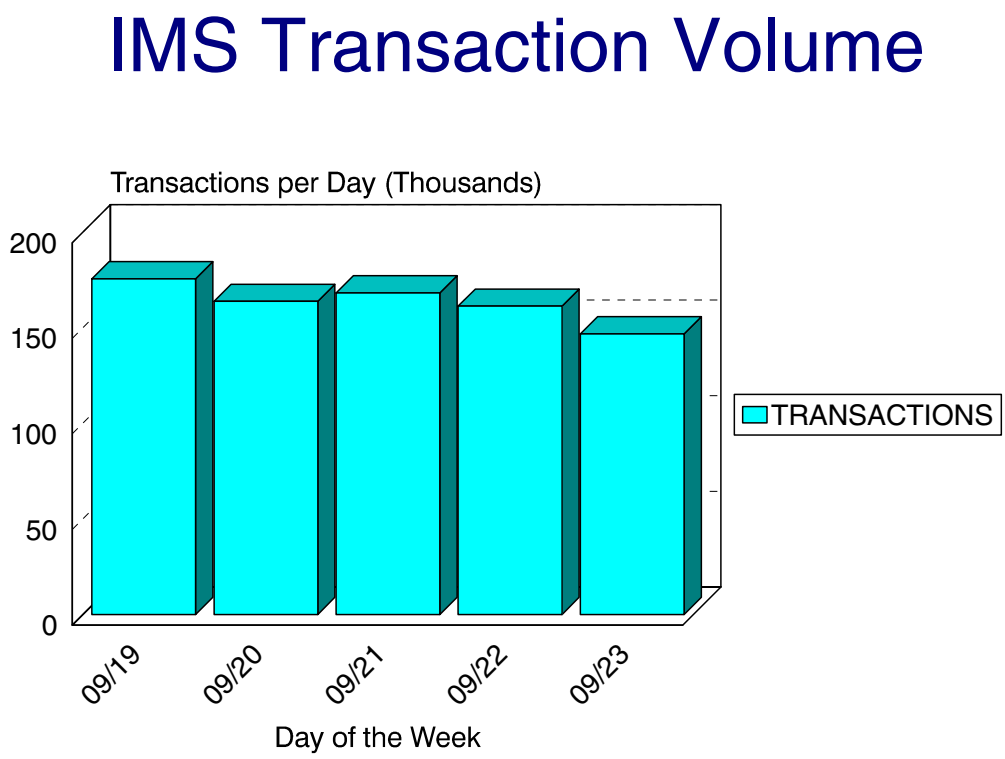
This bar graph shows the average daily number of IMS Transactions processed during the period.

Which Program Builds the Data Point Member

PGM=SSA1IMSG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of IMS transactions per day.



Graph(296):CNTL(DIMSDGRF)

p97: IMS Transaction Volume (PARMLIB=No PARMLIB Members)

Graph Description

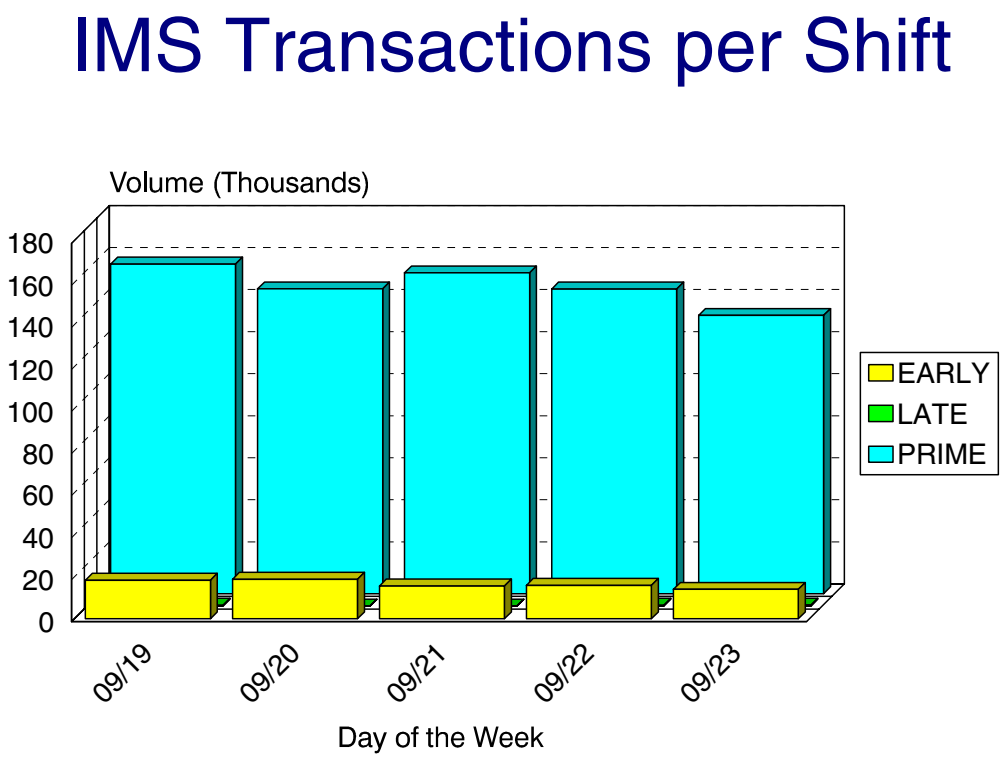
This bar graph shows the average number of IMS Transactions per shift (EARLY/LATE/PRIME) for the period.

Which Program Builds the Data Point Member

PGM=SSA1IMSG

What Does the Data Represent

The chart is in an overlapped bar form. Each bar shows the number of IMS transactions per shift per day.



Graph(297):CNTL(DIMSDGRF)

p98: IMS Terminal Activity (PARMLIB=No PARMLIB Members)

Graph Description

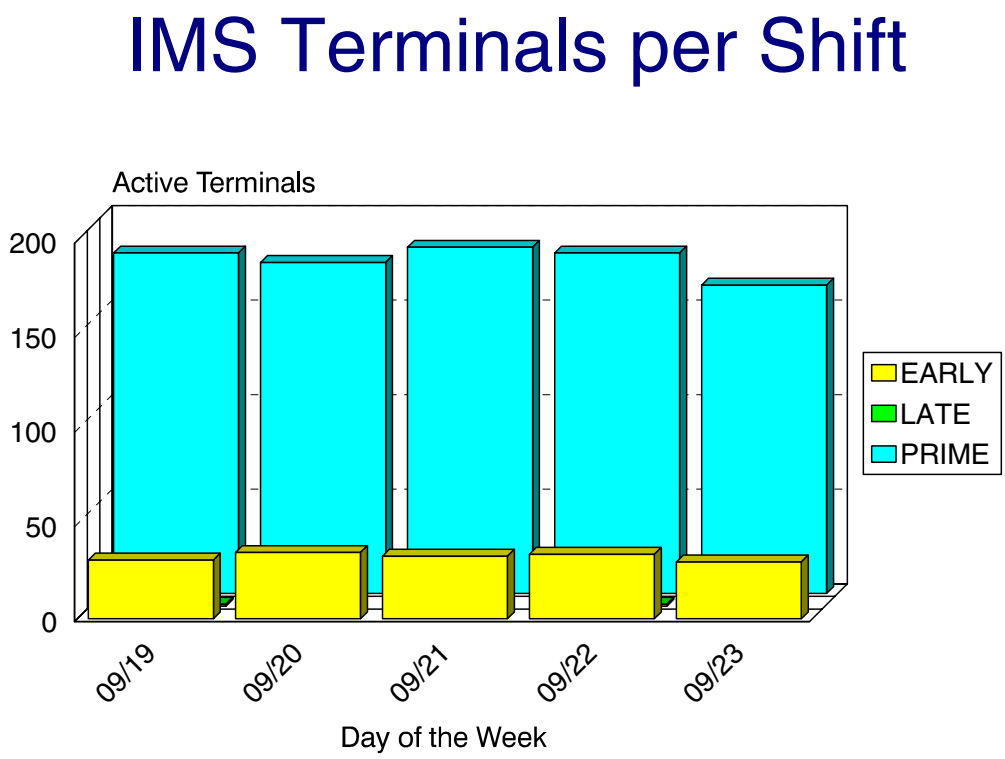
This bar graph shows the average number of Active IMS Terminals per shift (EARLY/LATE/PRIME) for the period.

Which Program Builds the Data Point Member

PGM=SSA1IMSG

What Does the Data Represent

The chart is in an overlapped bar form. Each bar shows the average number of active IMS terminals per shift per day.



Graph(298):CNTL(DIMSDGRF)

p9B: IMS Response:Volume by Org. (PARMLIB=IMSO,IMSR)

Graph Description

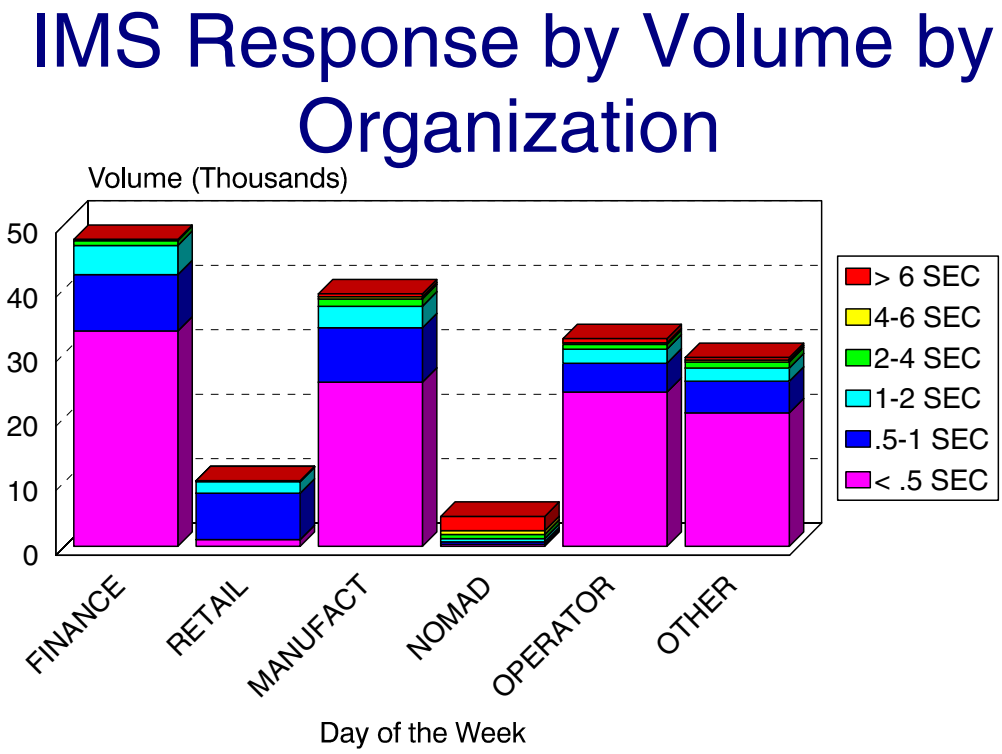
This bar graph divides the IMS transactions into up to six categories based on the IMSO member of PARMLIB and shows, for each category, the total volume of transactions and the response breakdown for each of the response thresholds defined in the IMSR member of PARMLIB.

Which Program Builds the Data Point Member

PGM=SSA1IMSE

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the response time by volume by organization.



Graph(29B):CNTL(DIMSDGRE)

p9C: IMS Volume by Organization. (PARMLIB=IMST)

Graph Description

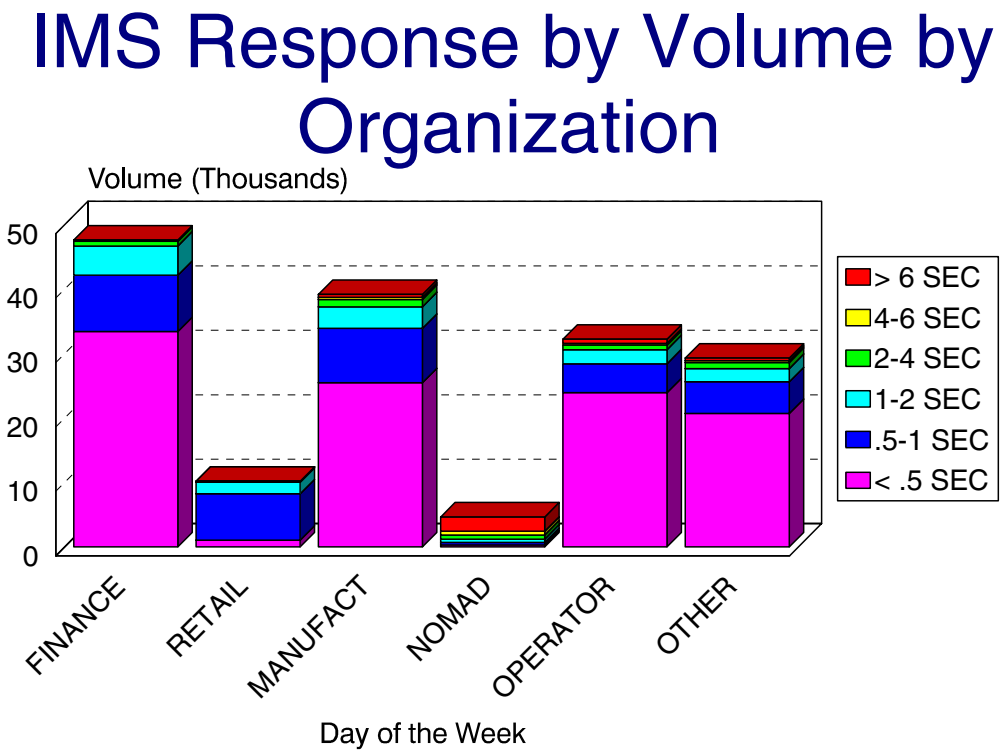
This bar graph divides the IMS transactions into up to six categories based on the IMST member of PARMLIB and shows, for each category, the total volume of transactions.

Which Program Builds the Data Point Member

PGM=SSA1IMSE

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the volume by organization.



Graph(29B):CNTL(DIMSDGRE)

p9D: IMS Volume by Response (PARMLIB=IMSR)

Graph Description

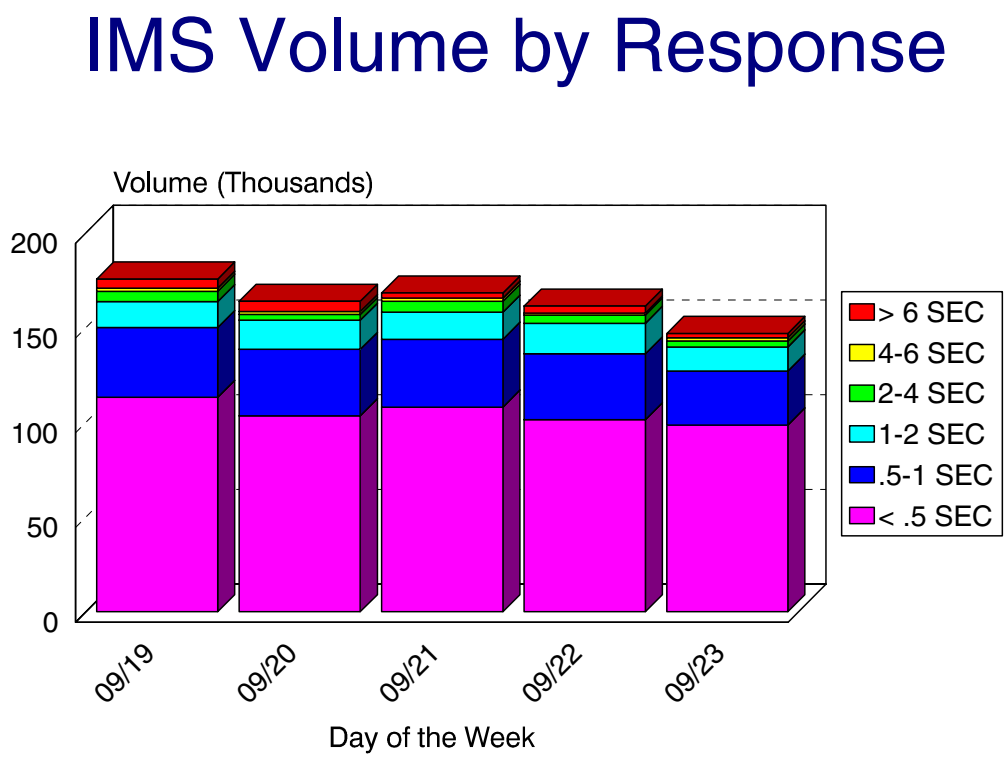
This bar graph shows the total volume of transactions and the response breakdown for each of the response thresholds defined in the IMSR member of PARMLIB.

Which Program Builds the Data Point Member

PGM=SSA1IMSE

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the response time by volume.



Graph(29D):CNTL(DIMSDGRE)

DB2 Subsystem Graphs

pB0: DB2 System Threads per Hour (PARMLIB=No PARMLIB Members)

Graph Description

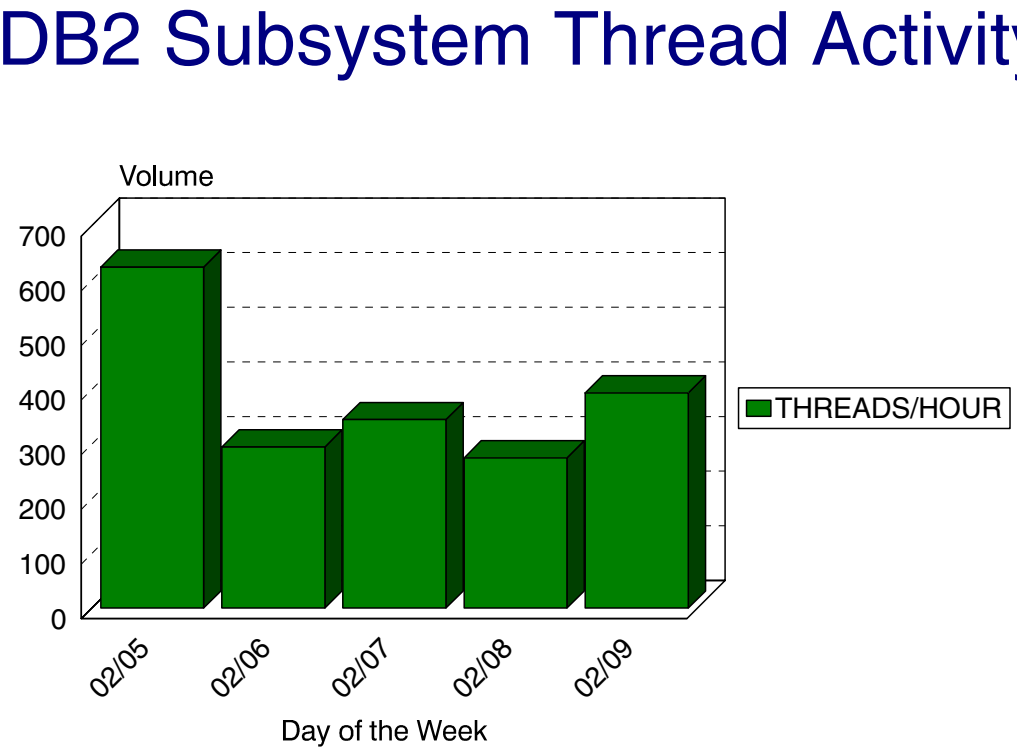
This bar graph shows, for a specific DB2 System, the average number of threads that were processed per hour.

Which Program Builds the Data Point Member

PGM=SSA1DB2G

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of threads processed per hour.



Graph(2B0):CNTL(DDB2DGRF)

pB1: DB2 System Commits per Hour (PARMLIB=No PARMLIB Members)

Graph Description

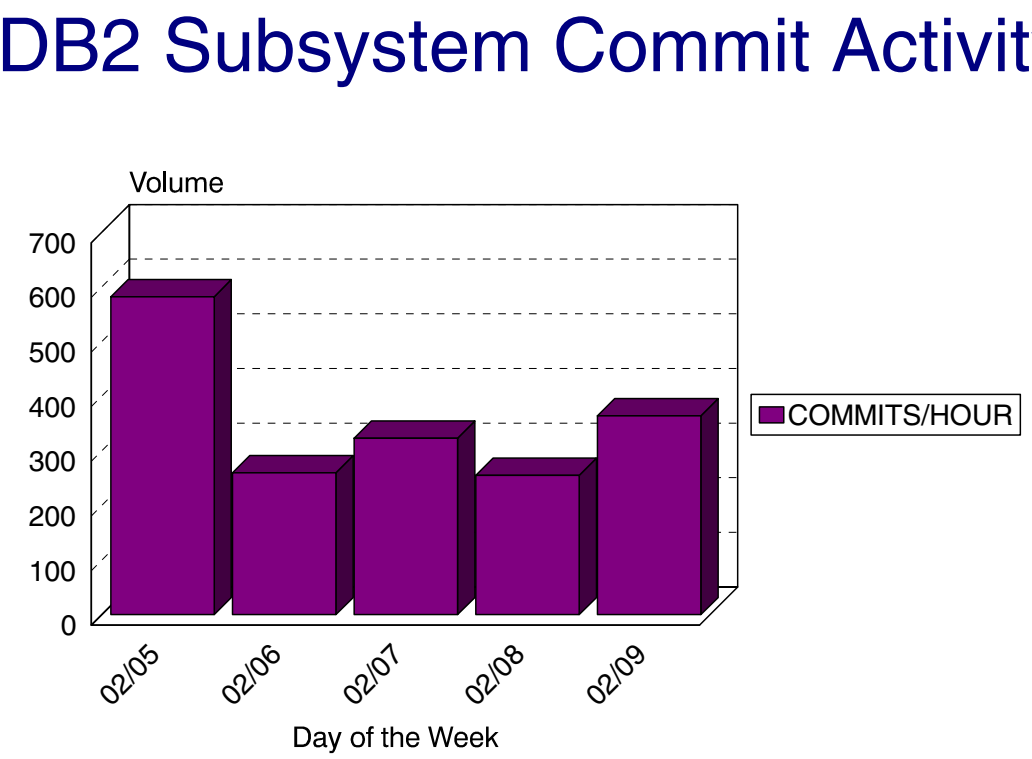
This bar graph shows, for a specific DB2 System, the average number of commits that were processed per hour.

Which Program Builds the Data Point Member

PGM=SSA1DB2G

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of commits processed per hour.



Graph(2B1):CNTL(DDB2DGRF)

pB2: DB2 System SQL Commands (PARMLIB=No PARMLIB Members)

Graph Description

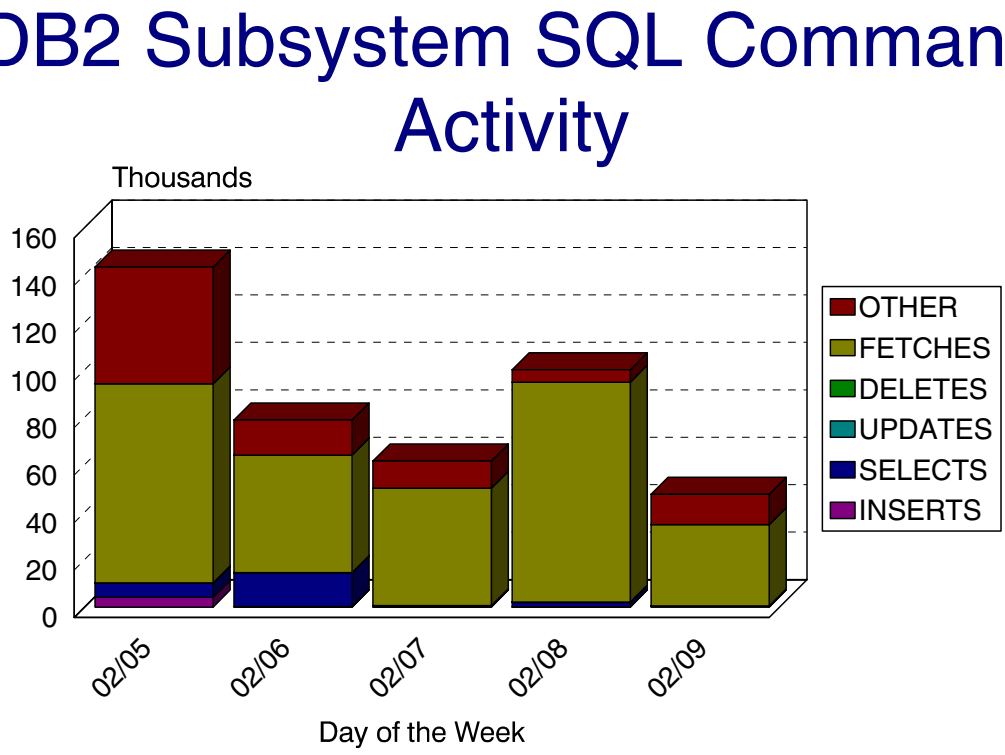
This bar graph shows, for a specific DB2 System, the total number of SQL commands that were processed during Prime shift, divided into INSERTS, SELECTS, UPDATES, DELETES, FETCHES and Other.

Which Program Builds the Data Point Member

PGM=SSA1DB2G

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the number of SQL commands processed, divided into the SQL command specified above.



Graph(2B2):CNTL(DDB2DGRF)

pB3: DB2 System % CPU Busy (PARMLIB=No PARMLIB Members)

Graph Description

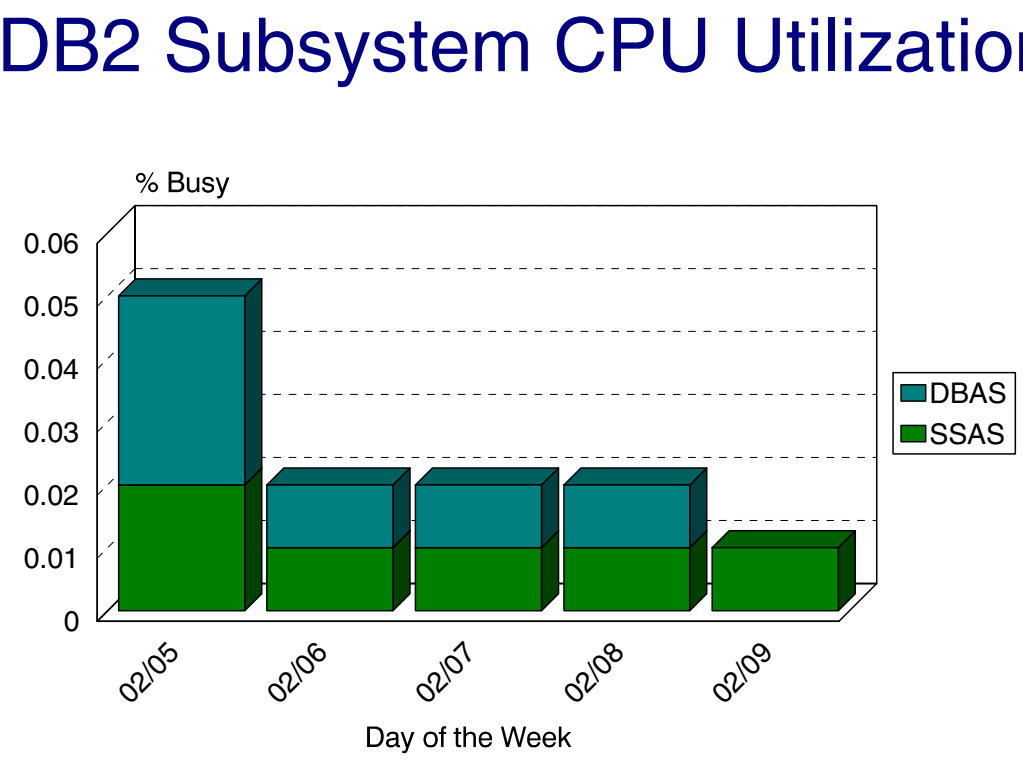
This bar graph shows, for a specific DB2 System, the CPU % busy for SSAS, DBAS and ILRM functions.

Which Program Builds the Data Point Member

PGM=SSA1DB2G

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the amount of CPU percentage busy for each of the functions specified above.



Graph(2B3):CNTL(DDB2DGRF)

pB4: DB2 System EXCPs per Second (PARMLIB=No PARMLIB Members)

Graph Description

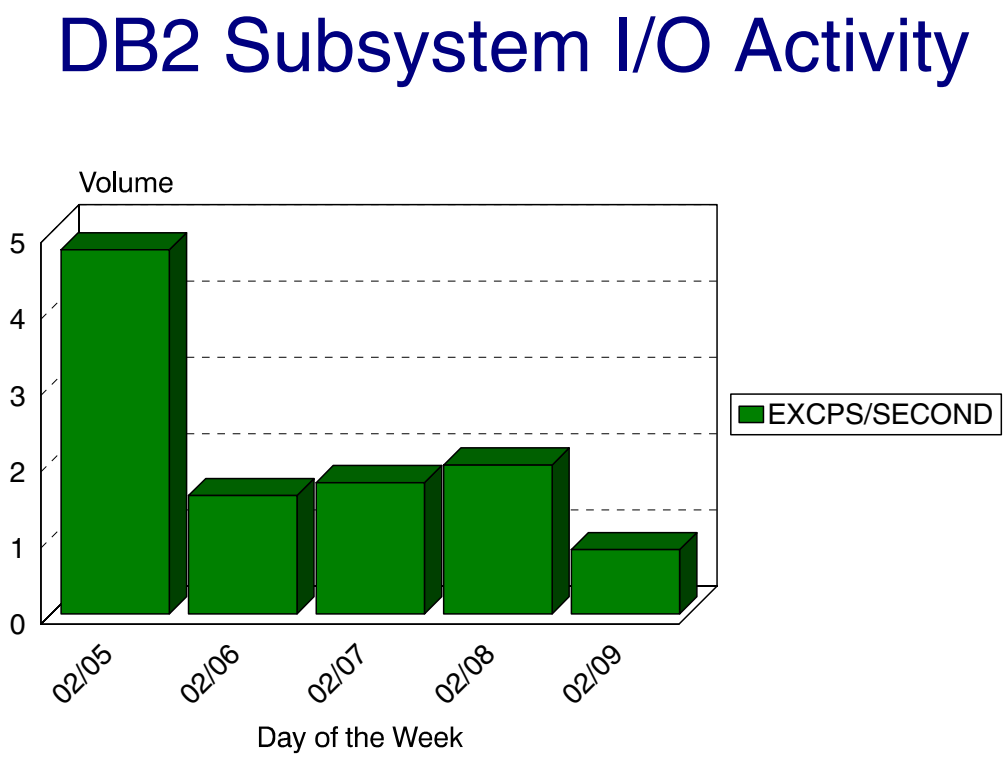
This bar graph shows, for a specific DB2 System, the average number of I/O operations that were processed per second.

Which Program Builds the Data Point Member

PGM=SSA1DB2G

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of I/O operations per second.



Graph(2B4):CNTL(DDB2DGRF)

pBA: DB2 Connect Threads per Hour (PARMLIB=No PARMLIB Members)

Graph Description

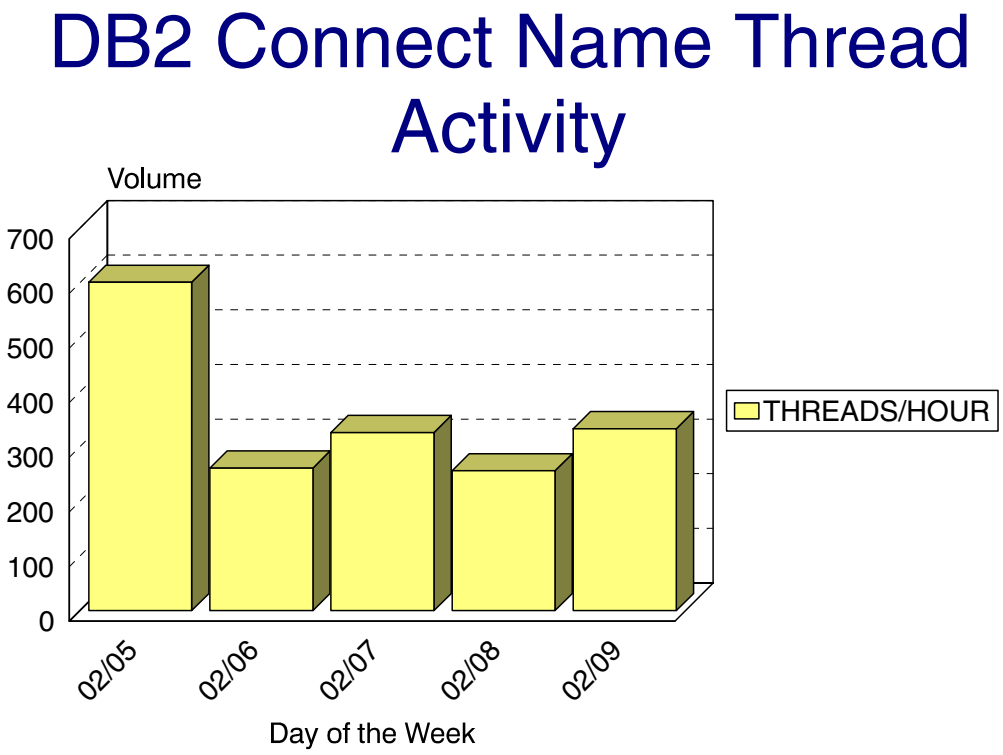
This bar graph shows, for a specific DB2 Connect Name, the average number of threads that were processed per hour.

Which Program Builds the Data Point Member

PGM=SSA1DB2H

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of threads processed per hour.



Graph(2BA):CNTL(DDB2DGRF)

pBB: DB2 Connect Commits per Hour (PARMLIB=No PARMLIB Members)

Graph Description

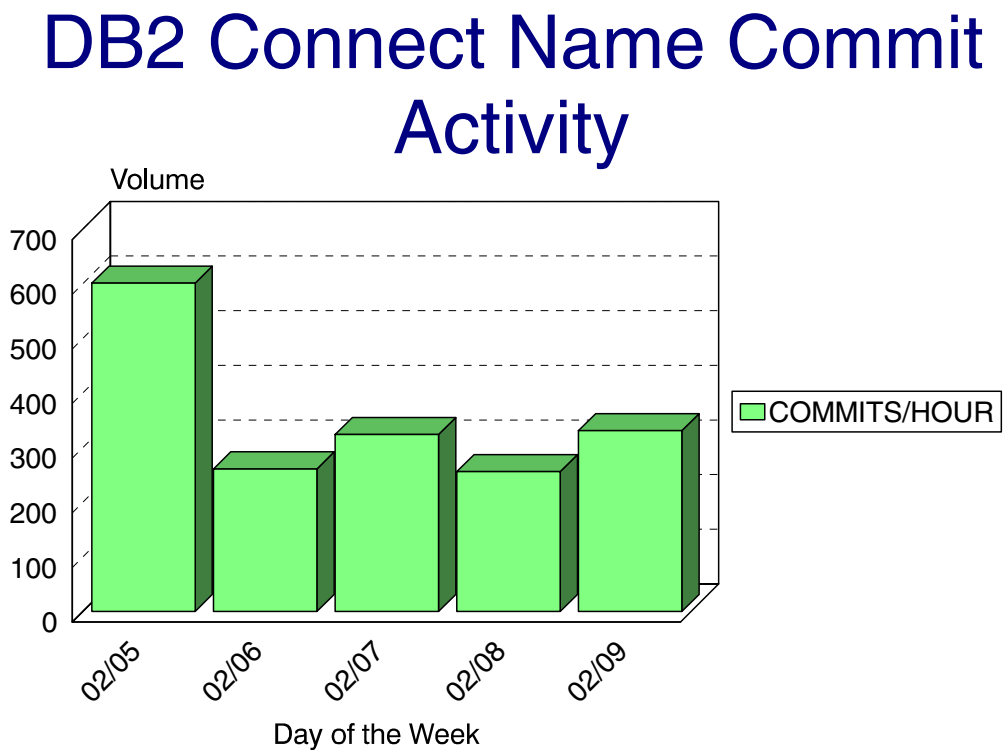
This bar graph shows, for a specific DB2 Connect Name, the average number of commits that were processed per hour.

Which Program Builds the Data Point Member

PGM=SSA1DB2H

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of commits processed per hour.



Graph(2BB):CNTL(DDB2DGRF)

pBC: DB2 Connect SQL Commands (PARMLIB=No PARMLIB Members)

Graph Description

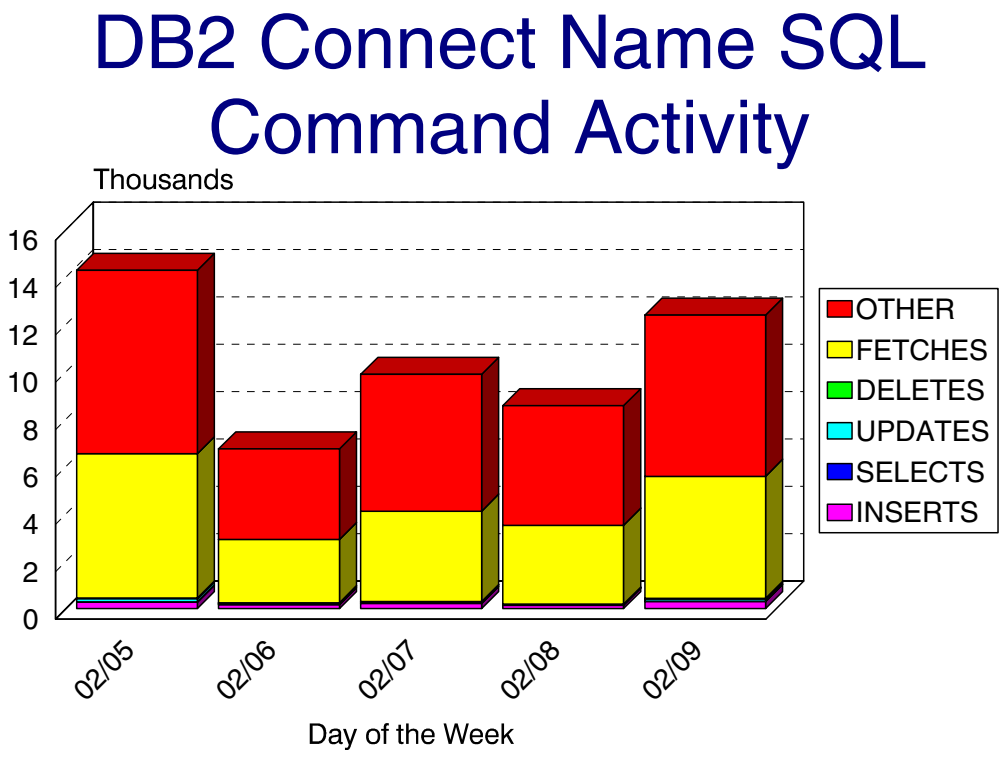
This bar graph shows, for a specific DB2 Connect Name, the total number of SQL commands that were processed during Prime shift, divided into INSERTS, SELECTS, UPDATES, DELETES, FETCHES and Other.

Which Program Builds the Data Point Member

PGM=SSA1DB2H

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the number of SQL commands processed, divided into the SQL command specified above.



Graph(2BC):CNTL(DDB2DGRF)

pBD: DB2 Connect Transit Time (PARMLIB=No PARMLIB Members)

Graph Description

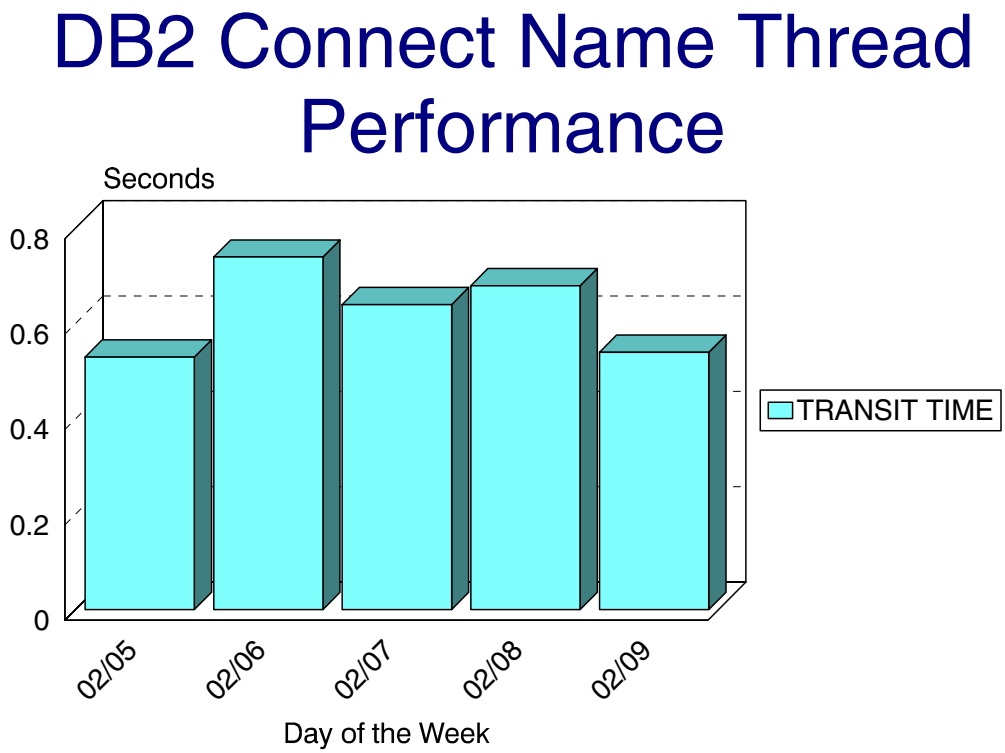
This bar graph shows, for a specific DB2 Connect Name, the average Thread Transit Time for the period.

Which Program Builds the Data Point Member

PGM=SSA1DB2H

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average thread transit time for the period.



Graph(2BD):CNTL(DDB2DGRF)

pBE: DB2 Connect % CPU Busy (PARMLIB=No PARMLIB Members)

Graph Description

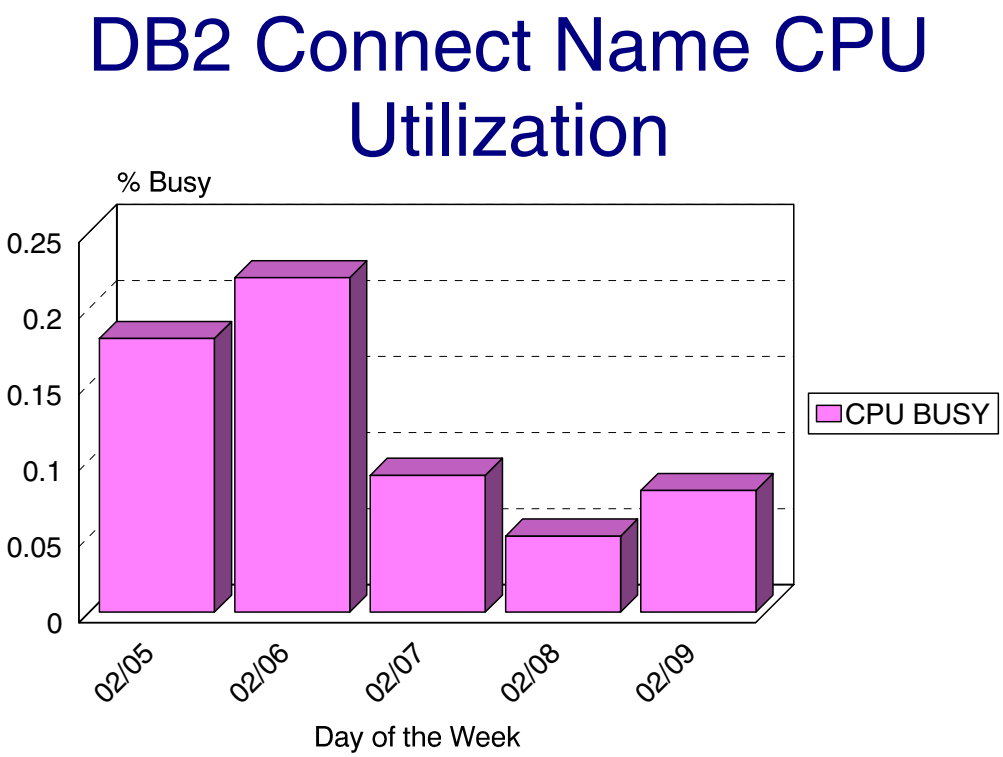
This bar graph shows, for a specific DB2 Connect Name, the CPU % busy for the period.

Which Program Builds the Data Point Member

PGM=SSA1DB2H

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the amount of CPU percentage busy for the period.



Graph(2BE):CNTL(DDB2DGRF)

Model 204 Subsystem Graphs

pM0: M204 Transaction Response (PARMLIB=No PARMLIB Members)

Graph Description

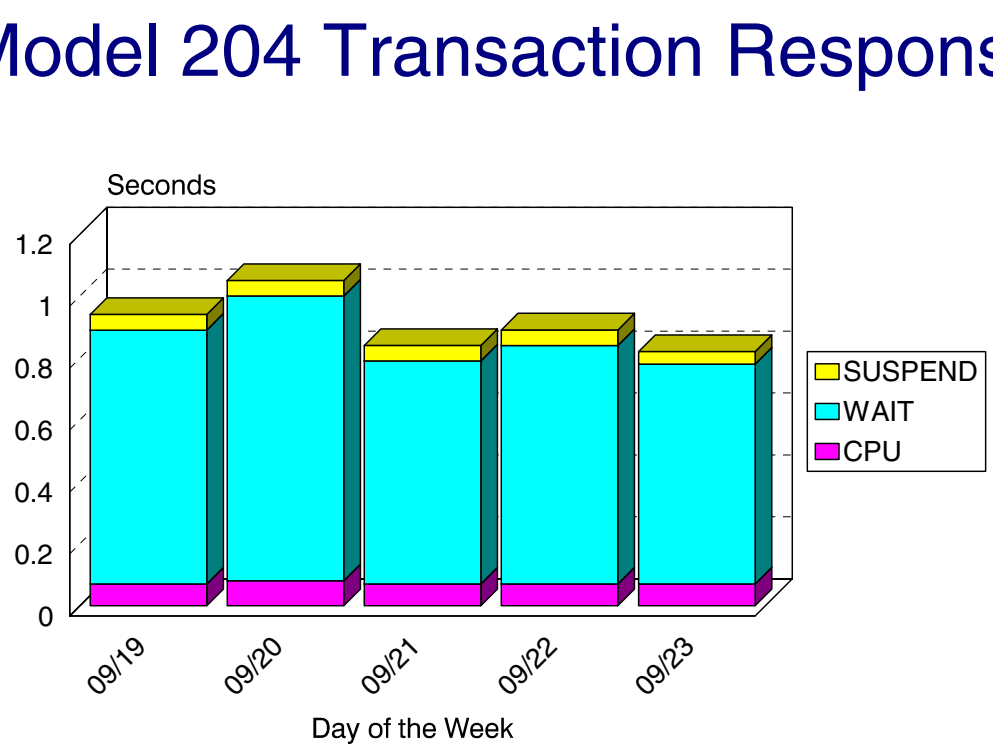
This bar graph shows average M204 Transaction response time, divided into CPU time, WAIT time and Suspend Time, for all transactions in the Region(s).

Which Program Builds the Data Point Member

PGM=SSA1M20G

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average Transaction Response time.



Graph(2M0):CNTL(D204DGRF)

pM1: M204 Transaction Volume (PARMLIB=No PARMLIB Members)

Graph Description

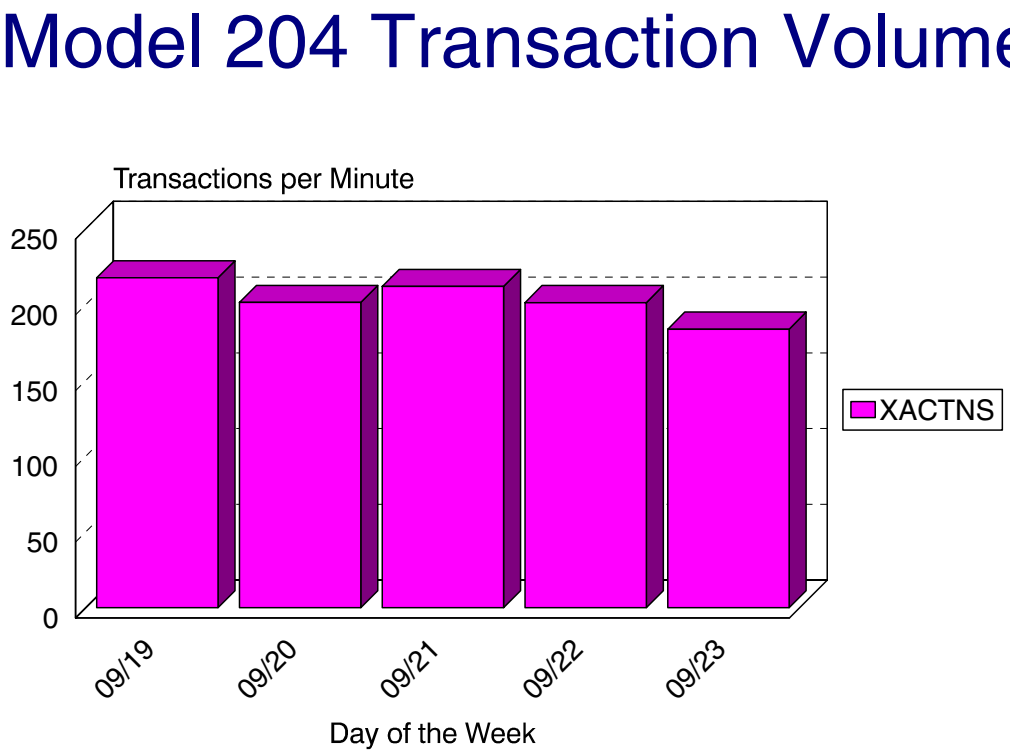
This bar graph shows the average number of M204 Transactions per minute during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1M20G

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of M204 transactions per minute.



Graph(2M1):CNTL(D204DGRF)

pM2: M204 % CPU Busy (PARMLIB=No PARMLIB Members)

Graph Description

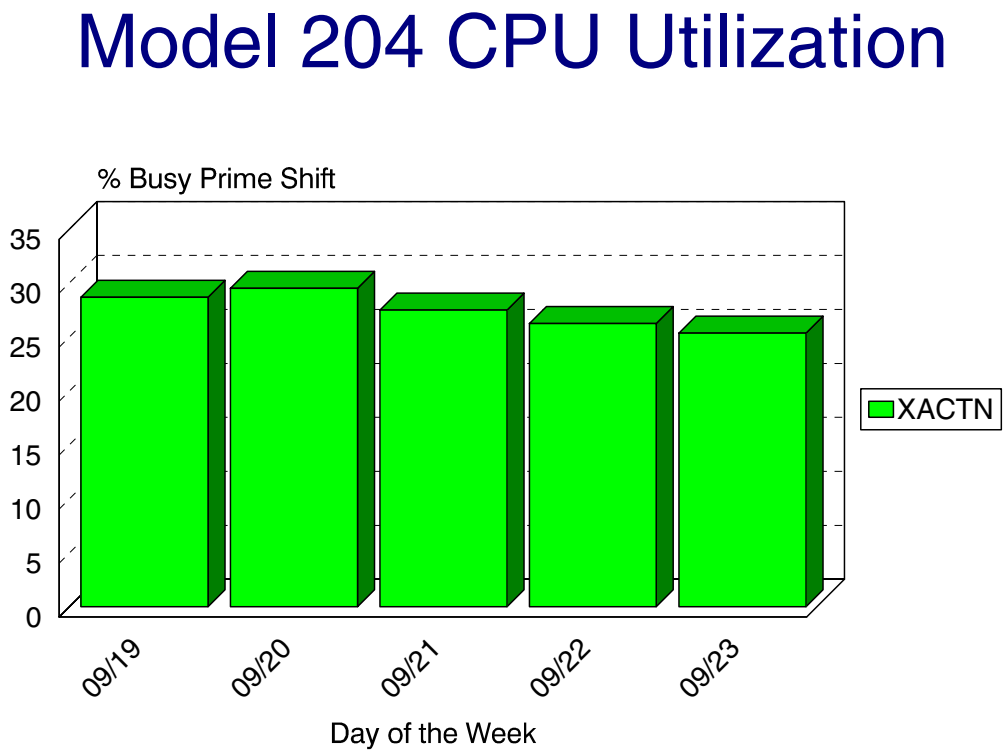
This bar graph shows the CPU % busy for this M204 region in terms of transaction time (XACTN) and M204 overhead (M204) during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1M20G

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average % busy for XACTN and M204.



Graph(2M2):CNTL(D204DGRF)

pM3: M204 EXCPs per Second (PARMLIB=No PARMLIB Members)

Graph Description

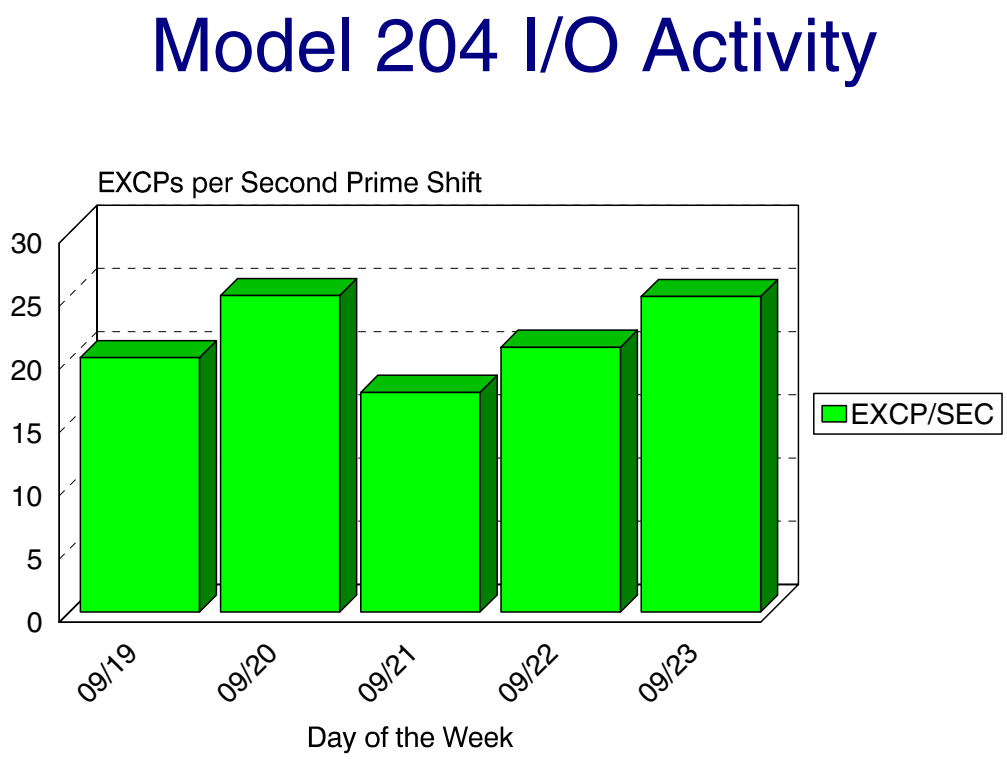
This bar graph shows the average number of I/O operations per second for this M204 region during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1M20G

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of I/O operations per second.



Graph(2M3):CNTL(D204DGRF)

pM4: M204 Terminals Active (PARMLIB=No PARMLIB Members)

Graph Description

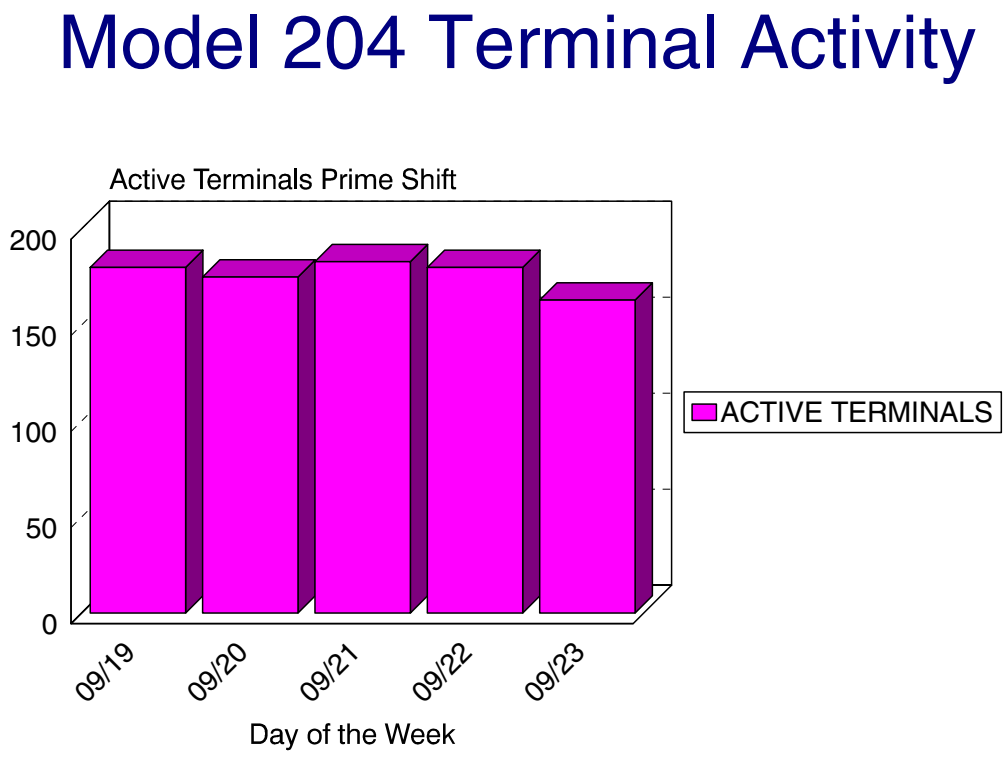
This bar graph shows the average number of M204 Terminals Active during Prime shift for the period. An active terminal is one that has actually executed one or more transactions during any given fifteen minute period.

Which Program Builds the Data Point Member

PGM=SSA1M20G

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of M204 terminals that were active.



Graph(2M4):CNTL(D204DGRF)

pM5: M204 Transactions per Terminal (No PARMLIB Members)

Graph Description

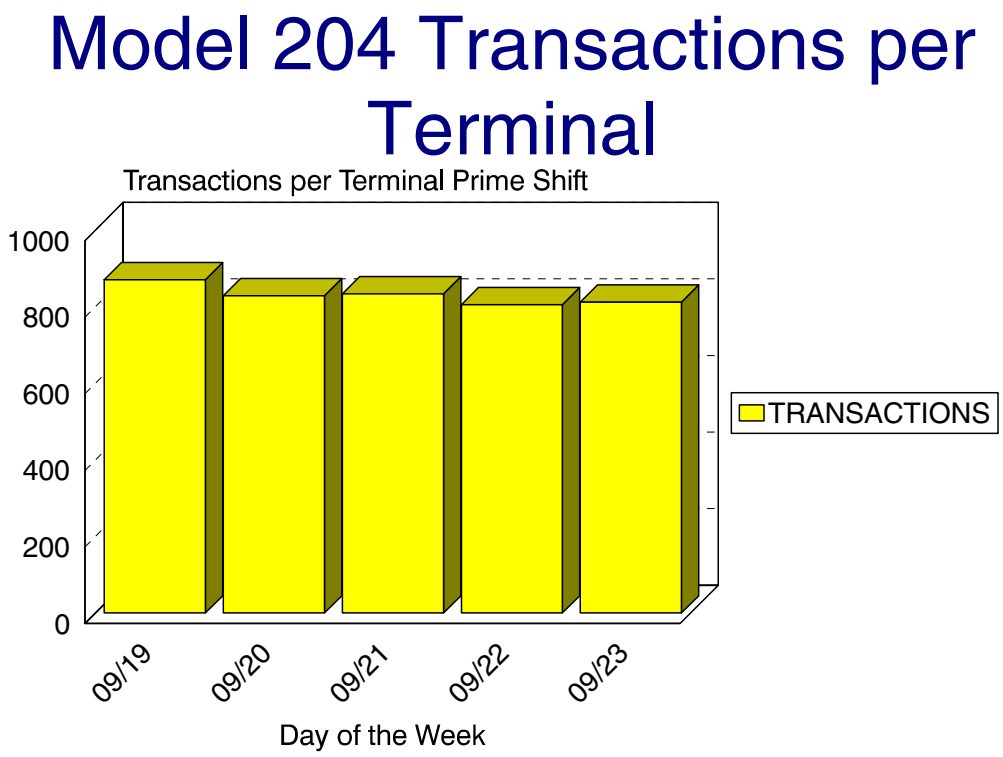
This bar graph shows the average number of M204 Transactions per active terminal during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1M20G

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of M204 transactions per active terminal.



Graph(2M5):CNTL(D204DGRF)

pM6: M204 Transaction Volume (PARMLIB=No PARMLIB Members)

Graph Description

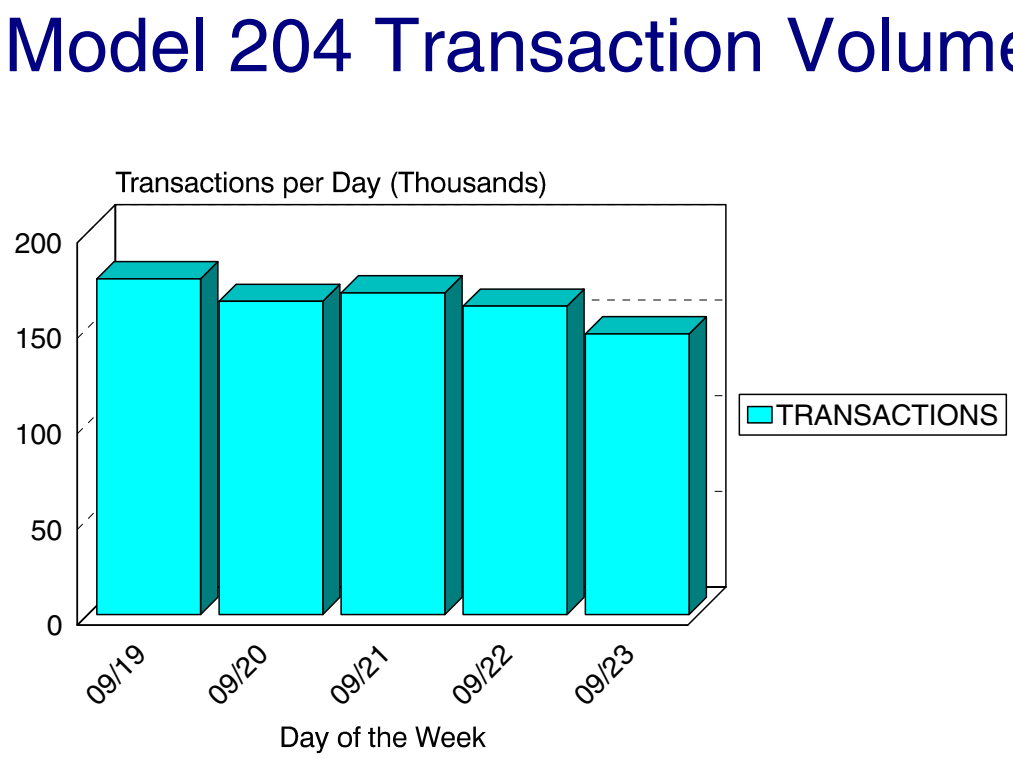
This bar graph shows the average daily number of M204 Transactions processed during the period.

Which Program Builds the Data Point Member

PGM=SSA1M20G

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of M204 transactions per day.



Graph(2M6):CNTL(D204DGRF)

pM7: M204 Transaction Volume (PARMLIB=No PARMLIB Members)

Graph Description

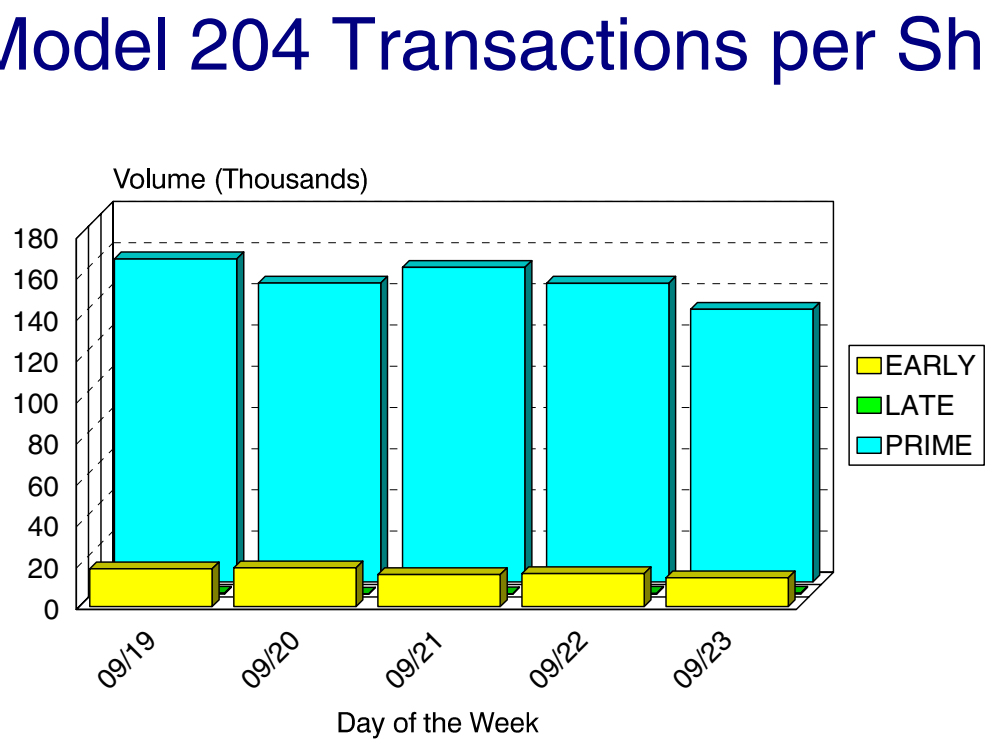
This bar graph shows the average number of M204 Transactions per shift (EARLY/LATE/PRIME) for the period.

Which Program Builds the Data Point Member

PGM=SSA1M20G

What Does the Data Represent

The chart is in an overlapped bar form. Each bar shows the number of M204 transactions per shift per day.



Graph(2M7):CNTL(D204DGRF)

pM8: M204 Terminal Activity (PARMLIB=No PARMLIB Members)

Graph Description

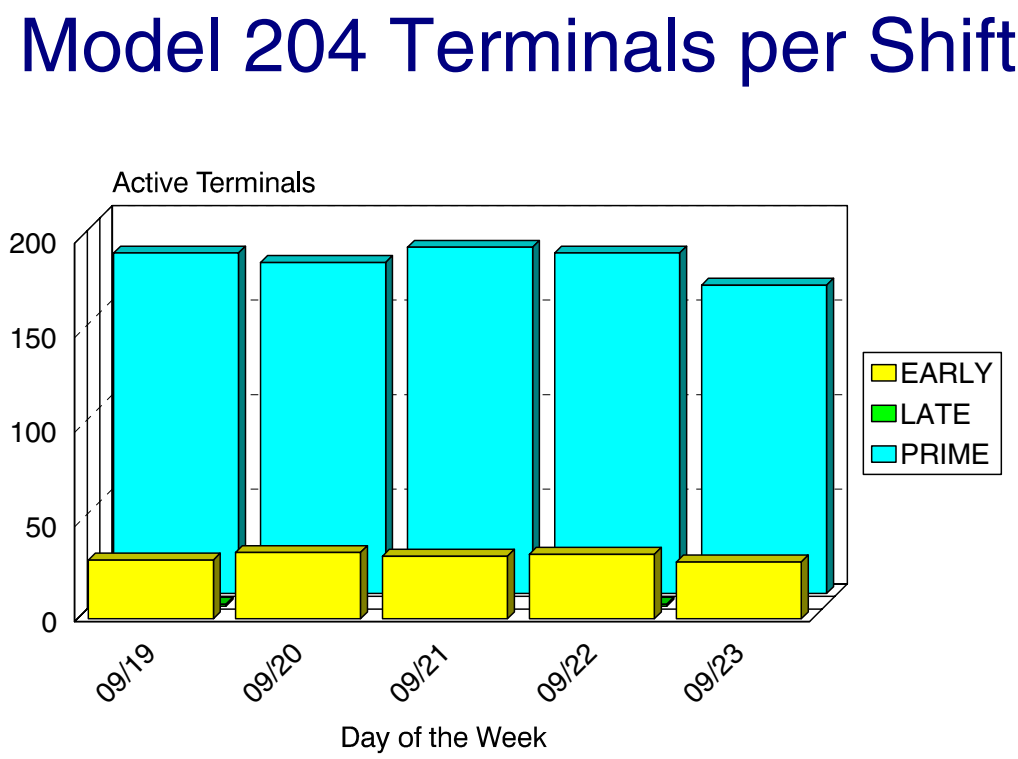
This bar graph shows the average number of Active M204 Terminals per shift (EARLY/LATE/PRIME) for the period.

Which Program Builds the Data Point Member

PGM=SSA1M20G

What Does the Data Represent

The chart is in an overlapped bar form. Each bar shows the average number of active M204 terminals per shift per day.



Graph(2M8):CNTL(D204DGRF)

pM9: M204 Terminal Response (PARMLIB=No PARMLIB Members)

Graph Description

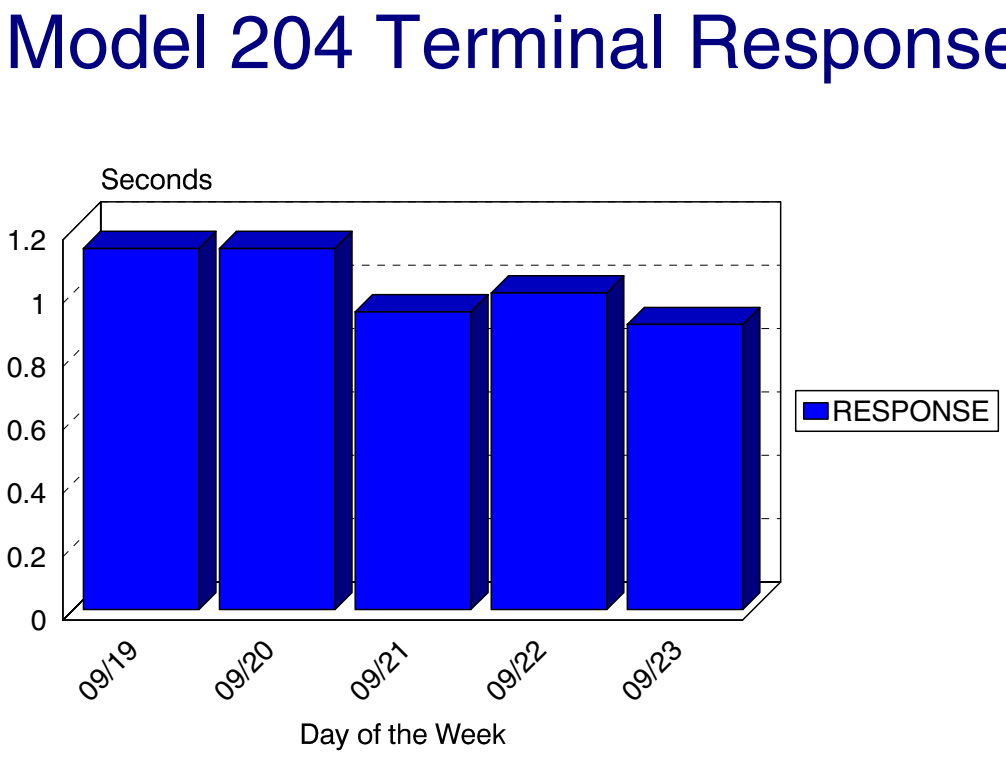
This bar graph shows average M204 Transaction response time, for all transactions directed to terminals (not printers or internal transactions), for all transactions in the Region(s).

Which Program Builds the Data Point Member

PGM=SSA1M20G

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average Terminal Response time.



Graph(2M9):CNTL(D204DGRF)

pMB: M204 Response:Volume by Org. (PARMLIB=204O,204R)

Graph Description

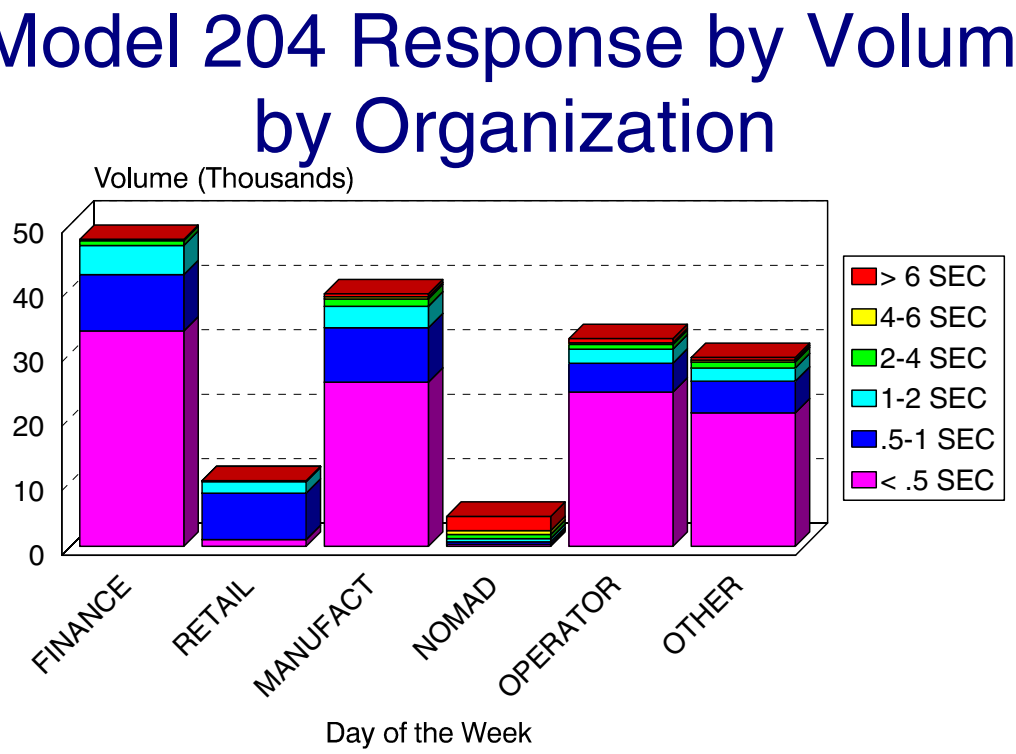
This bar graph divides the M204 transactions into up to six categories based on the 204O member of PARMLIB and shows, for each category, the total volume of transactions and the response breakdown for each of the response thresholds defined in the 204R member of PARMLIB.

Which Program Builds the Data Point Member

PGM=SSA1M20E

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the response time by volume by organization.



Graph(2MB):CNTL(D204DGRE)

pMC: M204 Volume by Organization (PARMLIB=204T)

Graph Description

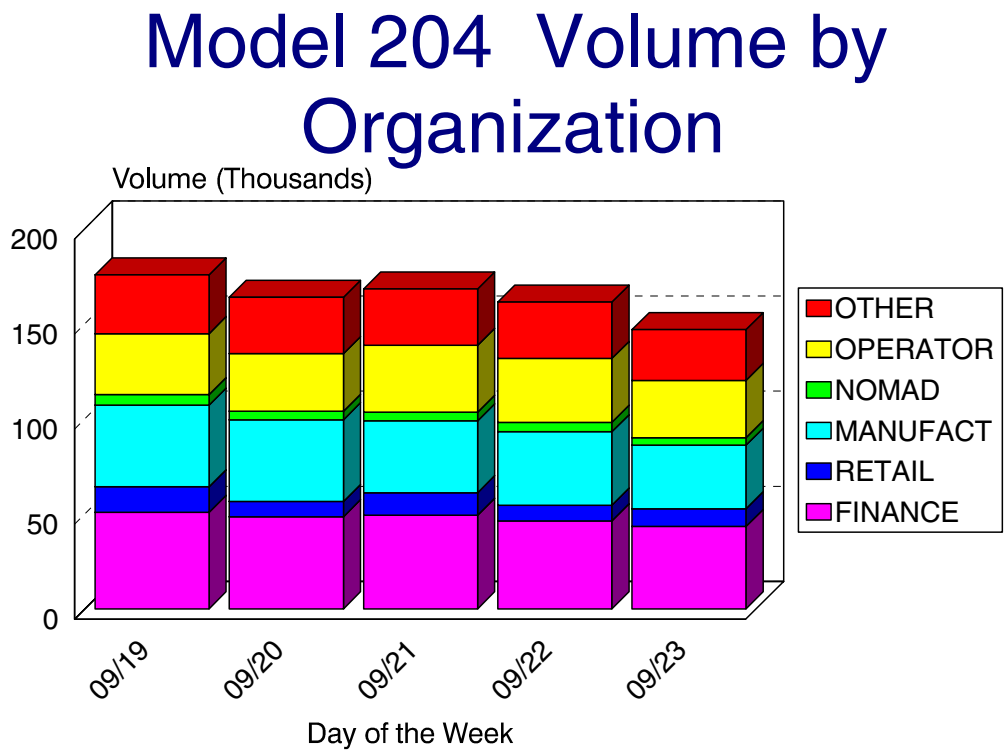
This bar graph divides the M204 transactions into up to six categories based on the 204T member of PARMLIB and shows, for each category, the total volume of transactions.

Which Program Builds the Data Point Member

PGM=SSA1M20E

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the volume by organization.



Graph(2MC):CNTL(D204DGRE)

pMD: M204 Volume by Response (PARMLIB=204R)

Graph Description

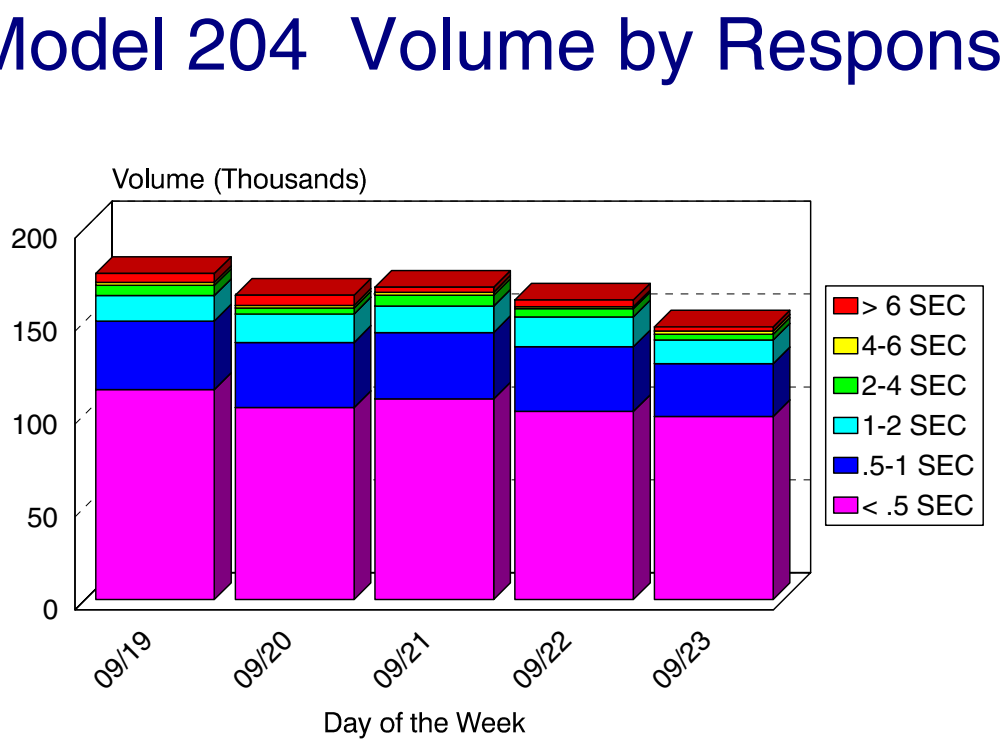
This bar graph shows the total volume of transactions and the response breakdown for each of the response thresholds defined in the 204R member of PARMLIB.

Which Program Builds the Data Point Member

PGM=SSA1M20E

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the response time by volume.



Graph(2MD):CNTL(D204DGRE)

Accounting Subsystem

Several graphs are available once the tables have been created. The HGDLIB members for these graphs are produced by the SSA1OPG1 program. The graphs are described below.

Batch Window Time Line Activity Profile

Graph Description

This graph shows, for each day in the specified time period, when the Batch Window opened and when it closed.

Which Program Builds the Data Point Member:

PGM=SSA1OPG1

What Does the Data Represent

This chart is in a horizontal stacked bar form. It shows, by day of the week, at which hour the Batch Window opened and at which hour the Batch Window closed.

Batch Window Duration

Graph Description:

This graph shows the actual elapsed time for each Batch Window, from the time the Opening JOB went into initiation up to the time when the Closing JOB terminated.

Which Program Builds the Data Point Member

PGM=SSA1OPG1

What Does the Data Represent

This chart is in a stacked bar form. Each stacked bar shows the elapsed time that the Batch Window was open until the Batch Window was closed.

Batch Window Resource Usage

Graph Description

This graph shows, for all Jobs in the Batch Window, the total amount of CPU time and the total number of DASD I/O operations that were performed.

Which Program Builds the Data Point Member

SSA1OPG1

What Does the Data Represent

This chart is in a mixed area/line form. The area portion of the graph shows, by day of the week, the total number of CPU hours and the line portion of the graph represents the total number of DASD I/O operations performed.

Batch Window JOB Overlap

Graph Description

This graph shows, for each Batch Window in the period, the average multi-programming factor (Jobs executing concurrently) for this window. Multi-programming factor in this case refers only to the Jobs belonging to this Batch Window as defined in the `&SID.BWnn` member of the CIMS Capacity Planner PARMLIB.

Which Program Builds the Data Point Member

PGM=SSA1OPG1

What Does the Data Represent

This is a line chart. The line represents the average number of JOBs executing concurrently within the specified Batch Window.

Batch Window Maximum Tape Drives Allocated Concurrently

Graph Description

This graph shows, for each Batch Window, the maximum number of tape drives that were owned concurrently by the Jobs included in this Batch Window.

Which Program Builds the Data Point Member

PGM=SSA1OPG1

What Does the Data Represent

This chart is in a stacked bar form. Each bar shows the maximum number of tape drives that were owned concurrently by the Jobs included in the specified Batch Window.

Batch Window Tape Drive Utilization Profile

Graph Description

This graph shows, for each time the Batch Window was active, the cumulative time during which a tape drive was allocated to a Job included in this Window. It further breaks that elapsed time down into three categories: Early Idle Time (from task initiation to data set open), Late Idle Time (from the last data set close up to task termination) and Active Time.

Which Program Builds the Data Point Member

PGM=SSA1OPG1

What Does the Data Represent

This chart is in a stacked bar form. Each bar shows, for each time the Batch Window was active, the cumulative time during which a tape drive was allocated to a Job included in the specified window.

Network Subsystem Graphs

pN0: VTAM Transaction Response (PARMLIB=No PARMLIB Members)

Graph Description

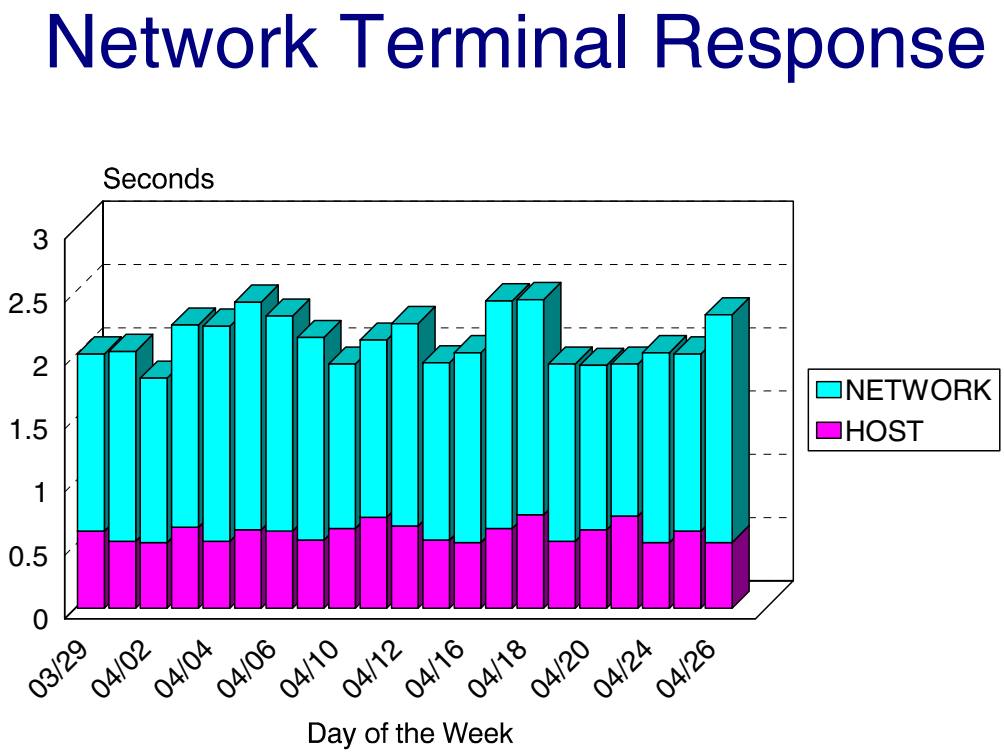
This bar graph shows average Terminal transaction response time, divided into CPU time and HOST time, for all transactions in the Region(s).

Which Program Builds the Data Point Member

PGM=SSA1NETG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average Transaction Response time.



Graph(2N0):CNTL(DNETDGRF)

pN1: VTAM Transaction Volume (PARMLIB=No PARMLIB Members)

Graph Description

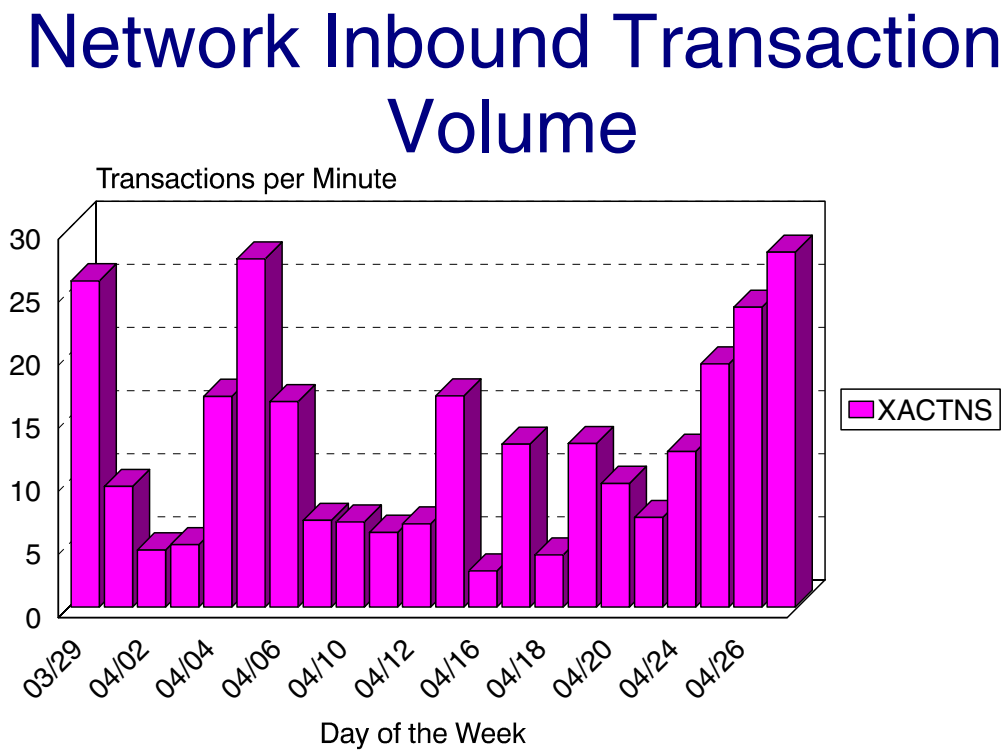
This bar graph shows the average number of incoming VTAM Transactions per minute during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1NETG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of incoming VTAM transactions per minute.



Graph(2N1):CNTL(DNETDGRF)

pN2: VTAM Messages per Minute (PARMLIB=No PARMLIB Members)

Graph Description

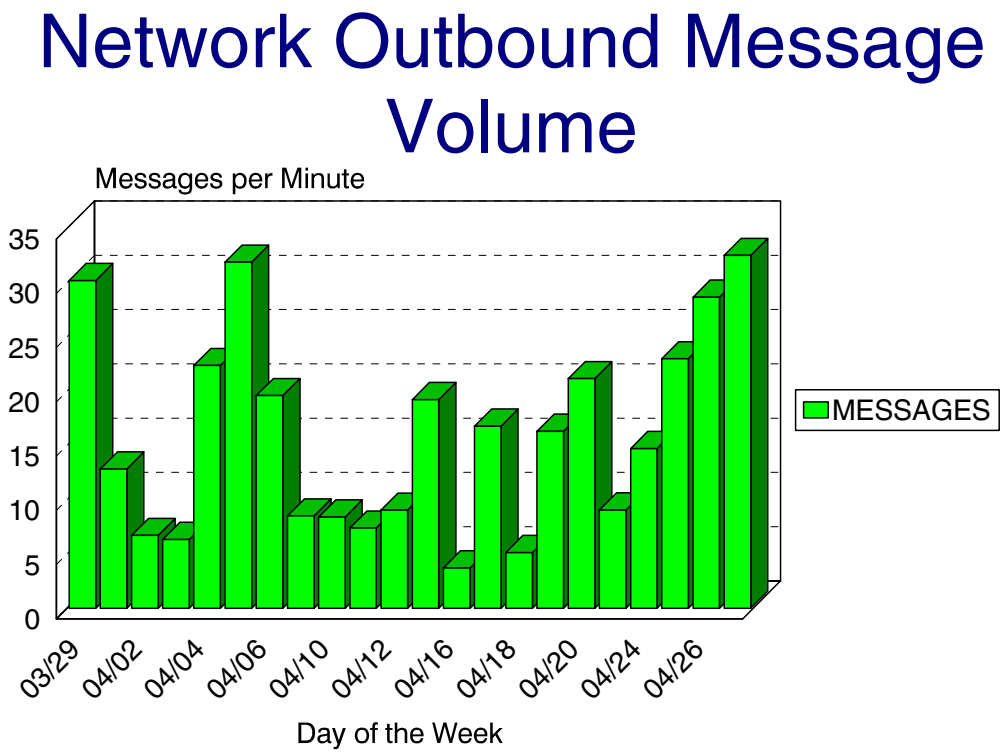
This bar graph shows the number of outgoing messages per minute for this VTAM region during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1NETG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the number of outgoing messages per minute.



Graph(2N2):CNTL(DNETDGRF)

pN3: VTAM Inbound Traffic (PARMLIB=No PARMLIB Members)

Graph Description

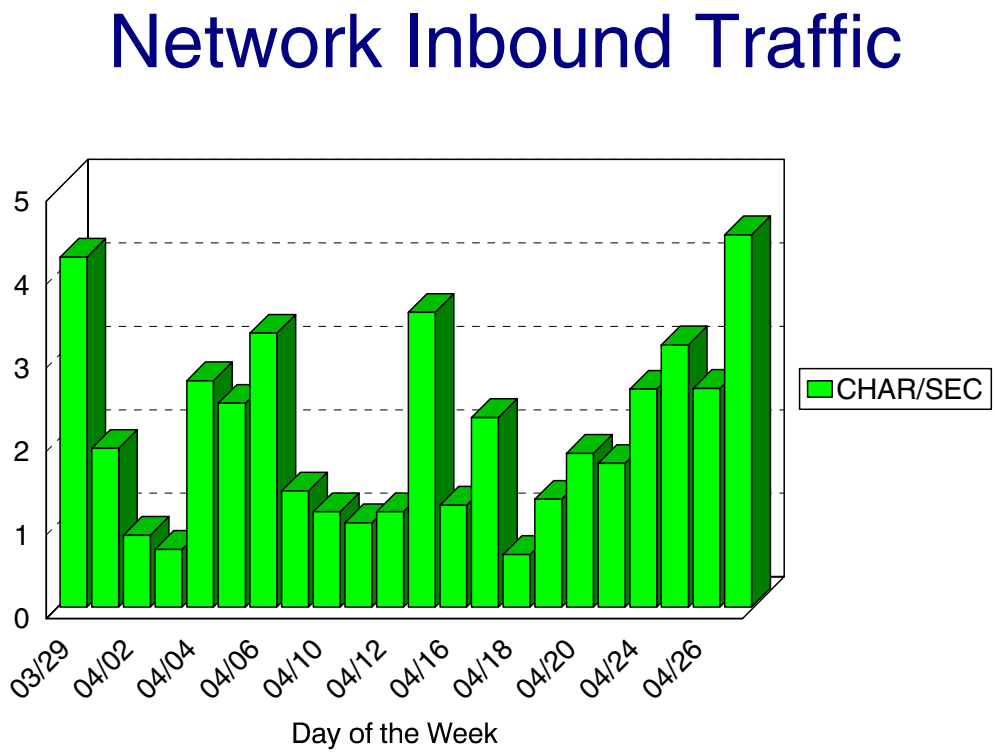
This bar graph shows the average number of characters per second for inbound transactions for this VTAM region during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1NETG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of characters per second for inbound transactions.



Graph(2N3):CNTL(DNETDGRF)

pN4: VTAM Outbound Traffic (PARMLIB=No PARMLIB Members)

Graph Description

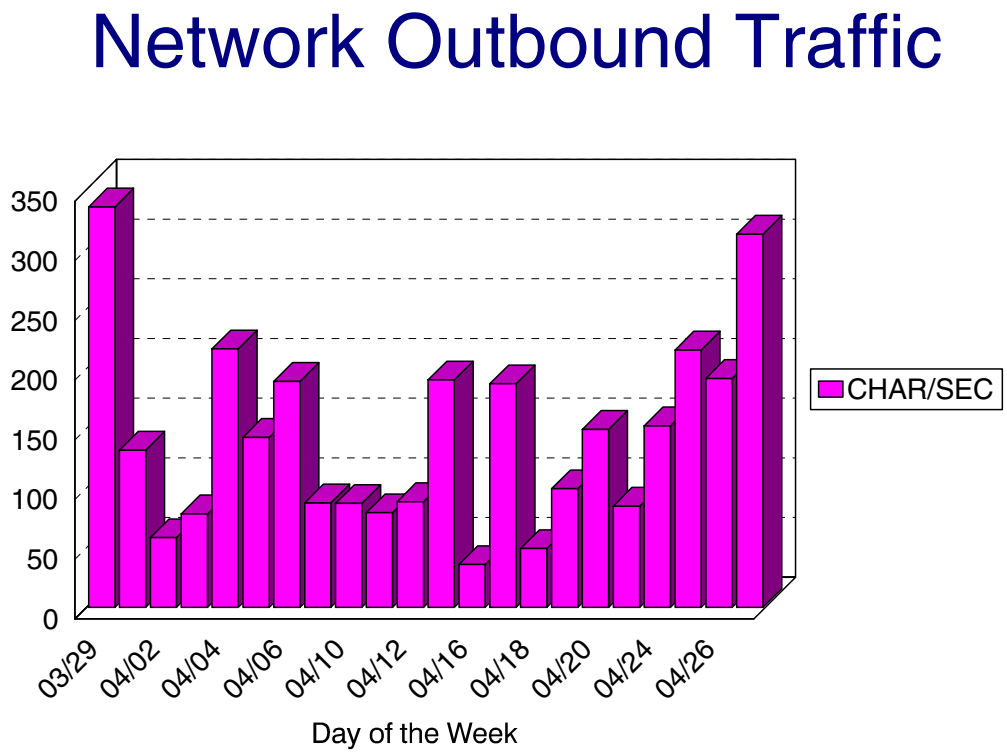
This bar graph shows the average number of characters per second for outbound messages for this VTAM region during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1NETG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of characters per second for outbound messages.



Graph(2N4):CNTL(DNETDGRF)

pN5: VTAM Terminals Active (PARMLIB=No PARMLIB Members)

Graph Description

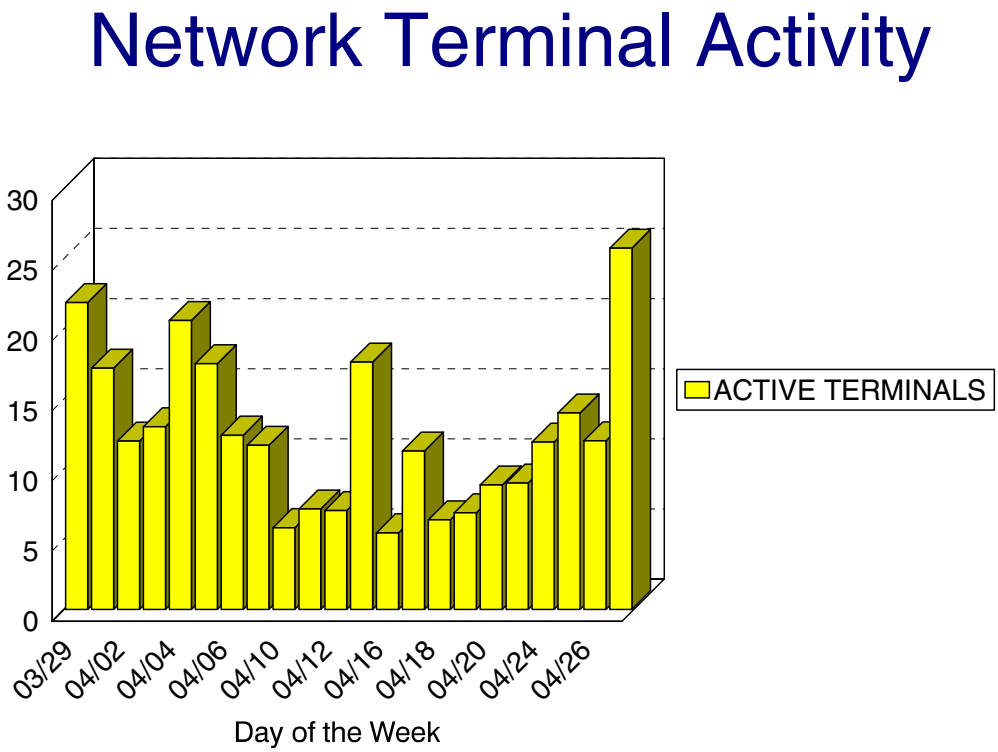
This bar graph shows the average number of VTAM Terminals Active during Prime shift for the period. An active terminal is one that has actually executed one or more transactions during any given fifteen minute period.

Which Program Builds the Data Point Member

PGM=SSA1NETG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of VTAM terminals that were active.



Graph(2N5):CNTL(DNETDGRF)

pN6: VTAM Transactions per Terminal (No PARMLIB Members)

Graph Description

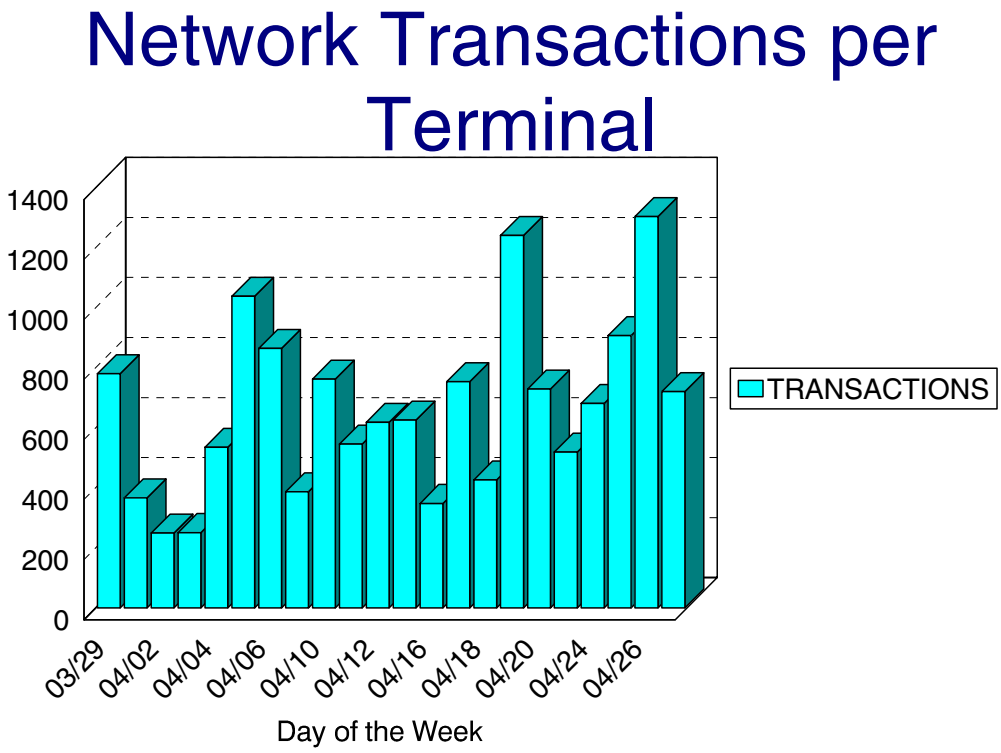
This bar graph shows the average number of VTAM Transactions per active terminal during Prime shift for the period.

Which Program Builds the Data Point Member

PGM=SSA1NETG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of VTAM transactions per active terminal.



Graph(2N6):CNTL(DNETDGRF)

pN7: VTAM Transaction Volume (PARMLIB=No PARMLIB Members)

Graph Description

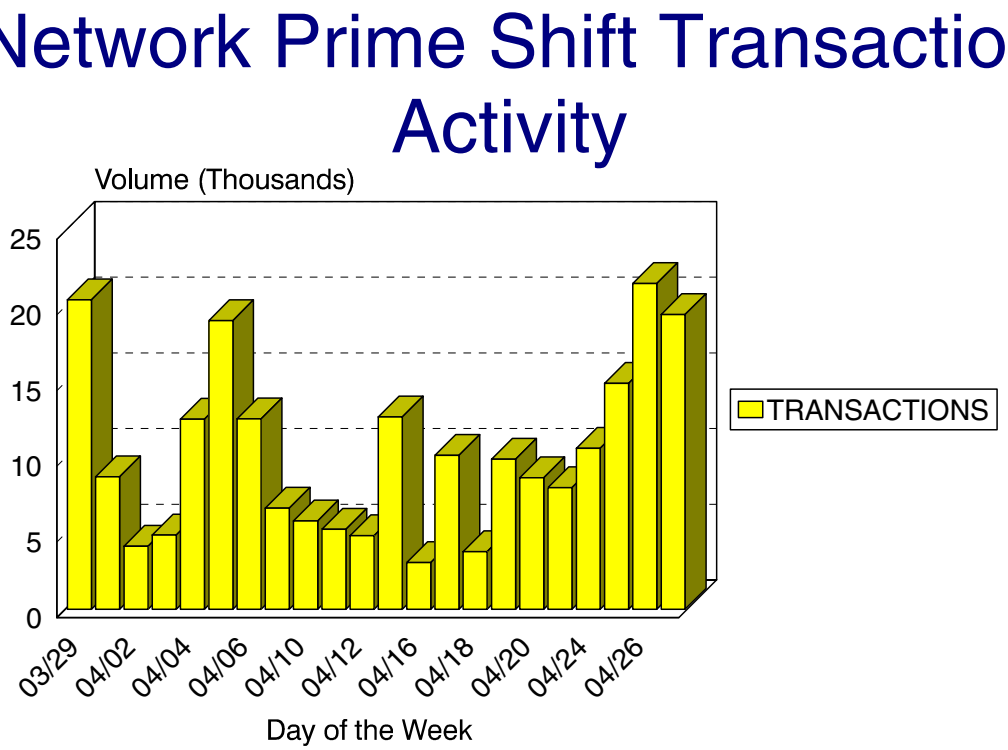
This bar graph shows the average daily number of VTAM Transactions processed during the period.

Which Program Builds the Data Point Member

PGM=SSA1NETG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average number of VTAM transactions per day.



Graph(2N7):CNTL(DNETDGRF)

pN8: VTAM Transaction Volume (PARMLIB=No PARMLIB Members)

Graph Description

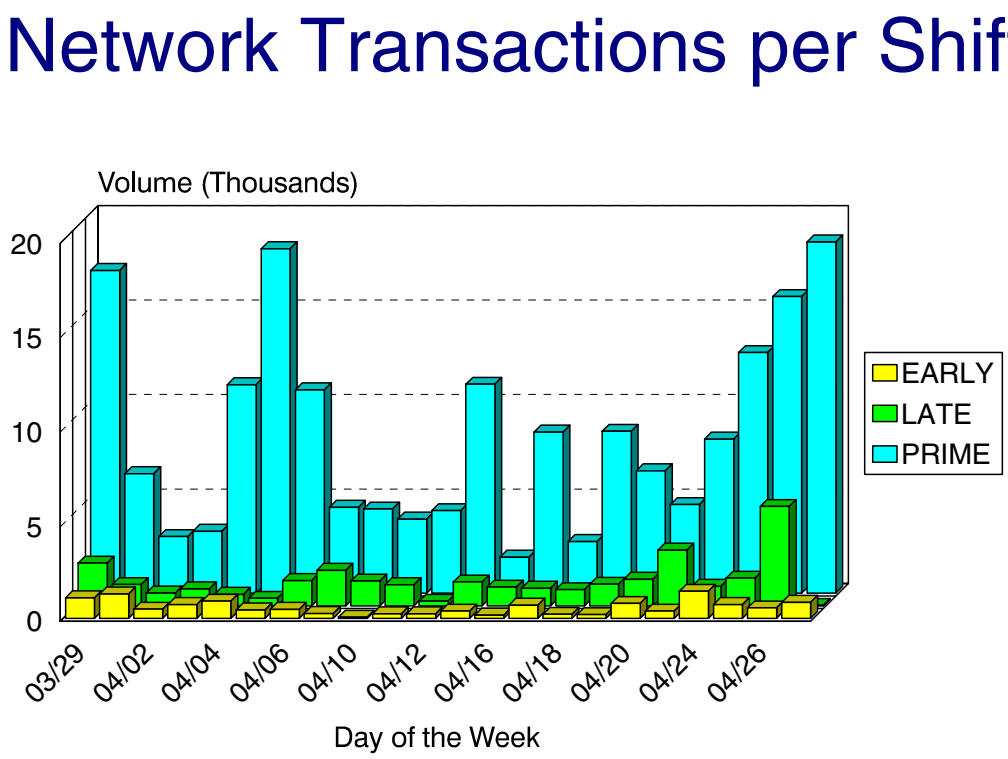
This bar graph shows the average number of VTAM Transactions per shift (EARLY/LATE/PRIME) for the period.

Which Program Builds the Data Point Member

PGM=SSA1NETG

What Does the Data Represent

The chart is in an overlapped bar form. Each bar shows the number of VTAM transactions per shift per day.



Graph(2N8):CNTL(DNETDGRF)

pN9: VTAM Terminal Activity (PARMLIB=No PARMLIB Members)

Graph Description

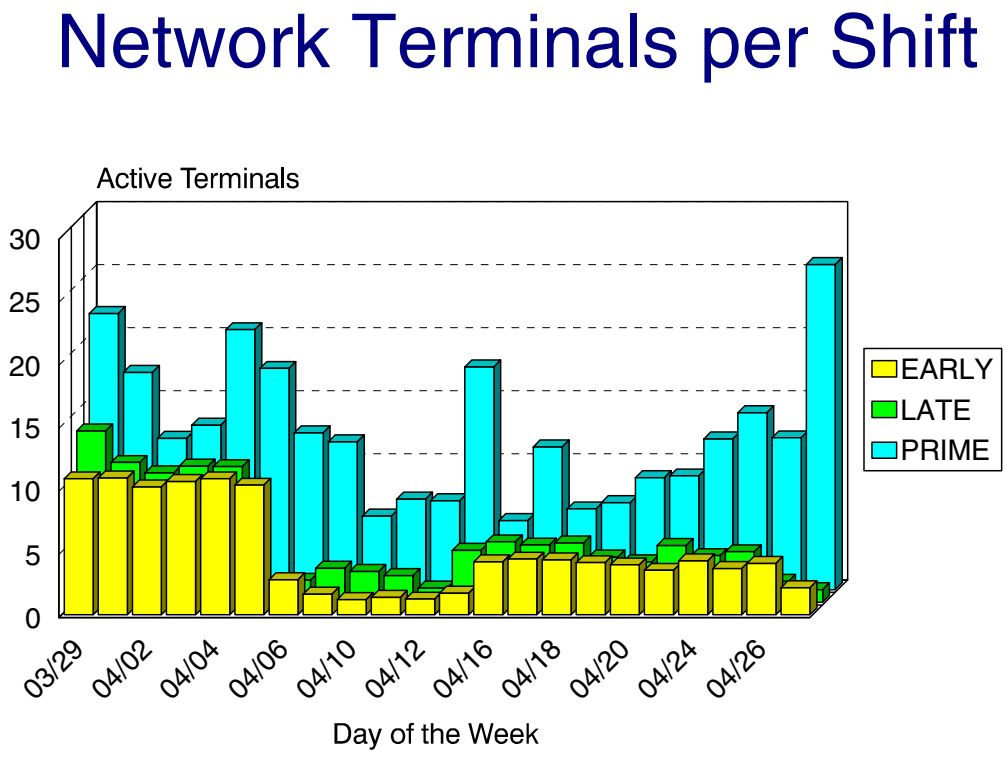
This bar graph shows the average number of Active VTAM Terminals per shift (EARLY/LATE/PRIME) for the period.

Which Program Builds the Data Point Member

PGM=SSA1NETG

What Does the Data Represent

The chart is in an overlapped bar form. Each bar shows the average number of active VTAM terminals per shift per day.



Graph(2N9):CNTL(DNETDGRF)

pNA: VTAM Traffic:Transactions (PARMLIB=No PARMLIB Members)

Graph Description

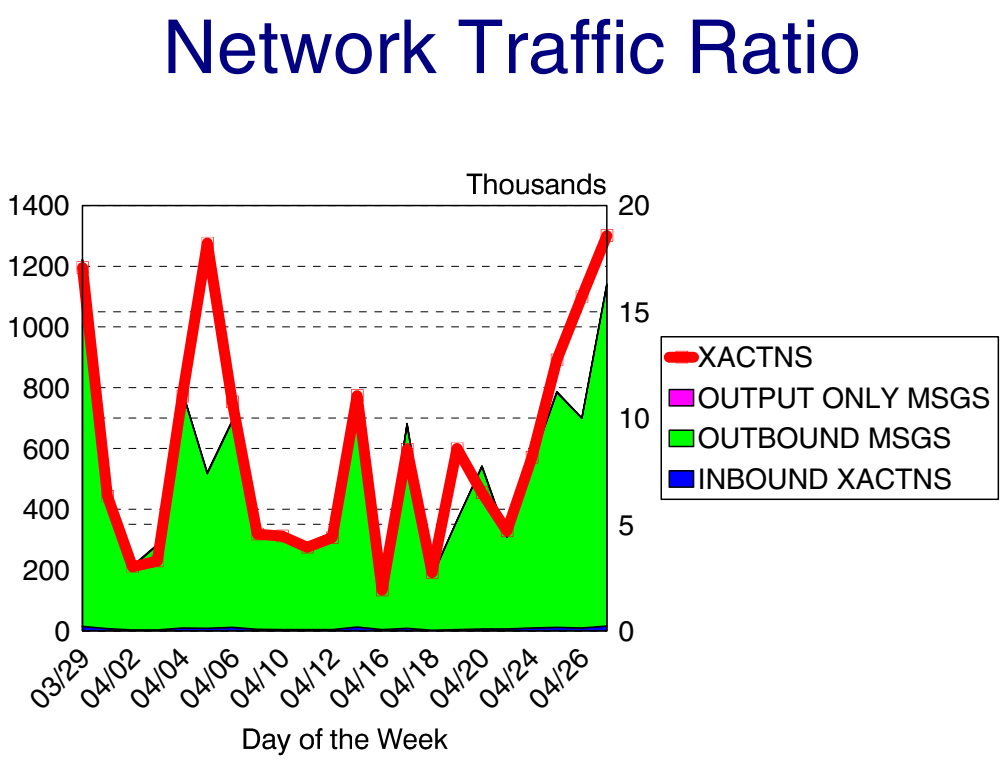
This bar graph shows the number of Inbound Characters per second, the number of outbound characters per second and the number of retransmitted character per second, plotted against the total number of VTAM transactions for the VTAM region during Prime Shift for the entire period.

Which Program Builds the Data Point Member

PGM=SSA1NETG

What Does the Data Represent

The chart is a mixed area:line chart. Each category in the area chart shows the number of Inbound characters per second, the number of outbound characters per second and the number of retransmitted characters per second. The line portion of the chart shows the number of transactions.



Graph(2NA):CNTL(DNETDGRF)

pNE: VTAM Volume by Date by Org. (PARMLIB=NETL)

Graph Description

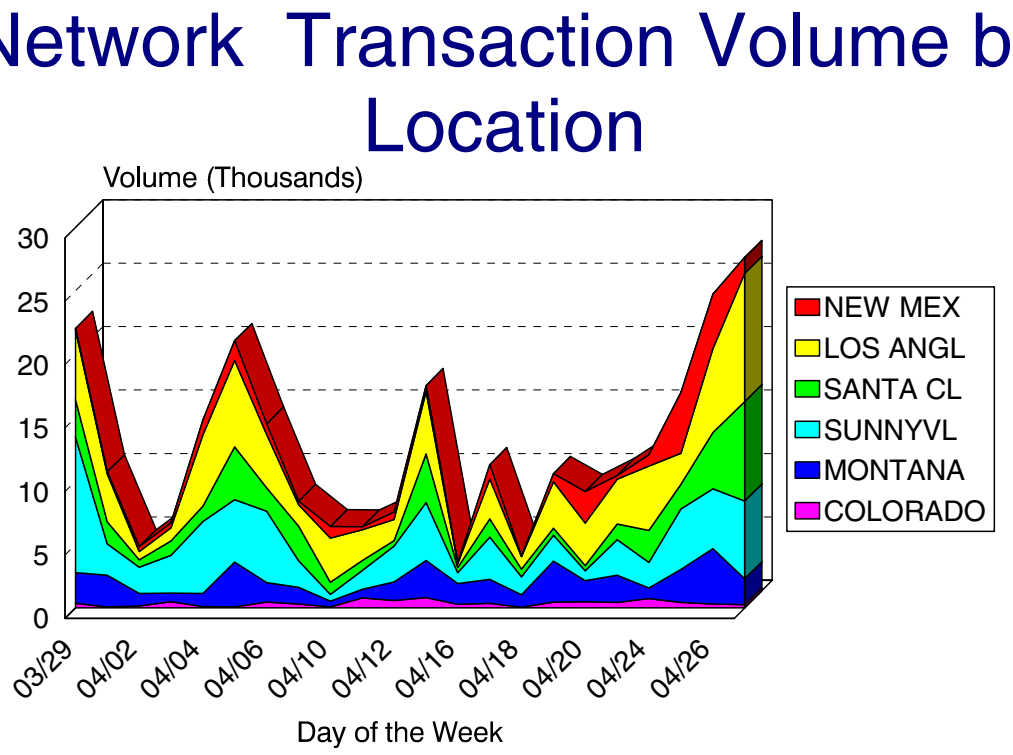
This bar graph divides the VTAM transactions into up to six categories based on the NETL member of PARMLIB and shows, for each category, the total volume of transactions by date.

Which Program Builds the Data Point Member

PGM=SSA1NETE

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the volume by date by organization.



Graph(2NE):CNTL(DCICDGRE)

pNF: VTAM Traffic by Date by Org. (PARMLIB=NETL)

Graph Description

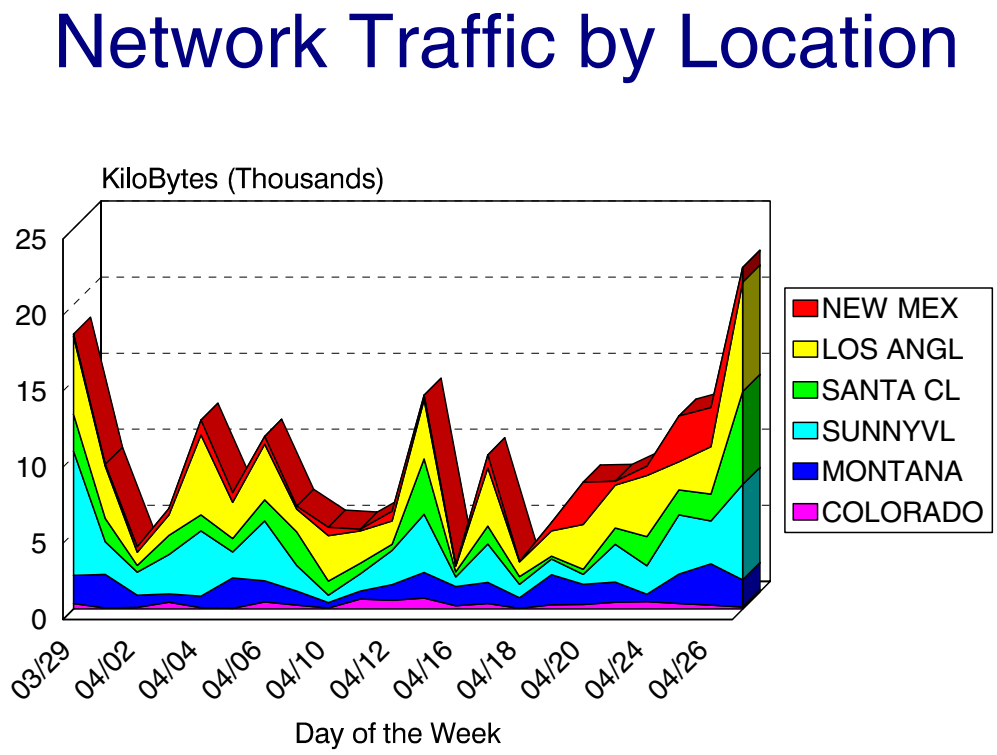
This bar graph divides the VTAM transactions into up to six categories based on the NETL member of PARMLIB and shows, for each category, the total line traffic (KB) by date.

Which Program Builds the Data Point Member

PGM=SSA1NETE

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the line traffic by date by organization.



Graph(2NF):CNTL(DNETDGRE)

pNG: VTAM Response:Volume by Org. (PARMLIB=NETL,NETR)

Graph Description

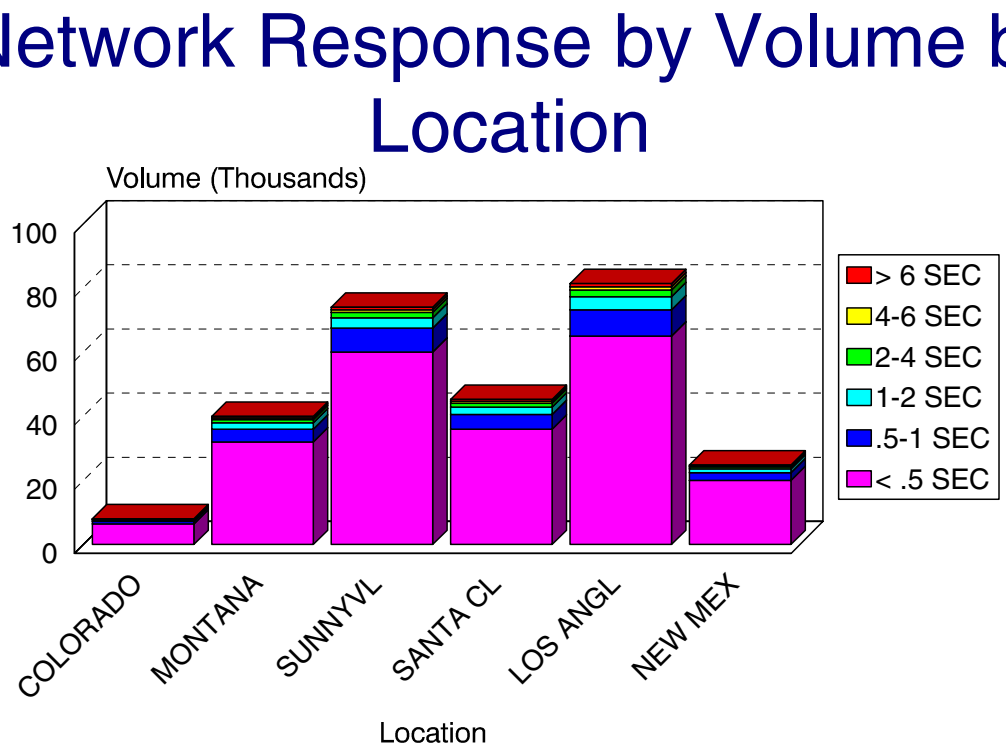
This bar graph divides the VTAM transactions into up to six categories based on the NETL member of PARMLIB and shows, for each category, the total volume of transactions and the response breakdown for each of the response thresholds defined in the NETR member of PARMLIB.

Which Program Builds the Data Point Member

PGM=SSA1NETE

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the response time by volume by organization.



Graph(2NG):CNTL(DNETDGRE)

pNI1-6: VTAM NCP % Busy (PARMLIB=NCPL,NCPV)

Graph Description

This set of area graphs shows the NCP % busy for each of up to six NCPs as defined by the NCPL member of PARMLIB. The thresholds for the % busy are defined in the NCPV member of PARMLIB.

Which Program Builds the Data Point Member

PGM=SSA1NETN

What Does the Data Represent

The chart is an area chart. Each category of the area chart shows the amount of time the NCP was xx% busy, based on the NCPV member of PARMLIB.

pNJ1-6: VTAM NCP Buffer Management (PARMLIB=NCPL)

Graph Description

This set of bar graphs shows the NCP Buffer Low water mark, the High water mark and the total number of buffers available for each of up to six NCPs as defined by the NCPL member of PARMLIB.

Which Program Builds the Data Point Member

PGM=SSA1NETN

What Does the Data Represent

The chart is an overlapped bar chart. Each bar shows the NCP Buffer Low water mark, the NCP Buffer High water mark and the total number of buffers available.

pNP: VTAM Volume by Date by APPLID Group (PARMLIB=NETN)

Graph Description

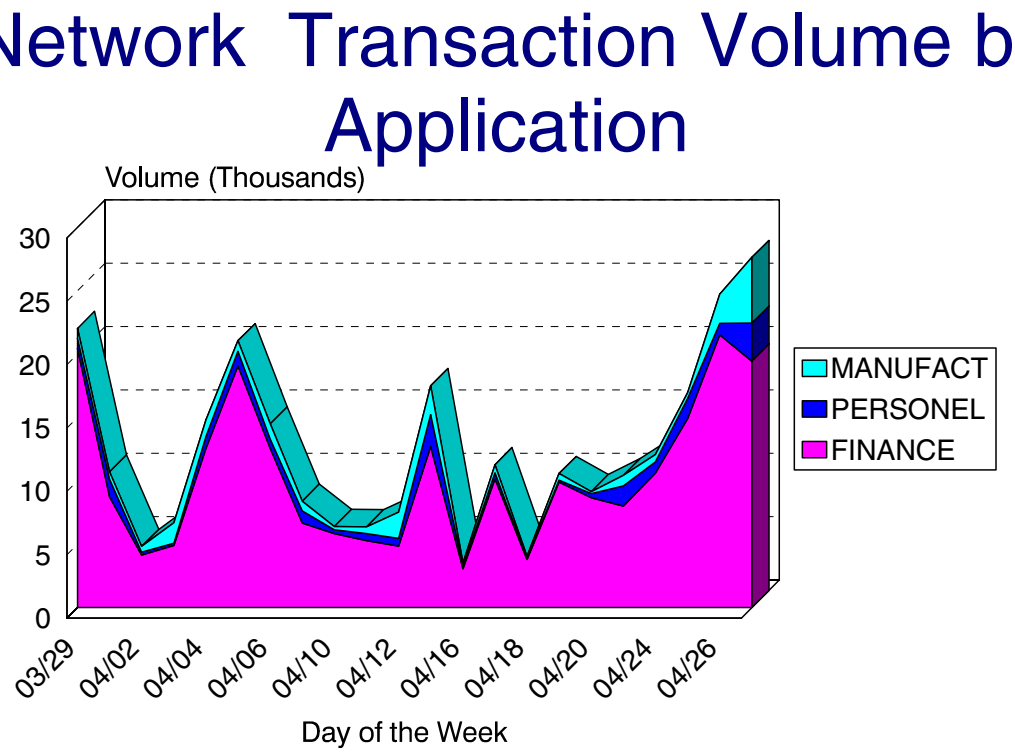
This bar graph divides the VTAM transactions into up to six categories based on the NETN member of PARMLIB and shows, for each category, the total volume of transactions by date.

Which Program Builds the Data Point Member

PGM=SSA1NETE

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the volume by date by APPLID Group.



Graph(2NP):CNTL(DNETDGRE)

pNQ: VTAM Traffic by Date by APPLID Group (PARMLIB=NETN)

Graph Description

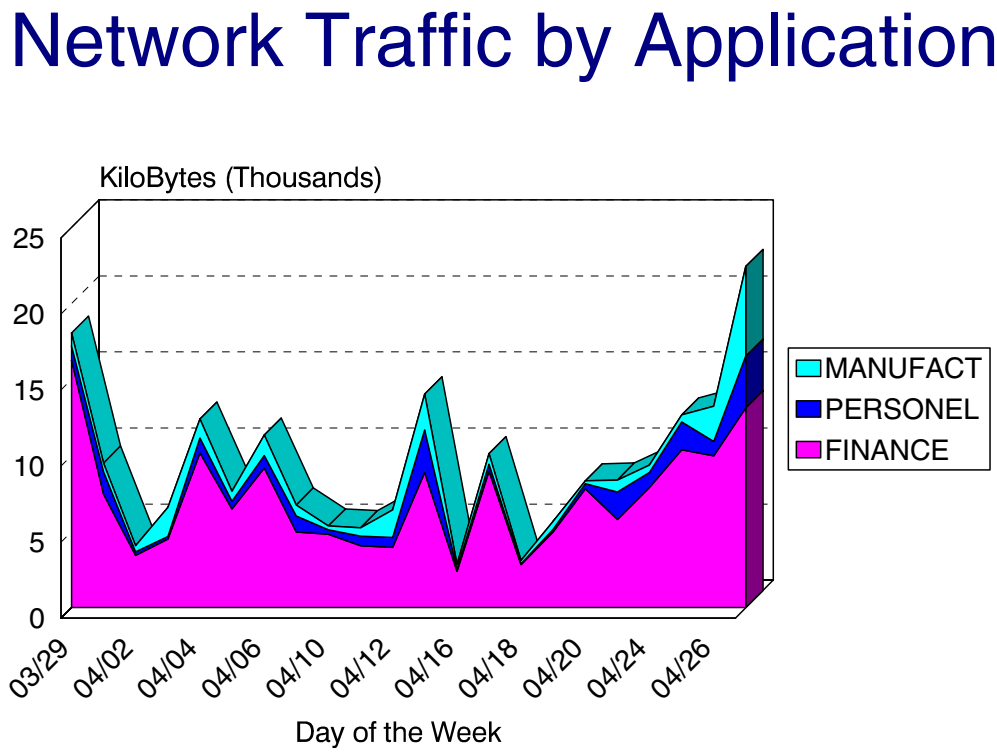
This bar graph divides the VTAM transactions into up to six categories based on the NETN member of PARMLIB and shows, for each category, the total line traffic (KB) by date.

Which Program Builds the Data Point Member

PGM=SSA1NETE

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the line traffic by date by APPLID Group.



Graph(2NQ):CNTL(DNETDGRE)

pNR:VTAM Response:Volume by APPLID Group (PARMLIB=NETN,NETR)

Graph Description

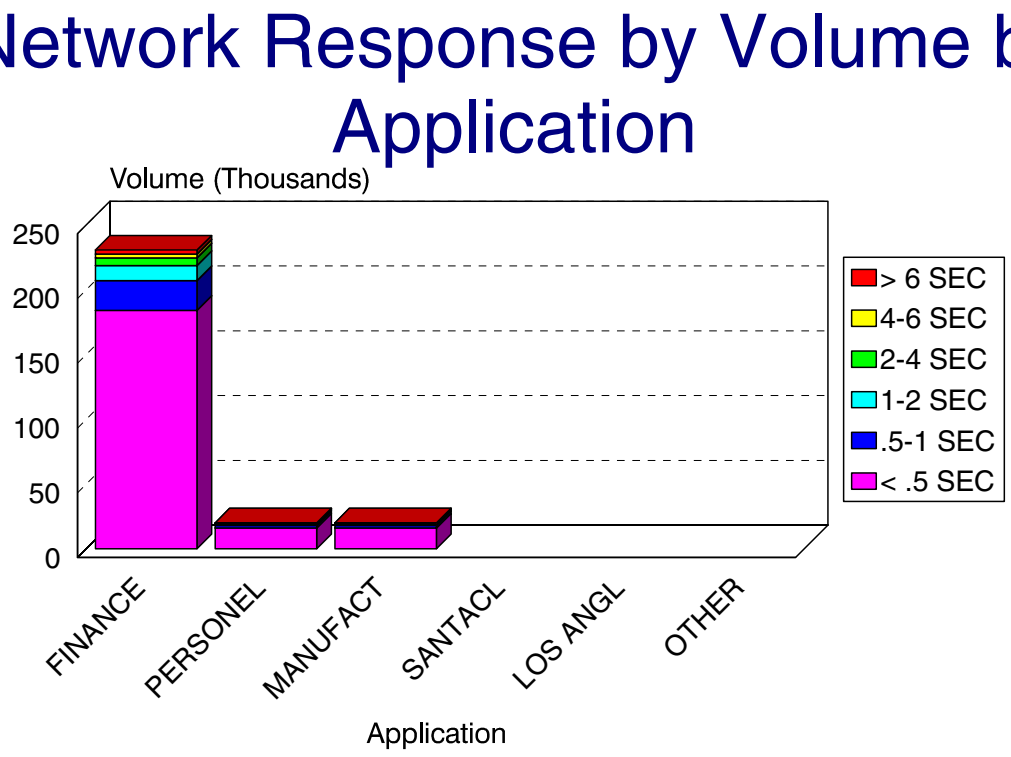
This bar graph divides the VTAM transactions into up to six categories based on the NETN member of PARMLIB and shows, for each category, the total volume of transactions and the response breakdown for each of the response thresholds defined in the NETR member of PARMLIB.

Which Program Builds the Data Point Member

PGM=SSA1NETE

What Does the Data Represent

The chart is in a horizontal stacked bar form. Each stacked bar shows the response time by volume by organization.



Graph(2NR):CNTL(DNETDGRE)

pNT: VTAM Total Line Capacity (PARMLIB=no PARMLIB members)

Graph Description

This area graph shows the percentage of Line capacity used by all physical communication lines into the VTAM being measured.

Which Program Builds the Data Point Member

PGM=SSA1NETL

What Does the Data Represent

The area chart shows the percentage of capacity used for all lines, divided into Inbound % Capacity, Outbound % Capacity and Retransmission % Capacity; depending on the specified Primary Baud Rate for each physical line.

pNT1-6: VTAM Selected Line Capacity (PARMLIB=LGRP)

Graph Description

This set of area graphs shows the percentage of Line capacity used by each of up to six Line Groups as defined by the LGRP member of PARMLIB. A Line Group is one or more individual physical communication lines.

Which Program Builds the Data Point Member

PGM=SSA1NETL

What Does the Data Represent

The area charts show the percentage of capacity used for each Line Group, divided into Inbound % Capacity, Outbound % Capacity and Retransmission % Capacity; depending on the specified Primary Baud Rate for each physical line.

pNU: VTAM Total Line Traffic (PARMLIB=no PARMLIB members)

Graph Description

This area graph shows the total line traffic in terms of Inbound KB/Hour, Outbound KB/Hour and Retransmitted KB/Hour by all physical communication lines into the VTAM being measured.

Which Program Builds the Data Point Member

PGM=SSA1NETL

What Does the Data Represent

The chart is an area chart. The values show the total line traffic by type for all lines into this particular VTAM.

pNU1-6: VTAM Selected Line Traffic (PARMLIB=LGRP)

Graph Description

This set of area graphs shows the total line traffic for each of up to six Line Groups as defined by the LGRP member of PARMLIB in terms of Inbound KB/Hour, Outbound KB/Hour and Retransmitted KB/Hour.

Which Program Builds the Data Point Member

PGM=SSA1NETL

What Does the Data Represent

The area charts show the total traffic for each Line Group, divided into the types described above.

Tape Subsystem Graphs

pT0: Tape Drive Activity (PARMLIB=none)

Graph Description

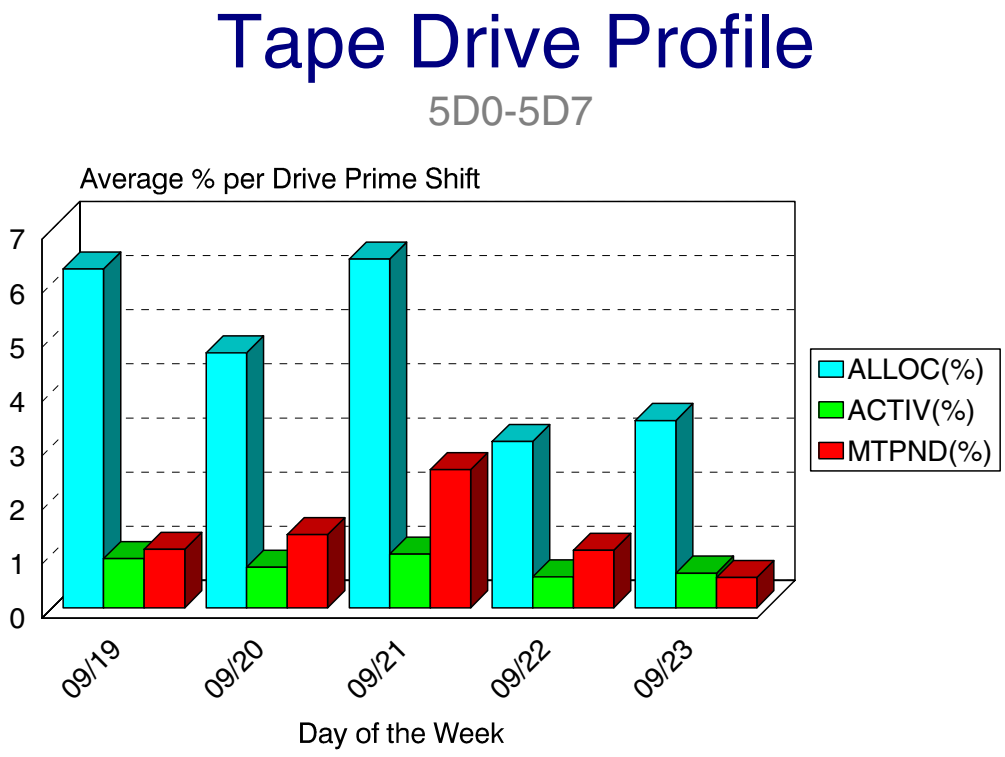
This side-by-side bar chart shows, for the set of Tape Drives selected, the % of time the set of Tape Drives was Allocated, the % of time any of the drives were Active (actually transferring data) and the % of time a Mount Pending condition was detected. The scope of the graph can be varied to include one or more tape drives through the use of the INCLUDE/EXCLUDE feature of CIMS Capacity Planner. You can see the changes in Tape Drive Activity on an hourly basis, a daily basis, from week to week or from month to month, depending on the Graph Period specified.

Which Program Builds the Data Point Member

PGM=SSA1TAUG

What Does the Data Represent

The chart is a side-by-side bar chart. The percent of time represented by the three categories (Allocated, Active and Mount Pending) is listed along the "Y" axis and the date represented for that condition is listed along the "X" axis.



Graph(2T0):CNTL(DTAPDGRU)

pT1: Tape Drives Allocated Concurrently (PARMLIB=none)

Graph Description

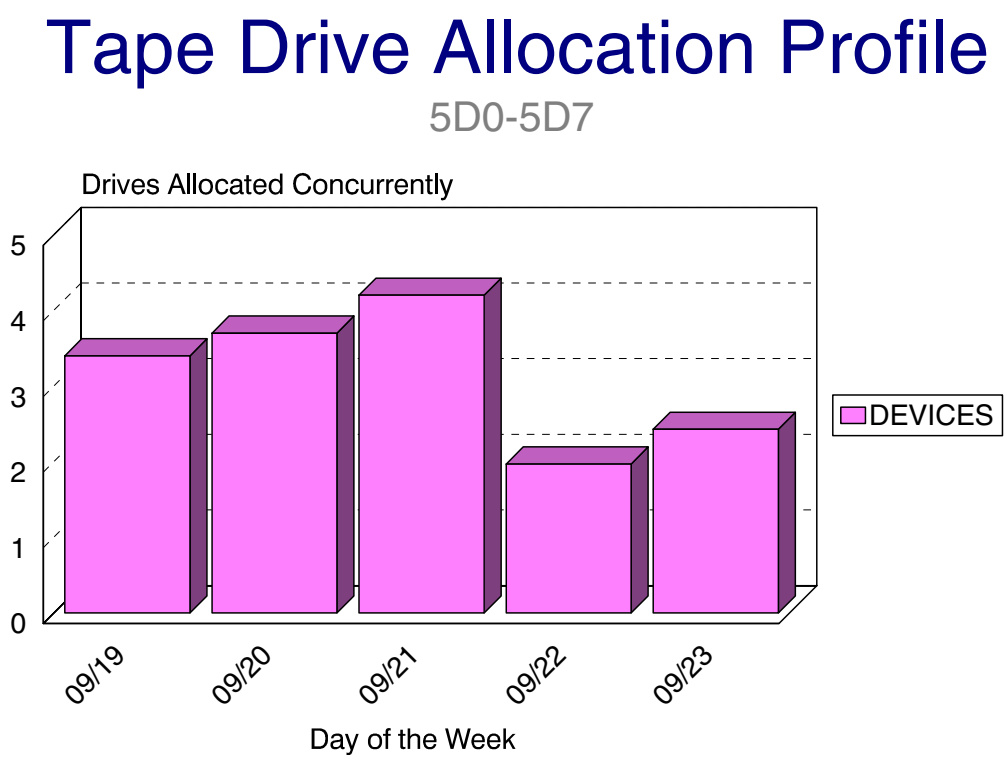
This bar chart shows, for the set of Tape Drives selected, the count of those drives that were allocated concurrently during any fifteen minute period. The scope of the graph can be varied to include one or more tape drives through the use of the INCLUDE/EXCLUDE feature of CIMS Capacity Planner. You can see the changes in Tape Drive concurrent allocation on an hourly basis, a daily basis, from week to week or from month to month, depending on the Graph Period specified.

Which Program Builds the Data Point Member

PGM=SSA1TAUG

What Does the Data Represent

The chart is a bar chart. The count of drives allocated concurrently is listed along the "Y" axis and the date represented by that situation is listed along the "X" axis.



Graph(2T1):CNTL(DTAPDGRU)

pT2: Tape Drive Mount Count (PARMLIB=none)

Graph Description

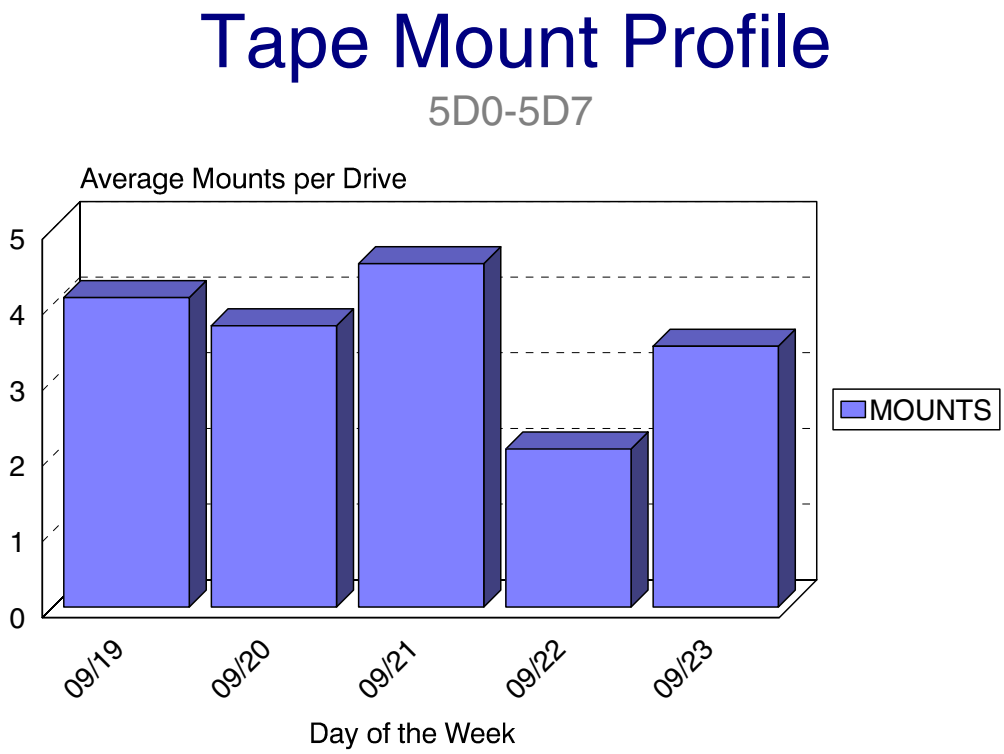
This bar chart shows, for the set of Tape Drives selected, the number of mounts that were satisfied. The scope of the graph can be varied to include one or more tape drives through the use of the INCLUDE/EXCLUDE feature of CIMS Capacity Planner. You can see the changes in Tape Mount Activity on an hourly basis, a daily basis, from week to week or from month to month, depending on the Graph Period specified.

Which Program Builds the Data Point Member

PGM=SSA1TAUG

What Does the Data Represent

The chart is a bar chart. The actual Mount count is listed along the "Y" axis and the date represented for that condition is listed along the "X" axis.



Graph(2T2):CNTL(DTAPDGRU)

pT3: I/O Data Transfer Rate (PARMLIB=none)

Graph Description

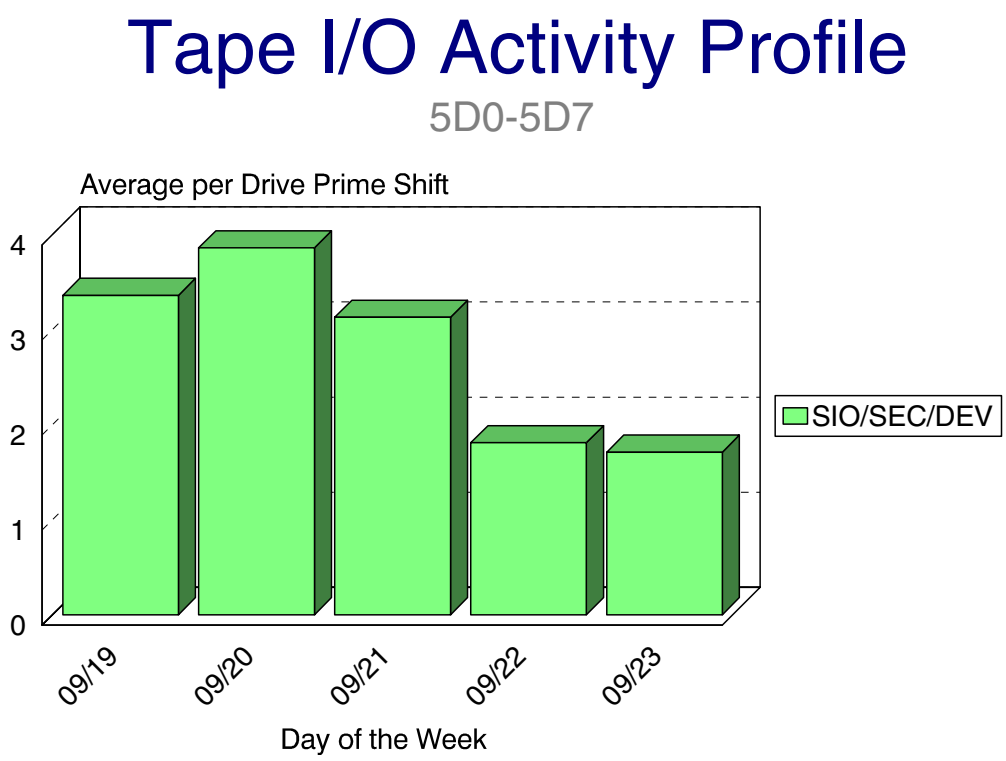
This bar chart shows, for the set of Tape Drives selected, the SIO per Second per Tape Drive when data transfer was in progress. The scope of the graph can be varied to include one or more tape drives through the use of the INCLUDE/EXCLUDE feature of CIMS Capacity Planner. You can see the changes in Tape Drive concurrent allocation on an hourly basis, a daily basis, from week to week or from month to month, depending on the Graph Period specified.

Which Program Builds the Data Point Member

PGM=SSA1TAUG

What Does the Data Represent

The chart is a bar chart. The date transfer rate (SIO per Second per Drive) is listed along the "Y" axis and the date represented by that SIO rate is listed along the "X" axis.



Graph(2T3):CNTL(DTAPDGRU)

pTA: Volume Inventory by Type (PARMLIB=none)

Graph Description

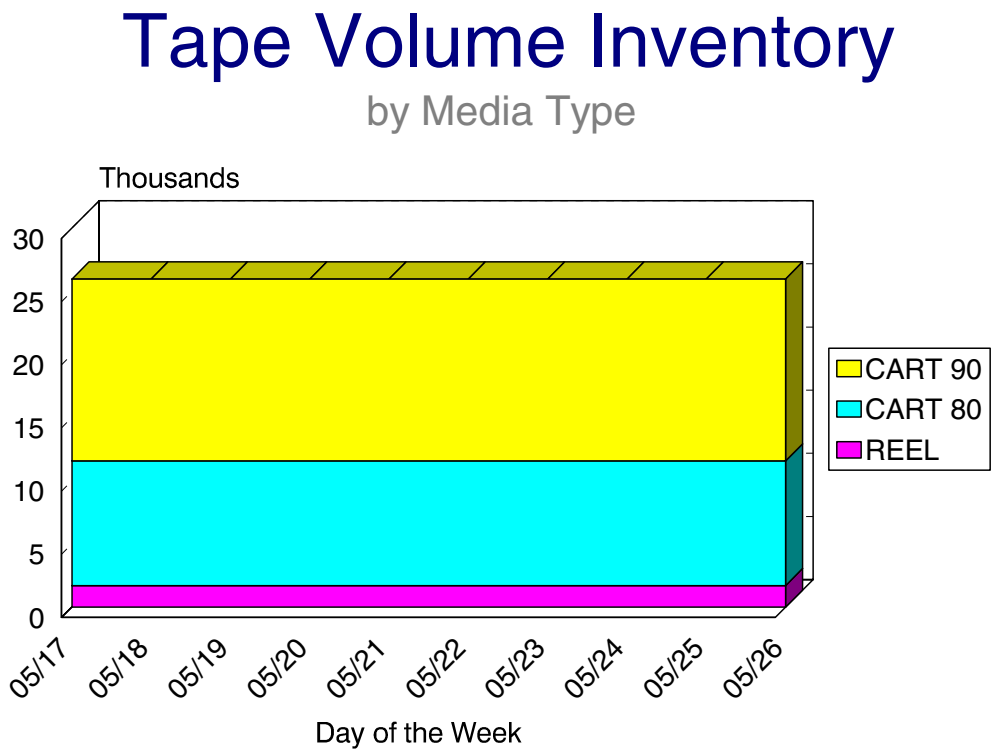
This area chart shows the total number of tape volumes in the Tape Library, divided into Reels, 3480, 3490, 3490E, 3590 & VTS Cartridges. You can see the changes in inventory by type from week to week or from month to month, depending on the Graph Period specified.

Which Program Builds the Data Point Member

PGM=SSA1TAVG

What Does the Data Represent

The chart is an area chart. Each volume type is listed along the "Y" axis and the date represented for that inventory is listed along the "X" axis.



Graph(2TA):CNTL(DTAPDGRV)

pTB: Volume Inventory by Function (PARMLIB=none)

Graph Description

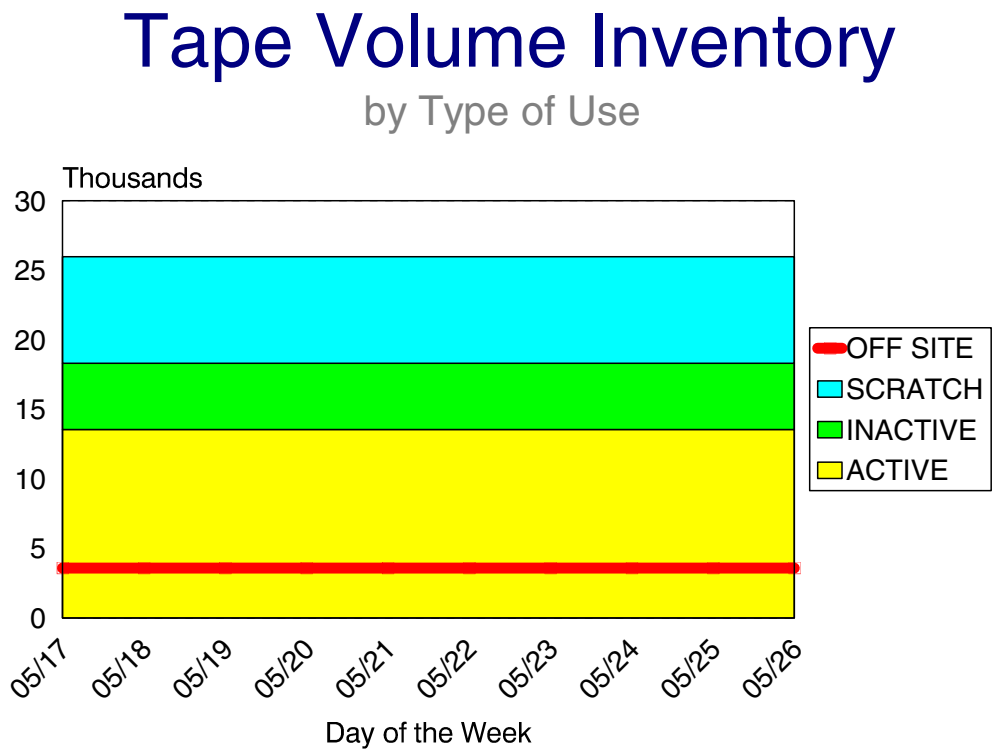
This area chart shows the total number of tape volumes in the Tape Library, divided into Active volumes, Inactive volumes, Scratch volumes and Off site volumes. You can see the changes in inventory by function from week to week or from month to month, depending on the Graph Period specified.

Which Program Builds the Data Point Member

PGM=SSA1TAVG

What Does the Data Represent

The chart is an area chart. Each functional category is listed along the "Y" axis and the date represented for that inventory is listed along the "X" axis.



Graph(2TB):CNTL(DTAPDGRV)

pTC: Storage Efficiency (PARMLIB=none)

Graph Description

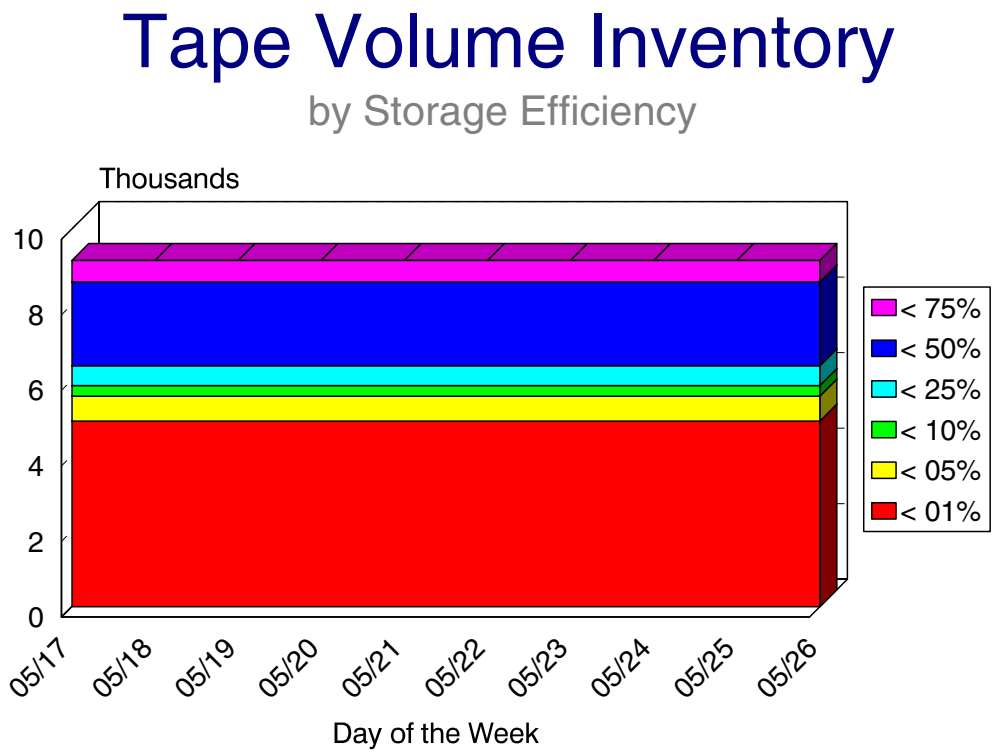
This area chart shows the total number of tape volumes in the Tape Library, divided into Volumes that are less than 5% used, less than 10% used, less than 25% used, less than 50 % used, less than 75% used and more than 75% used. You can see the changes in efficiency from week to week or from month to month, depending on the Graph Period specified.

Which Program Builds the Data Point Member

PGM=SSA1TAVG

What Does the Data Represent

The chart is an area chart. Each gradient of efficiency is listed along the "Y" axis and the date represented for that set is listed along the "X" axis.



Graph(2TC):CNTL(DTAPDGRV)

pTL: Tape Space Wasted by Organization (PARMLIB=TAPF)

Graph Description

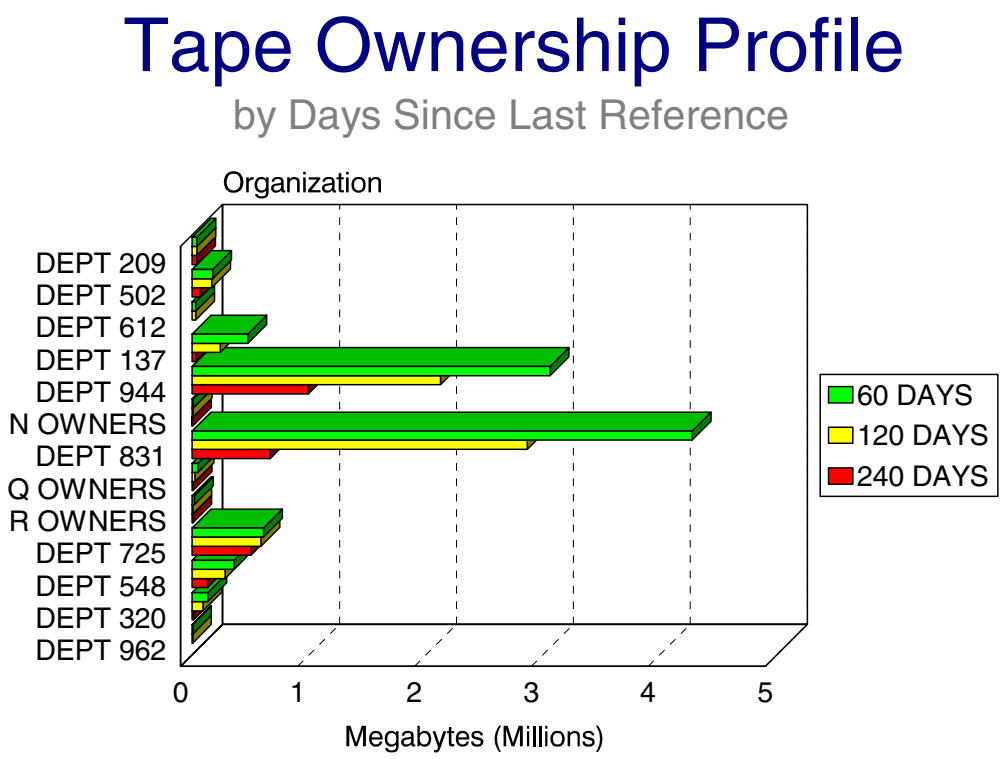
This horizontal bar chart shows, within organization, the total amount of space allocated (MB) and, of that allocated amount, the total space wasted. Wasted space is defined as space that has been allocated but is not used (i.e, end-of-file to end of volume). The TAPF member of PARMLIB allows you to specify which OWNERIDs (high level qualifiers) are included in each of up to 64 organizations.

Which Program Builds the Data Point Member

PGM=SSA1TAOG

What Does the Data Represent

The chart is a horizontal bar chart. Each organization is listed along the "Y" axis and has two individual bars: the top bar shows the amount of space allocated and the bottom bar shows the amount of space that is wasted.



Graph(2TL):CNTL(DTAPDGRO)

pTM: Tape Space Wasted % by Organization (PARMLIB=TAPF)

Graph Description

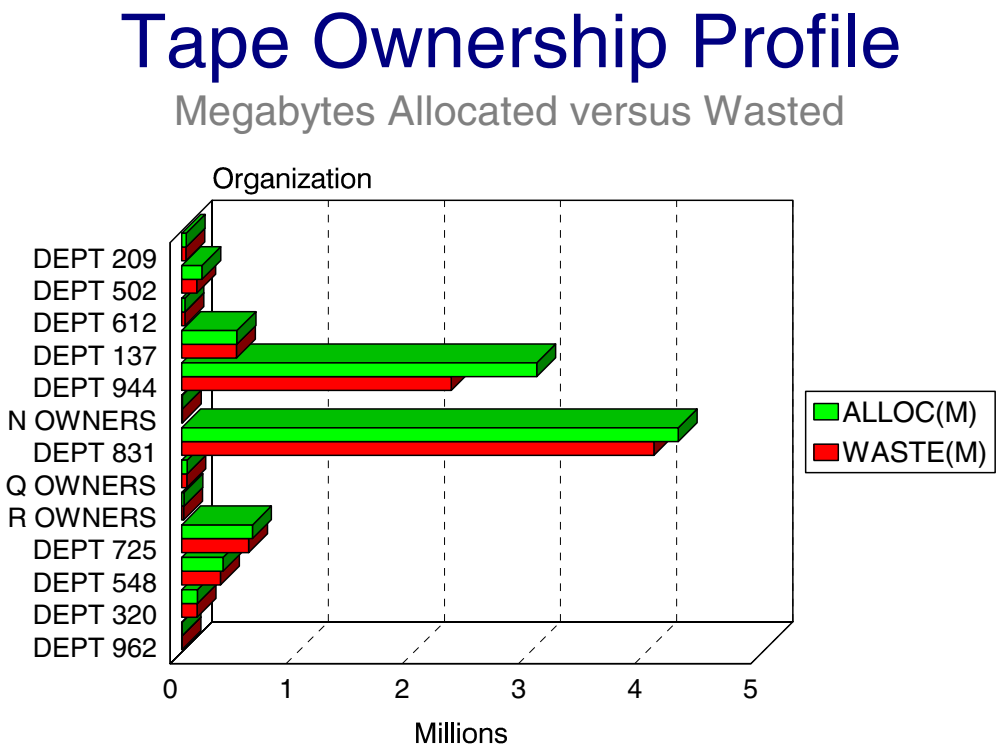
This horizontal bar chart shows, within organization, the total percentage of space allocated (MB) that is wasted. Wasted space is defined as space that has been allocated but is not used (i.e, end-of-file to end of extent). VSAM space is considered to be 100% used. The TAPF member of PARMLIB allows you to specify which OWNERIDs (high level qualifiers) are included in each of up to 64 organizations.

Which Program Builds the Data Point Member

PGM=SSA1TAOG

What Does the Data Represent

The chart is a horizontal bar chart. Each organization is listed on the "Y" axis with a single bar showing the % of allocated space that is wasted.



Graph(2TM):CNTL(DTAPDGRO)

pTN: Tape Space Unreferenced by Organization (PARMLIB=TAPF)

Graph Description

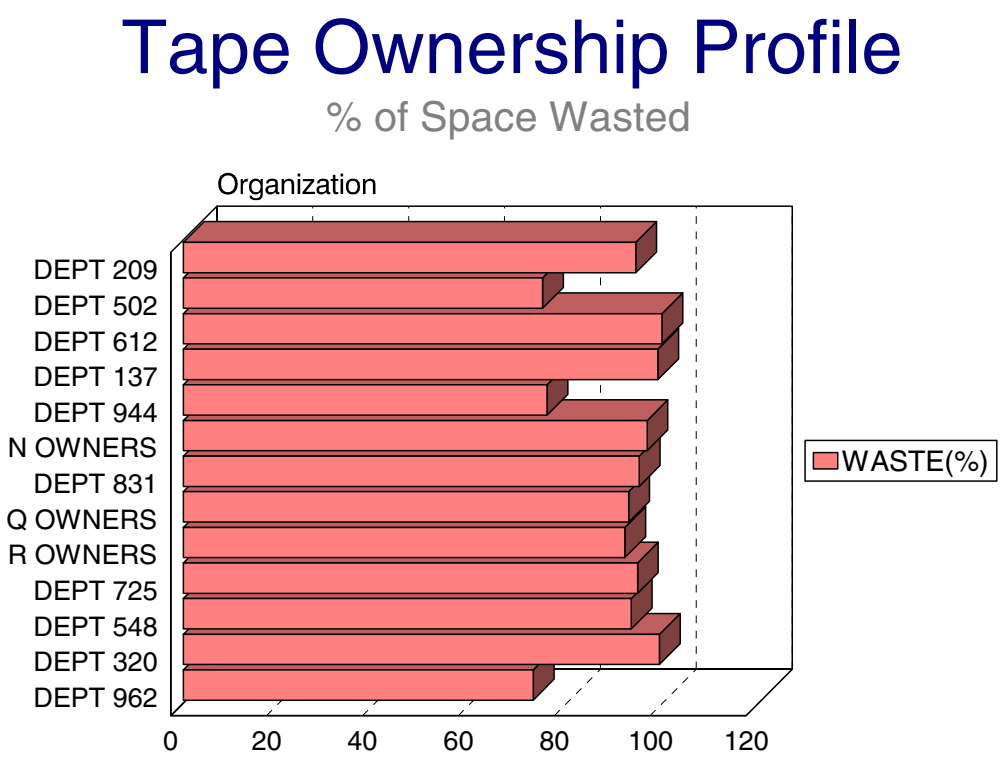
This horizontal bar chart shows, within organization, the total amount of allocated space (MB) that has gone unreferenced in 60, 120 and 240 days. The TAPF member of PARMLIB allows you to specify which OWNERIDs (high level qualifiers) are included in each of up to 64 organizations.

Which Program Builds the Data Point Member

PGM=SSA1TAOG

What Does the Data Represent

The chart is a horizontal bar chart. Each organization is listed along the "Y" axis and has three individual bars: the top bar shows the amount of allocated space unreferenced in 60 days, the middle bar shows the amount of space unreferenced in 120 days and the bottom bar shows the amount of space unreferenced in 240 days.



Graph(2TN):CNTL(DTAPDGRO)

Unix Subsystem Graphs

pU0: UNIX CPU Activity (No PARMLIB Members)

Graph Description

This bar graph shows the percentage of time a UNIX server or group of servers was active (monitor data was being collected), broken down by the type of activity that was occurring on the server at the time:

- User activity (% of time)
- Local activity (% of time)
- Remote activity (% of time)
- Waiting for I/O to occur (% of time)
- Idle time (% of time)

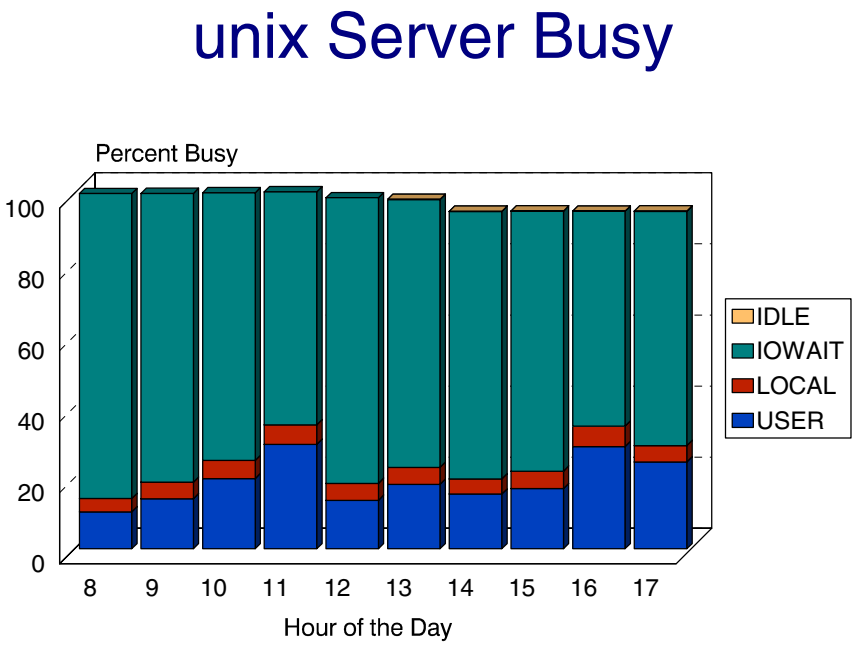
The graph represents the composite activity for all servers in the included population of servers, based on the SELECTED SYSTEM statement in the SYSIN. That population can be a single server, a group of servers, or all servers for which data is being collected.

Which Program Builds the Data Point Member

PGM=SSA1UNXG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the type of activity for an average server in the population.



CNTL(DUNXHGRF) HGDATA(UNIX1U0)

pU0Z: UNIX Comparative CPU Activity (PARMLIB=UNIXLOCN)

Graph Description

This bar graph shows the average percentage of time the CPU was active for one or more groups of UNIX servers (processor not in a WAIT state or Idle), plotted by individual group (up to six groups as specified in the UNIXLOCN member of PARMLIB). The graph allows a comparison among several different populations of UNIX servers in terms of % CPU busy. Only the CPU activity is tracked. That is, the Waiting for I/O and Idle categories depicted in the pU0 graph are discarded.

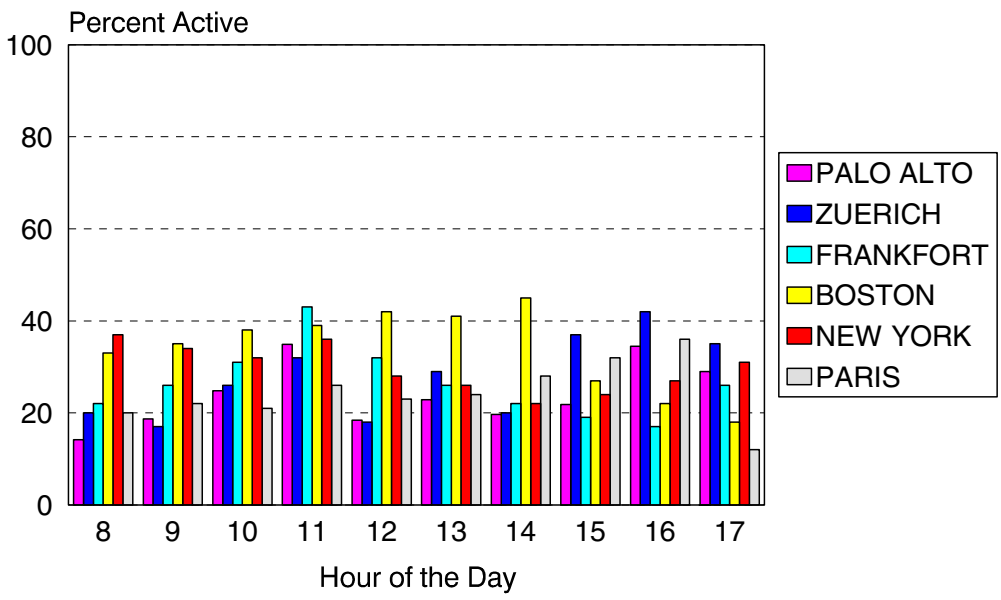
The graph represents the composite activity for all servers in the included population of servers, based on the SELECTED SYSTEM statement in the SYSIN. That population can be a single server, a group of servers, or all servers for which data is being collected.

Which Program Builds the Data Point Member

PGM=SSA1UNXG

What Does the Data Represent

The chart is in a line graph form. Each line shows the % of CPU busy time for an average server in the group as specified in the UNIXLOCN member of PARMLIB.



CNTL(DUNXHGRF) HGDATA(UNIX1U0Z)

pU1: UNIX Run Queue Length (No PARMLIB Members)

Graph Description

This bar graph shows the average Run Queue Length for a group of UNIX servers. That is, the number of users who were stacked up in the UNIX Run Queue. This value gives a good indication as to the amount of contention for UNIX resources within the server. As the number approaches 2, the resources of the UNIX server population are being more and more constrained.

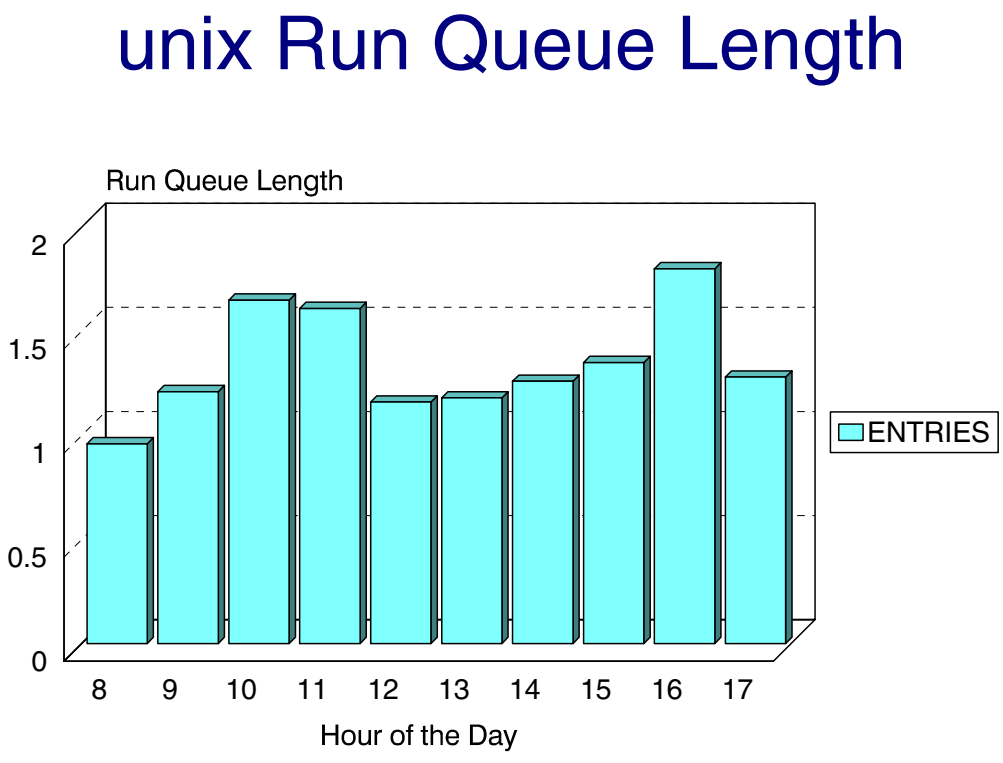
The graph represents the composite activity for all servers in the included population of servers, based on the SELECTED SYSTEM statement in the SYSIN. That population can be a single server, a group of servers, or all servers for which data is being collected.

Which Program Builds the Data Point Member

PGM=SSA1UNXG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average Run Queue length for an average server in the population.



CNTL(DUNXHGRF) HGDATA(UNIX1U1)

pU1Z: UNIX Comparative Run Queue Length (PARMLIB=UNIXLOCN)

Graph Description

This bar graph shows the average Run Queue Length for up to six groups of UNIX servers as specified in the UNIXLOCN member of PARMLIB. This provides a comparative analysis of Run Queue lengths among the different groups of servers.

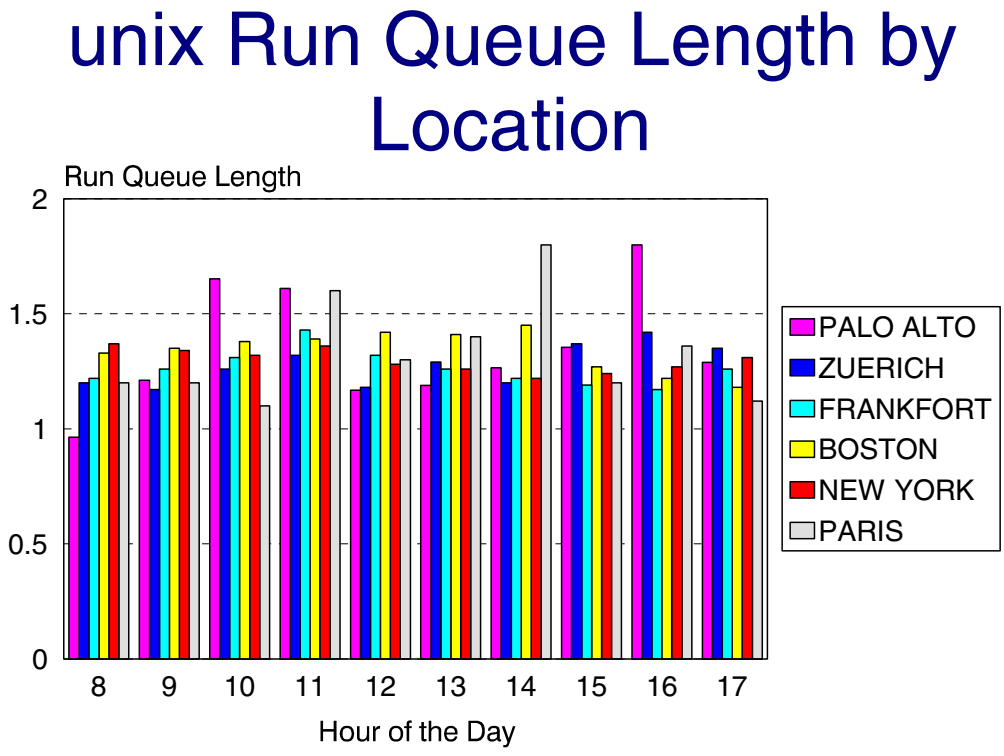
The graph represents the composite activity for all servers in the included population of servers, based on the SELECTED SYSTEM statement in the SYSIN. That population can be a single server, a group of servers, or all servers for which data is being collected.

Which Program Builds the Data Point Member

PGM=SSA1UNXG

What Does the Data Represent

The chart is in a line graph form. Each line shows the average Run Queue Length for an average server in each group as specified in the UNIXLOCN member of PARMLIB.



CNTL(DUNXHGRF) HGDATA(UNIX1U1Z)

pU2: UNIX Run Queue % Occupied (No PARMLIB Members)

Graph Description

This bar graph shows the average percentage of the the UNIX Run Queue was occupied for a group of UNIX servers. That is, the percentage of time users were stacked up in the UNIX Run Queue. This value gives a good indication as to the amount of contention for UNIX resources within the server. As the number approaches 50, the resources of the UNIX server population are being more and more constrained.

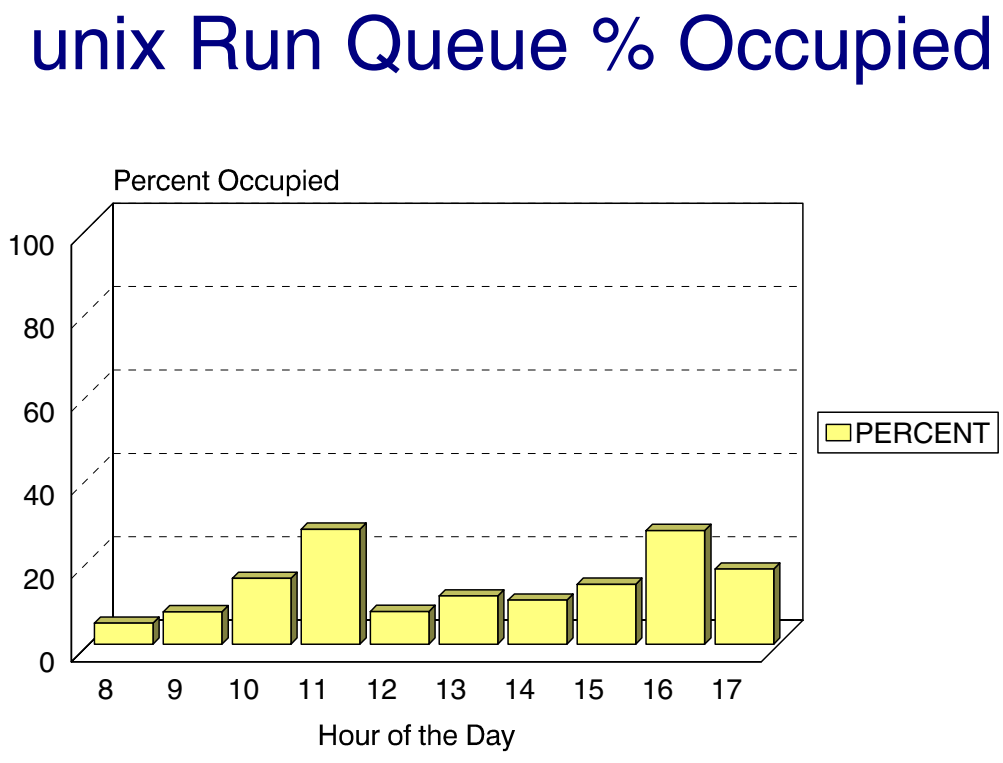
The graph represents the composite activity for all servers in the included population of servers, based on the SELECTED SYSTEM statement in the SYSIN. That population can be a single server, a group of servers, or all servers for which data is being collected.

Which Program Builds the Data Point Member

PGM=SSA1UNXG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the average % Run Queue Occupancy for an average server in the population.



CNTL(DUNXHGRF) HGDATA(UNIX1U2)

pU2Z: UNIX Comparative Run Queue % Occupied(PARMLIB=UNIXLOCN)

Graph Description

This bar graph shows the average percentage of time the Run Queue was occupied for up to six groups of UNIX servers as specified in the UNIXLOCN member of PARMLIB. This provides a comparative analysis of Run Queue occupancy among the different groups of servers.

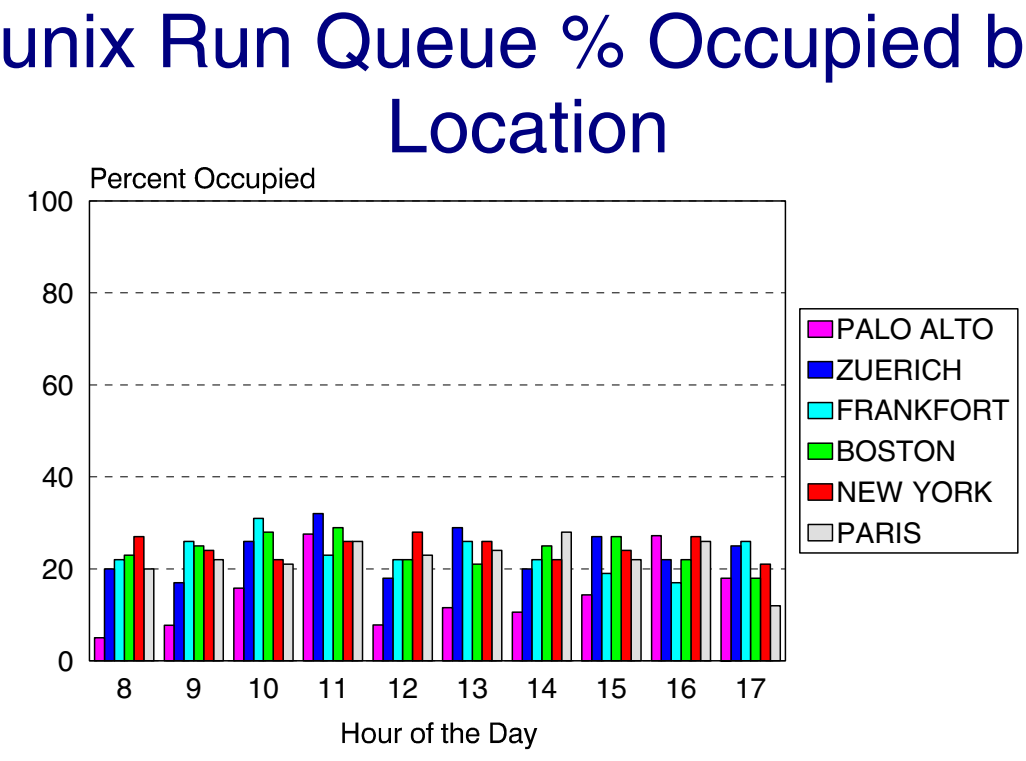
The graph represents the composite activity for all servers in the included population of servers, based on the SELECTED SYSTEM statement in the SYSIN. That population can be a single server, a group of servers, or all servers for which data is being collected.

Which Program Builds the Data Point Member

PGM=SSA1UNXG

What Does the Data Represent

The chart is in a line graph form. Each line shows the % of time the UNIX Run Queue was occupied for an average server in the group as specified in the UNIXLOCN member of PARMLIB.



CNTL(DUNXHGRF) HGDATA(UNIX1U2Z)

pU3: UNIX Server Inventory (No PARMLIB Members)

Graph Description

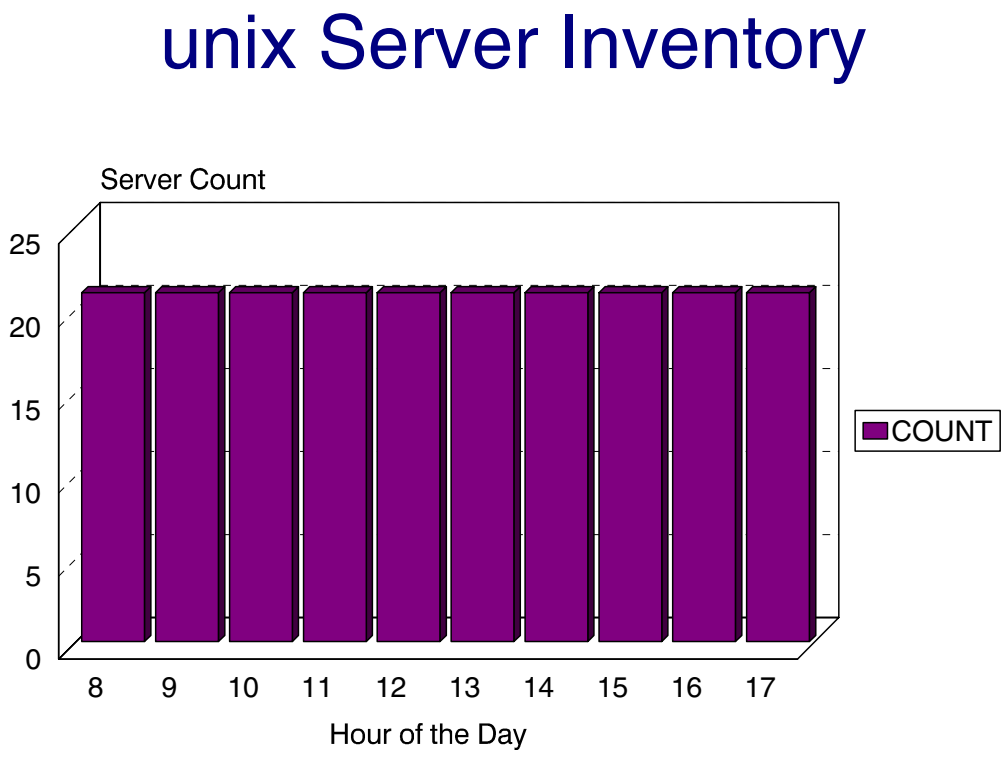
This bar graph shows the average count of servers in the population during a specific time period. It allows you to track the physical number of installed UNIX servers over time.

Which Program Builds the Data Point Member

PGM=SSA1UNXG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the count of UNIX servers in the population.



CNTL(DUNXHGRF) HGDATA(UNIX1U3)

pU3Z: UNIX Comparative Server Inventory (PARMLIB=UNIXLOCN)

Graph Description

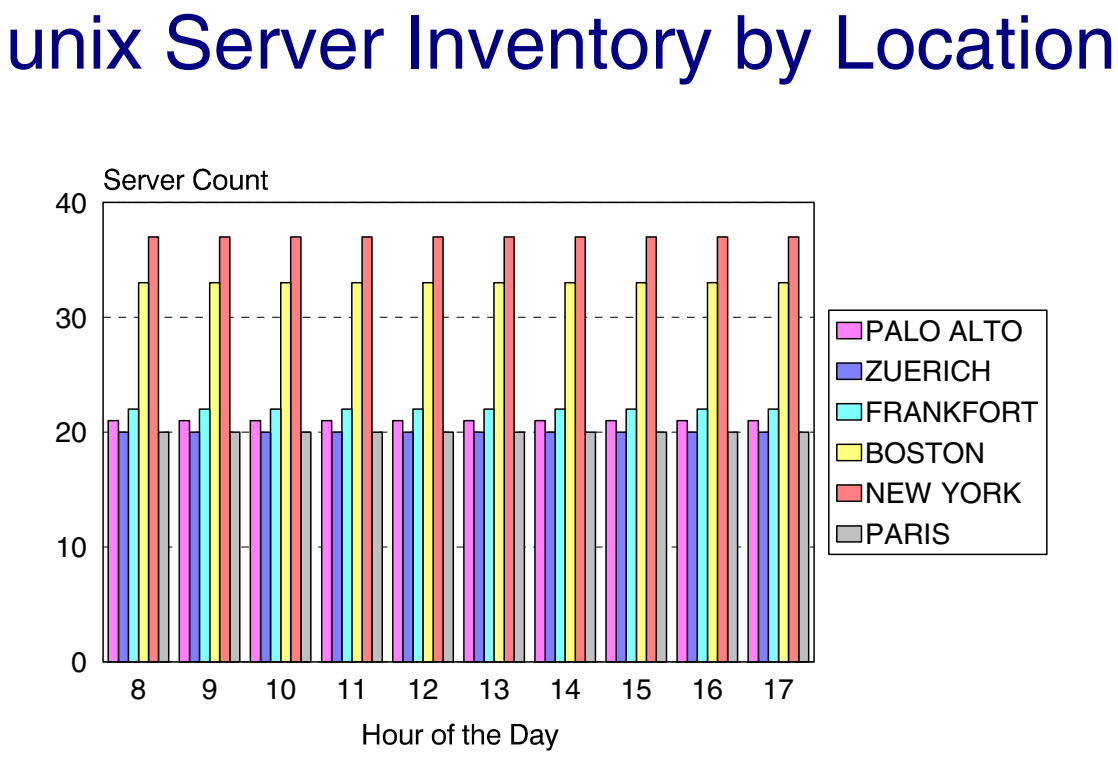
This bar graph shows the average count of UNIX servers in up to six groups of UNIX servers as specified in the UNIXLOCN member of PARMLIB. This provides a comparative analysis of installed servers among the different groups of servers.

Which Program Builds the Data Point Member

PGM=SSA1UNXG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the total count of installed UNIX servers, broken down into groups as specified in the UNIXLOCN member of PARMLIB.



CNTL(DUNXHGRF) HGDATA(UNIX1U3Z)

pU4: UNIX Swap Activity (No PARMLIB Members)

Graph Description

This bar graph shows the average Swapping activity in terms of swaps per second for a group of UNIX servers. Values are provided for Swap-Ins as well as Swap-Outs.

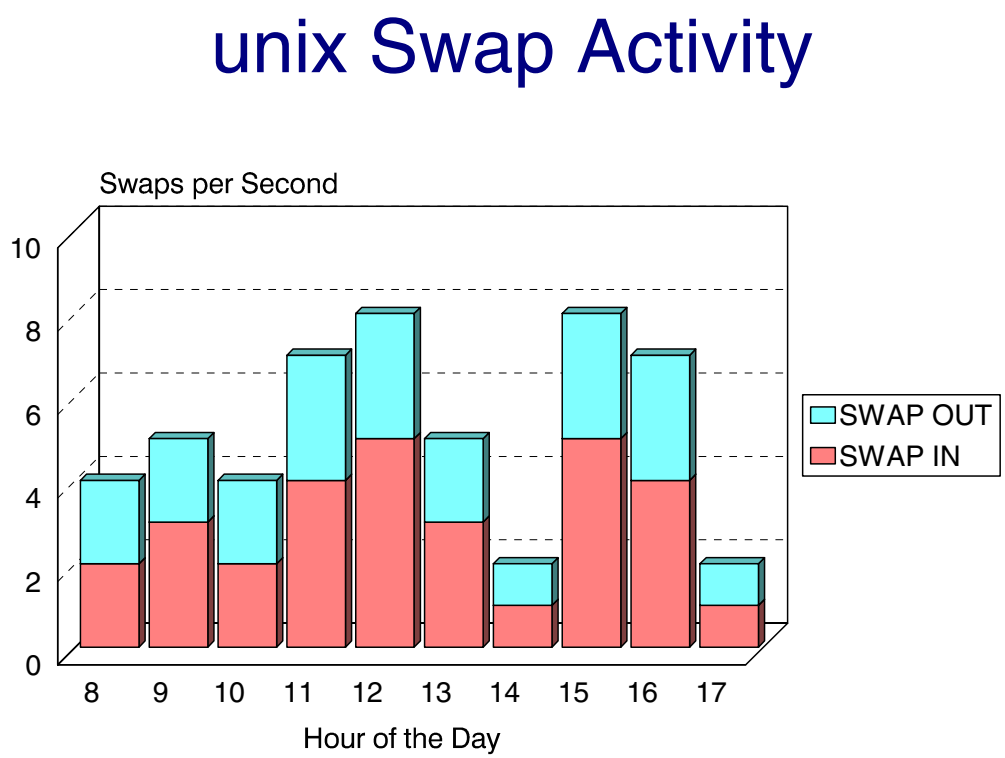
The graph represents the composite activity for all servers in the included population of servers, based on the SELECTED SYSTEM statement in the SYSIN. That population can be a single server, a group of servers, or all servers for which data is being collected.

Which Program Builds the Data Point Member

PGM=SSA1UNXG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the Swap activity for an average server in the population.



CNTL(DUNXHGRF) HGDATA(UNIX1U4)

pU5: UNIX Cache Hit Ratio (No PARMLIB Members)

Graph Description

This bar graph shows the average Cache Hit Ratio for a group of UNIX servers. Values are provided for Local Reads as well as Local Writes.

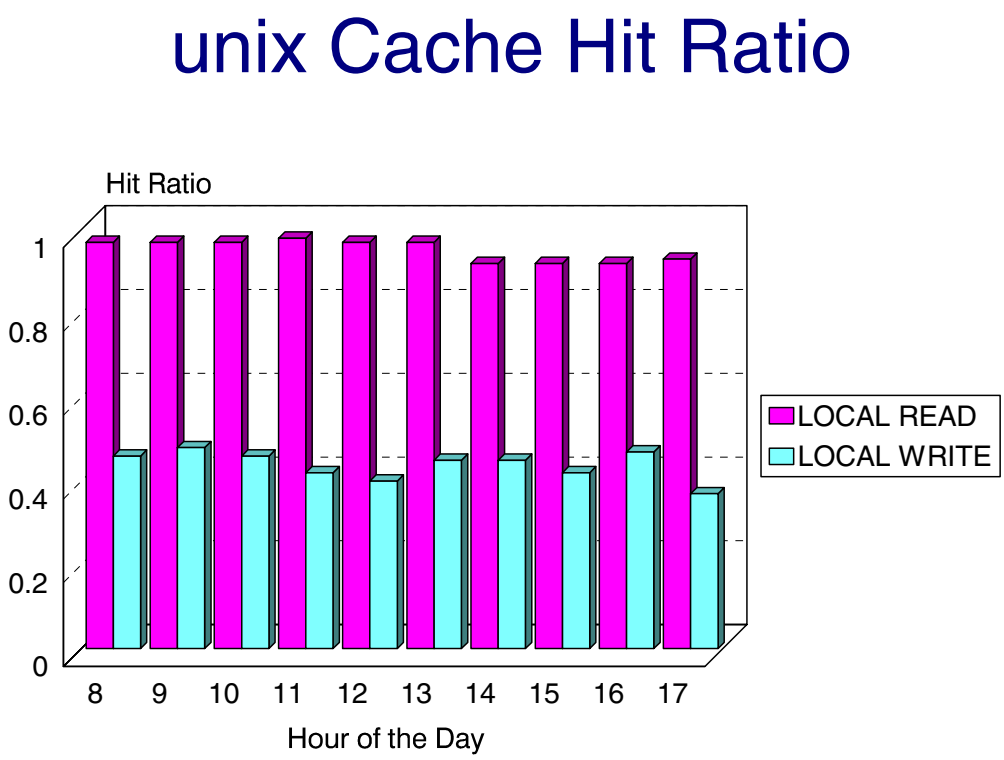
The graph represents the composite activity for all servers in the included population of servers, based on the SELECTED SYSTEM statement in the SYSIN. That population can be a single server, a group of servers, or all servers for which data is being collected.

Which Program Builds the Data Point Member

PGM=SSA1UNXG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the Cache Hit Ratio for an average server in the population.



CNTL(DUNXHGRF) HGDATA(UNIX1U5)

pU6: UNIX System Calls by Type (No PARMLIB Members)

Graph Description

This bar graph shows the average number of System Calls in terms of calls per second for a group of UNIX servers. Values are provided for S/Reads, S/Writes, Forks, Execs, Read Chars (in thousands) and Write Chars (in thousands).

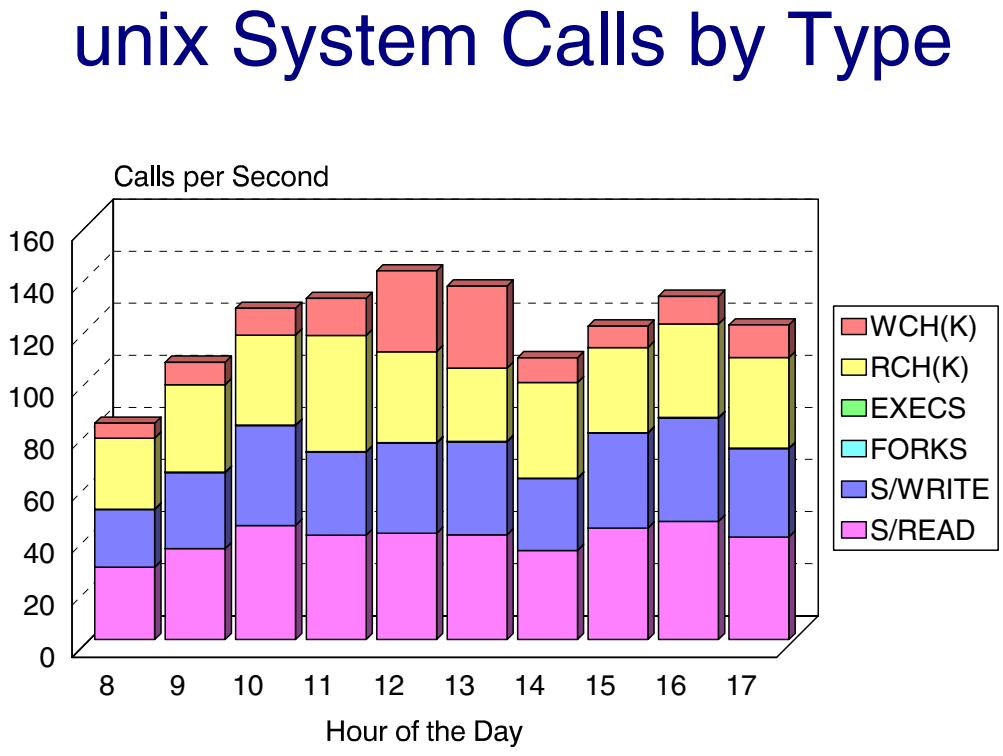
The graph represents the composite activity for all servers in the included population of servers, based on the SELECTED SYSTEM statement in the SYSIN. That population can be a single server, a group of servers, or all servers for which data is being collected.

Which Program Builds the Data Point Member

PGM=SSA1UNXG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the System Call activity for an average server in the population.



CNTL(DUNXHGRF) HGDATA(UNIX1U6)

pU7: UNIX Paging Activity (No PARMLIB Members)

Graph Description

This bar graph shows the average Paging activity in terms of pages per second for a group of UNIX servers. Values are provided for Page-Ins as well as Page-Outs.

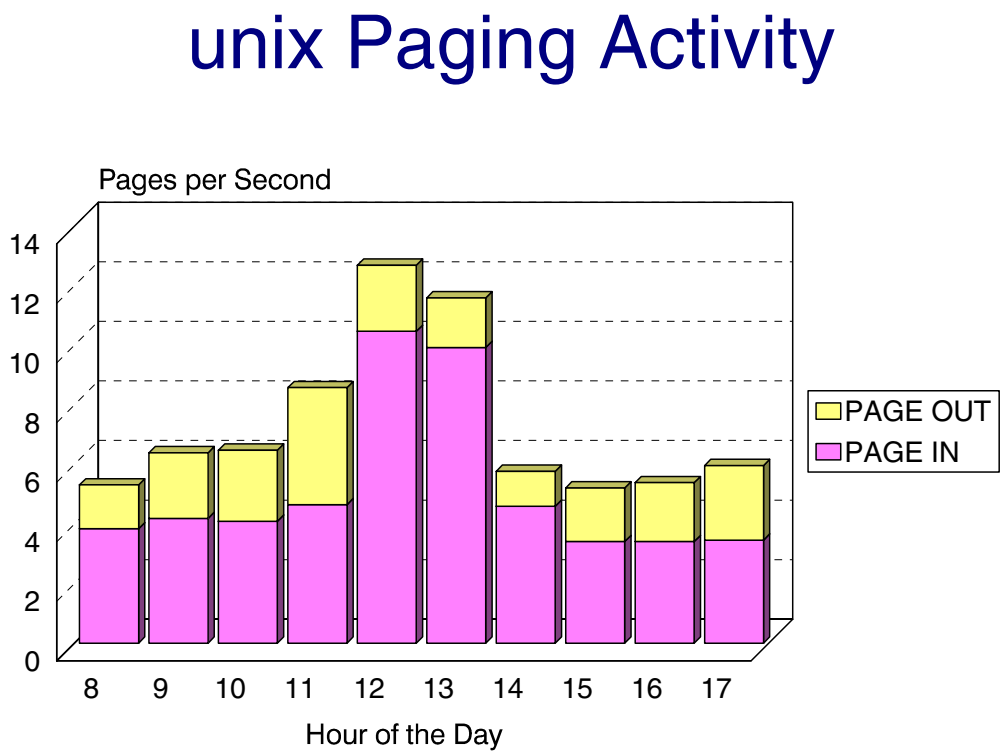
The graph represents the composite activity for all servers in the included population of servers, based on the SELECTED SYSTEM statement in the SYSIN. That population can be a single server, a group of servers, or all servers for which data is being collected.

Which Program Builds the Data Point Member

PGM=SSA1UNXG

What Does the Data Represent

The chart is in a stacked bar form. Each stacked bar shows the Paging activity for an average server in the population.



CNTL(DUNXHGRF) HGDATA(UNIX1U7)

4

CIMS Capacity Planner Reports

Introduction

This chapter discusses the many reports that are generated using the CIMS Capacity Planner. Most report descriptions are followed by a sample report. For more information on report generation, please refer to the *CIMS Capacity Planner User Guide*.

Workload Reports

The Workload subsystem produces a variety of reports. Several of the reports (Ad-Hoc) are only available from the Data Reduction program—SSA1WKLD, while the remainder of the reports are produced by the report generation program SSA1RPT. The SSA1WKLD program produces its reports from the SMF/RMF input data and reports upon portions of the input data that are not retained in the CIMS Capacity Planner Performance Data Base. The SSA1RPT program produces its reports from the data contained in the Performance Data Base. The reports produced by the Report Generation program can be run at any time. Report generation generally takes only a few seconds.

The first four reports discussed are produced by the Data Reduction program. The remainder are produced by the Report Generation program - SSA1RPT.

JOBNAME Report (Ad-Hoc)

The JOBNAME Report is requested by including a JOBNAME= parameter as a SYSIN parameter in the SSA1WKLD data reduction Jobstream. The JOBNAME parameter consists of up to eight characters. A generic JOBNAME is supported by including an asterisk after the root of the JOBNAME. For example, you can select all JOBs beginning with SOM1 by specifying JOBNAME=SOM1*.

The selection of JOBs to be included in this report is limited by the BEGIN DATE, END DATE, BEGIN TIME, and END TIME parameters.The JOBNAME report includes the following data:

- Date and time the JOB entered the system
- Date and time the JOB finished execution
- CPU time used by the JOB
- Total number of DASD accesses issued

Following is a sample of the JOBNAME Ad Hoc Report:

SYSSID	JOB NAME	DATE IN	TIME IN	DATE OUT	TIME OUT	LAST COMPL CODE	CPU SECONDS	DASD EXCPS	CLASS	ACCOUNTING DATA
SID1	PDRKHADH	03/07	09:25	03/07	09:26	0000	14.50	1,910	A	28610 200
SID1	PDRKHADH	03/07	09:26	03/07	09:28	0000	14.50	1,938	A	28610 200
SID1	PDRKHASM	03/07	09:29	03/07	09:30	0000	6.08	2,161	A	28610 200
SID1	PDRKHADH	03/07	09:30	03/07	09:31	0000	15.35	2,029	A	28610 200
SID1	PDRKHADH	03/07	09:31	03/07	09:32	0000	15.25	2,040	A	28610 200
SID1	PDRKHADH	03/07	09:37	03/07	09:38	0000	16.36	2,091	A	28610 200
SID1	PDRKHADH	03/07	09:40	03/07	09:47	0000	68.67	8,706	A	28610 200
SID1	PDRKHADH	03/07	09:47	03/07	09:53	0000	55.28	6,919	A	28610 200

Two JOBNAME Detail Ad Hoc reports are also available. The DDNAME Detail report shows, in addition to the information contained in the JOBNAME Ad Hoc Report, specific information pertaining to the DDNAME of the specified JOB. The S/U Detail report shows, in addition to the information contained in the JOBNAME Ad Hoc Report, specific information pertaining to the Service Units of the specified JOB.

Following is a sample of the DDNAME Detail Ad Hoc Report:

```
SYSSID  JOB NAME  PGM NAME  PGN  DATE IN  TIME IN  DATE OUT  TIME OUT  C/CDE    CPU SECONDS     DASD EXCPS  PAGING ACTIVITY  CLASS
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:25:56  03/07     09:26:53  *I3*          14.21          1,910                     A
        CPPRPARM    (000000172) CPPRERT     (000000125) SYSUT3      (000000138) VTOCDDNM    (000001475)
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:25:56  03/07     09:26:53   0000         14.50          1,910                     A
        CPPRPARM    (000000172) CPPRERT     (000000125) SYSUT3      (000000138) VTOCDDNM    (000001475)
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:26:55  03/07     09:28:11  *I3*          14.21          1,938                     A
        CPPRPARM    (000000172) CPPRERT     (000000125) SYSUT3      (000000138) VTOCDDNM    (000001503)
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:26:55  03/07     09:28:11   0000         14.50          1,938                     A
        CPPRPARM    (000000172) CPPRERT     (000000125) SYSUT3      (000000138) VTOCDDNM    (000001503)
  SID1  PDRKHASM  IEV90     000  03/07   09:29:46  03/07     09:29:50  *I3*           1.36            274                     A
        SYSLIB      (000000140) SYSLIB  +002(000000103) SYSUT1      (000000228) SYSPRINT    (000000026) SYSIN       (000000005)
        SYSLIN      (000000010)
  SID1  PDRKHASM  IEV90     000  03/07   09:29:46  03/07     09:29:50   0000         1.61            274                     A
        SYSLIB      (000000140) SYSLIB  +002(000000103) SYSUT1      (000000228) SYSPRINT    (000000026) SYSIN       (000000005)
        SYSLIN      (000000010)
  SID1  PDRKHASM  IEWL      000  03/07   09:29:50  03/07     09:29:51  *I3*           .16             11               4      A
        SYSLIN  +001(000000011) SYSLMOD     (000000011)
  SID1  PDRKHASM  IEWL      000  03/07   09:29:50  03/07     09:29:51   0004          .23             11               4      A
        SYSLIN      (000000011) SYSLMOD     (000000011)
  SID1  PDRKHASM  IEWL      000  03/07   09:29:51  03/07     09:30:00  *I2*           3.07          1,501                     A
        SYSLIN      (000000007) SYSLMOD     (000001494)
  SID1  PDRKHASM  IEWL      000  03/07   09:29:51  03/07     09:30:04  *I3*           1.10            375                     A
        SYSLMOD     (000000375)
  SID1  PDRKHASM  IEWL      000  03/07   09:29:51  03/07     09:30:04   0000         4.24          1,876                     A
        SYSLIN      (000000007) SYSLMOD     (000001494) SYSLMOD     (000000375)
 SID1  PDRKH     IKJEFT01  000  03/07   09:18:45  03/07     09:30:05  *I2*           8.94          1,428
        SYSPROC     (000000004) ISPPROF     (000000061) ISPLLIB     (000000057) ISPLLIB +005(000000114) ISPLLIB +006(000000171)
        ISPPLIB     (000000018) ISPPLIB +003(000000046) ISPMLIB     (000000008) ISPMLIB +002(000000030) ISPTLIB     (000000002)
        ISPTLIB +001(000000003) ISPTLIB +002(000000002) ISP09222    (000000011) ISP09230    (000000010) ISP09235    (000000250)
        ISP09236    (000000005) SYS00001    (000000001) SYSLBC      (000000001) ISP09227    (000000006) SYS00087    (000000004)
        SYS00089    (000000004) ISP09225    (000000015) ISP09224    (000000261) ISP09234    (000000006) ISP09232    (000000038)
        ISP09231    (000000291) SYS00091    (000000005) ISP09238    (000000004)
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:30:35  03/07     09:31:23  *I3*          15.05          2,029                     A
        CPPRPARM    (000000172) CPPRERT     (000000125) SYSUT3      (000000140) VTOCDDNM    (000001592)
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:30:35  03/07     09:31:23   0000         15.35          2,029                     A
        CPPRPARM    (000000172) CPPRERT     (000000125) SYSUT3      (000000140) VTOCDDNM    (000001592)
```

```
            CPU S/U (000161949) SRB S/U (000005198) IOC S/U (000011405) MSO S/U (000024153)
SID1  PDRKHADH  SSA1WKLD  000  03/07   09:47:28  03/07     09:49:13  *I3*          18.04         2,289                    A
          CPPRPARM    (000000169) CPPRERT     (000000125) SYSUT3      (000000104) SYSPRINT    (000000004) VTOCDDNM    (000001887)
SID1  PDRKHADH  SSA1WKLD  000  03/07   09:47:28  03/07     09:49:14   0000          18.38         2,289                    A
          CPPRPARM    (000000169) CPPRERT     (000000125) SYSUT3      (000000104) SYSPRINT    (000000004) VTOCDDNM    (000001887)
SID1  PDRKHADH  SSA1WKLD  000  03/07   09:49:14  03/07     09:51:01  *I3*          18.14         2,306                    A
          CPPRPARM    (000000169) CPPRERT     (000000125) SYSUT3      (000000104) SYSPRINT    (000000004) VTOCDDNM    (000001904)
SID1  PDRKHADH  SSA1WKLD  000  03/07   09:49:14  03/07     09:51:01   0000          18.27         2,306                    A
          CPPRPARM    (000000169) CPPRERT     (000000125) SYSUT3      (000000104) SYSPRINT    (000000004) VTOCDDNM    (000001904)
SID1  PDRKHADH  SSA1WKLD  000  03/07   09:51:01  03/07     09:53:28  *I3*          18.49         2,324                    A
          CPPRPARM    (000000169) CPPRERT     (000000125) SYSUT3      (000000104) SYSPRINT    (000000004) VTOCDDNM    (000001922)
SID1  PDRKHADH  SSA1WKLD  000  03/07   09:51:01  03/07     09:53:28   0000          18.63         2,324                    A
          CPPRPARM    (000000169) CPPRERT     (000000125) SYSUT3      (000000104) SYSPRINT    (000000004) VTOCDDNM    (000001922)
SID1  PDRKHADH  SSA1WKLD  000  03/07   09:53:31  03/07     09:54:37  *I3*          18.83         2,362                    A
          CPPRPARM    (000000169) CPPRERT     (000000125) SYSUT3      (000000104) SYSPRINT    (000000004) VTOCDDNM    (000001960)
SID1  PDRKHADH  SSA1WKLD  000  03/07   09:53:31  03/07     09:54:38   0000          19.49         2,362                    A
          CPPRPARM    (000000169) CPPRERT     (000000125) SYSUT3      (000000104) SYSPRINT    (000000004) VTOCDDNM    (000001960)
SID1  PDRKHADH  SSA1WKLD  000  03/07   09:54:38  03/07     09:55:48  *I3*          18.79         2,373                    A
          CPPRPARM    (000000169) CPPRERT     (000000125) SYSUT3      (000000104) SYSPRINT    (000000004) VTOCDDNM    (000001971)
SID1  PDRKHADH  SSA1WKLD  000  03/07   09:54:38  03/07     09:55:48   0000          18.93         2,373                    A
          CPPRPARM    (000000169) CPPRERT     (000000125) SYSUT3      (000000104) SYSPRINT    (000000004) VTOCDDNM    (000001971)
```

Following is a sample of the S/U Detail Ad Hoc Report:

SYSSID	JOB NAME	PGM NAME	PGN	DATE IN	TIME IN	DATE OUT	TIME OUT	C/CDE	CPU SECONDS	DASD EXCPS	PAGING ACTIVITY	CLASS
SID1	PDRKHADH	SSA1WKLD	000	03/07	09:25:56	03/07	09:26:53	*I3*	14.21	1,910		A
	CPU S/U (000131518) SRB S/U (000004402) IOC S/U (000009885) MSO S/U (000019770)											
SID1	PDRKHADH	SSA1WKLD	000	03/07	09:25:56	03/07	09:26:53	0000	14.50	1,910		A
	CPU S/U (000131518) SRB S/U (000004402) IOC S/U (000009885) MSO S/U (000019770)											
SID1	PDRKHADH	SSA1WKLD	000	03/07	09:26:55	03/07	09:28:11	*I3*	14.21	1,938		A
	CPU S/U (000131550) SRB S/U (000004327) IOC S/U (000010010) MSO S/U (000020229)											
SID1	PDRKHADH	SSA1WKLD	000	03/07	09:26:55	03/07	09:28:11	0000	14.50	1,938		A
	CPU S/U (000131550) SRB S/U (000004327) IOC S/U (000010010) MSO S/U (000020229)											
SID1	PDRKHASM	IEV90	000	03/07	09:29:46	03/07	09:29:50	*I3*	1.36	274		A
	CPU S/U (000012419) SRB S/U (000000569) IOC S/U (000002640) MSO S/U (000000914)											
SID1	PDRKHASM	IEV90	000	03/07	09:29:46	03/07	09:29:50	0000	1.61	274		A
	CPU S/U (000012419) SRB S/U (000000569) IOC S/U (000002640) MSO S/U (000000914)											
SID1	PDRKHASM	IEWL	000	03/07	09:29:50	03/07	09:29:51	*I3*	.16	11	4	A
	CPU S/U (000001499) SRB S/U (000000039) IOC S/U (000000170) MSO S/U (000000070)											
SID1	PDRKHASM	IEWL	000	03/07	09:29:50	03/07	09:29:51	0004	.23	11	4	A
	CPU S/U (000001499) SRB S/U (000000039) IOC S/U (000000170) MSO S/U (000000070)											
SID1	PDRKHASM	IEWL	000	03/07	09:29:51	03/07	09:30:00	*I2*	3.07	1,501		A
	CPU S/U (000027708) SRB S/U (000001697) IOC S/U (000007545) MSO S/U (000002446)											
SID1	PDRKHASM	IEWL	000	03/07	09:29:51	03/07	09:30:04	*I3*	1.10	375		A
	CPU S/U (000009815) SRB S/U (000000651) IOC S/U (000002140) MSO S/U (000001084)											
SID1	PDRKHASM	IEWL	000	03/07	09:29:51	03/07	09:30:04	0000	4.24	1,876		A
	CPU S/U (000037523) SRB S/U (000002348) IOC S/U (000009685) MSO S/U (000003530)											
SID1	PDRKH	IKJEFT01	000	03/07	09:18:45	03/07	09:30:05	*I2*	8.94	1,428		
	CPU S/U (000082353) SRB S/U (000002948) IOC S/U (000009265) MSO S/U (000009079)											
SID1	PDRKHADH	SSA1WKLD	000	03/07	09:30:35	03/07	09:31:23	*I3*	15.05	2,029		A
	CPU S/U (000139360) SRB S/U (000004764) IOC S/U (000010470) MSO S/U (000023282)											
SID1	PDRKHADH	SSA1WKLD	000	03/07	09:30:35	03/07	09:31:23	0000	15.35	2,029		A
	CPU S/U (000139360) SRB S/U (000004764) IOC S/U (000010470) MSO S/U (000023282)											
SID1	PDRKHADH	SSA1WKLD	000	03/07	09:31:24	03/07	09:32:11	*I3*	14.91	2,040		A
	CPU S/U (000138117) SRB S/U (000004630) IOC S/U (000010525) MSO S/U (000023829)											
SID1	PDRKHADH	SSA1WKLD	000	03/07	09:31:24	03/07	09:32:11	0000	15.25	2,040		A
	CPU S/U (000138117) SRB S/U (000004630) IOC S/U (000010525) MSO S/U (000023829)											
SID1	PDRKHADH	SSA1WKLD	000	03/07	09:37:58	03/07	09:38:47	*I3*	16.04	2,091		A
	CPU S/U (000148249) SRB S/U (000005355) IOC S/U (000010745) MSO S/U (000022758)											
SID1	PDRKHADH	SSA1WKLD	000	03/07	09:37:58	03/07	09:38:47	0000	16.36	2,091		A
	CPU S/U (000148249) SRB S/U (000005355) IOC S/U (000010745) MSO S/U (000022758)											
SID1	PDRKHADH	SSA1WKLD	000	03/07	09:40:04	03/07	09:41:20	*I3*	16.48	2,117		A
	CPU S/U (000152931) SRB S/U (000004826) IOC S/U (000010865) MSO S/U (000023309)											
SID1	PDRKHADH	SSA1WKLD	000	03/07	09:40:04	03/07	09:41:20	0000	16.84	2,117		A
	CPU S/U (000152931) SRB S/U (000004826) IOC S/U (000010865) MSO S/U (000023309)											
SID1	PDRKHADH	SSA1WKLD	000	03/07	09:41:21	03/07	09:43:29	*I3*	16.77	2,168		A
	CPU S/U (000155694) SRB S/U (000005138) IOC S/U (000011140) MSO S/U (000024253)											

```
SID1  PDRKHADH  SSA1WKLD  000  03/07   09:41:21  03/07     09:43:29   0000          16.91          2,168                    A
           CPU S/U (000155694) SRB S/U (000005138) IOC S/U (000011140) MSO S/U (000024253)
SID1  PDRKHADH  SSA1WKLD  000  03/07   09:43:29  03/07     09:44:50  *I3*           17.20          2,196                    A
    CPU S/U (000159853) SRB S/U (000005107) IOC S/U (000011260) MSO S/U (000024590)
SID1  PDRKHADH  SSA1WKLD  000  03/07   09:43:29  03/07     09:44:52   0000          17.34          2,196                    A
    CPU S/U (000159853) SRB S/U (000005107) IOC S/U (000011260) MSO S/U (000024590)
SID1  PDRKHADH  SSA1WKLD  000  03/07   09:44:53  03/07     09:45:00  *I2*            .20             54                    A
           CPU S/U (000001748) SRB S/U (000000214) IOC S/U (000000380) MSO S/U (000000114)
SID1  PDRKH     IKJEFT01  000  03/07   09:18:45  03/07     09:45:03  *I2*           6.84            644
           CPU S/U (000061522) SRB S/U (000003144) IOC S/U (000003885) MSO S/U (000011093)
SID1  PDRKHADH  SSA1WKLD  000  03/07   09:44:53  03/07     09:47:23  *I3*           17.24          2,171                3   A
           CPU S/U (000160201) SRB S/U (000004984) IOC S/U (000011025) MSO S/U (000024039)
SID1  PDRKHADH  SSA1WKLD  000  03/07   09:44:53  03/07     09:47:23   0000          17.58          2,225                3   A
```

PGMNAME Report (Ad-Hoc)

The PGMNAME Report is requested by including a PGMNAME= parameter as a SYSIN parameter in the SSA1WKLD data reduction Jobstream. The PGMNAME parameter consists of up to eight characters. A generic PGMNAME is supported by including an asterisk after the root of the PGMNAME. For example, you can select all JOBs beginning with SOM1 by specifying PGMNAME=SOM1*.

The selection of Programs to be included in this report is limited by the BEGIN DATE, END DATE, BEGIN TIME, and END TIME parameters.

The PGMNAME report includes the following data:

- Date and time the JOB entered the system
- Date and time the JOB finished execution
- CPU time used by the JOB
- Total number of DASD accesses issued

Following is a sample of the PGMNAME Ad-Hoc report:

```
SYSSID  JOB NAME  PGM NAME  PGN  DATE IN  TIME IN  DATE OUT  TIME OUT  C/CDE    CPU SECONDS     DASD EXCPS  PAGING
ACTIVITY  CLASS
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:25:56  03/07     09:26:53  *I3*         14.21         1,910
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:25:56  03/07     09:26:53   0000        14.50         1,910
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:26:55  03/07     09:28:11  *I3*         14.21         1,938
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:26:55  03/07     09:28:11   0000        14.50         1,938
  SID1  PDRKHASM  IEV90     000  03/07   09:29:46  03/07     09:29:50  *I3*          1.36           274
  SID1  PDRKHASM  IEV90     000  03/07   09:29:46  03/07     09:29:50   0000         1.61           274
  SID1  PDRKHASM  IEWL      000  03/07   09:29:50  03/07     09:29:51  *I3*          .16            11             4
  SID1  PDRKHASM  IEWL      000  03/07   09:29:50  03/07     09:29:51   0004         .23            11             4
  SID1  PDRKHASM  IEWL      000  03/07   09:29:51  03/07     09:30:00  *I2*         3.07         1,501
  SID1  PDRKHASM  IEWL      000  03/07   09:29:51  03/07     09:30:04  *I3*         1.10           375
  SID1  PDRKHASM  IEWL      000  03/07   09:29:51  03/07     09:30:04   0000        4.24         1,876
   SID1  PDRKH     IKJEFT01  000  03/07   09:18:45  03/07     09:30:05  *I2*           8.94          1,428
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:30:35  03/07     09:31:23  *I3*         15.05         2,029
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:30:35  03/07     09:31:23   0000        15.35         2,029
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:31:24  03/07     09:32:11  *I3*         14.91         2,040
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:31:24  03/07     09:32:11   0000        15.25         2,040
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:37:58  03/07     09:38:47  *I3*         16.04         2,091
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:37:58  03/07     09:38:47   0000        16.36         2,091
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:40:04  03/07     09:41:20  *I3*         16.48         2,117
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:40:04  03/07     09:41:20   0000        16.84         2,117
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:41:21  03/07     09:43:29  *I3*         16.77         2,168
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:41:21  03/07     09:43:29   0000        16.91         2,168
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:43:29  03/07     09:44:50  *I3*         17.20         2,196
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:43:29  03/07     09:44:52   0000        17.34         2,196
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:44:53  03/07     09:45:00  *I2*          .20            54
   SID1  PDRKH     IKJEFT01  000  03/07   09:18:45  03/07     09:45:03  *I2*           6.84           644
  SID1  PDRKHADH  SSA1WKLD  000  03/07   09:44:53  03/07     09:47:23  *I3*         17.24         2,171             3
```

TSO USERID Report (Ad-Hoc)

The TSO USERID Report is requested by specifying the USERID= parameter as SYSIN parameter in the Data Reduction program Jobstream. The USERID consists of up to eight characters. A generic USERID is supported by including an asterisk after the root of the USERID. For example, all records with references to a USERID of TSO1 would be requested by specifying USERID=TSO1*.

The selection of the records from the input data is also limited by the BEGIN DATE, END DATE, BEGIN TIME, and END TIME parameters.

The TSO USERID report contains the following data pertaining to each record selected:

- Time the TSO User logged on
- Time the TSO User logged off
- Amount of CPU time used
- Number of TSO commands executed

Following is a sample of the TSO User ID Ad Hoc report:

SYSSID	TSO USER	DATE ON	TIME ON	DATE OFF	TIME OFF	COMMANDS	CPU SECONDS
SID1	PDMHD	04/24	12:10	04/24	12:29	26	9.18
SID1	PDABHA	04/24	10:32	04/24	12:34	9	6.03
SID1	PDABH	04/24	10:33	04/24	12:36	6	5.76
SID1	DCKYMAA	04/24	10:34	04/24	12:42	84	7.25
SID1	PDALLEX	04/24	12:17	04/24	12:44	104	38.46
SID1	ADDDM	04/24	10:06	04/24	12:47	292	9.04
SID1	TSMSU	04/24	09:13	04/24	12:49	40	21.98
SID1	PDKJH	04/24	08:53	04/24	12:49	170	8.73
SID1	DCRICH	04/24	09:04	04/24	12:49	187	5.57
SID1	ADJXSA	04/24	10:30	04/24	12:54	389	29.59
SID1	ADJXS	04/24	11:23	04/24	12:54	390	14.30
SID1	TSJMCA	04/24	11:37	04/24	12:54	45	4.47
SID1	PDEMA	04/24	10:15	04/24	12:55	37	2.80
SID1	TSDKOA	04/24	10:48	04/24	12:56	57	12.33
SID1	TSJXGB	04/24	08:05	04/24	12:56	555	12.20
SID1	TSMIKW	04/24	09:24	04/24	13:00	133	19.35
SID1	ADMTT	04/24	10:27	04/24	13:01	47	4.05
SID1	TSVIVS	04/24	07:20	04/24	13:01	90	41.19
SID1	TSSCAA	04/24	09:06	04/24	13:03	79	17.63
SID1	CNMGO	04/24	12:57	04/24	13:03	27	2.92

SUMMARY ANALYSIS REPORT

The Summary Analysis Report provides a summary of the data encountered during the measured period in a narrative format. This report is especially useful in quickly evaluating the magnitude of the workload and the level of service provided by the data center during the measured period. It is also useful at the technical level to provide some basic indicators of developing performance problems and areas to examine to solve current performance problems.

The following topics are addressed in the report:

- The dates included in the measured period
- Peak and average TSO activity including session statistics, average response time, average number of prime-time sessions, and the total number of sessions
- Peak paging activity
- Total JOBs executed, including a breakdown by Class and Shift
- Total number of TSO transactions processed, including a breakdown by transaction size and shift.
- CPU Utilization by shift for each component of the workload
- Average paging activity by shift for each major component of the workload
- Average DASD device busy percentage by shift for the 10 busiest devices
- Average DASD device delay time in milliseconds by shift for the 10 devices experiencing the highest delays
- Average I/O service times in milliseconds by shift for the 10 devices experiencing the longest service times
- Average DASD I/O activity by shift for the 10 busiest strings
- Average channel busy percentage by shift for the 10 busiest channels

Following is a sample of the Workload Summary Analysis Report:

SUMMARY REPORT SYSID:308A

1. THE MEASURED PERIOD BEGINS AT 00:00 MONDAY, FEBRUARY 5, AND CONTINUES THROUGH 23:59 FRIDAY, FEBRUARY 9.

2. DURING THE MEASURED PERIOD TSO USAGE PEAKED AT 26 USERS CONNECTED CONCURRENTLY.

3. DURING THE MEASURED PERIOD THERE WERE A TOTAL OF 670 INDIVIDUAL TSO SESSIONS

4. DURING THE MEASURED PERIOD PAGING ACTIVITY PEAKED AT 44 PAGES PER SECOND.

5. DURING THE MEASURED PERIOD THE AVERAGE RESPONSE TIME FOR TSO TRIVIAL TRANSACTIONS DURING PRIME SHIFT WAS: .06 SECONDS

6. DURING THE MEASURED PERIOD THE AVERAGE NUMBER OF TSO USERS ACTIVE DURING PRIME TIME WAS: 15

7. DURING THE MEASURED PERIOD A TOTAL OF 23,274 JOBS COMPLETED EXECUTION.

	00:00 - 07:00	07:00 - 17:00	17:00 - 24:00
G			2
J	890	31	941
P	2,336	398	1,957
R		1	29
S			70
T		4	27
U			75
V			40
0	3	283	96
1	2	314	100
2	28	3,196	545
3		40	37
4		15	81
5			89
6		3	29
7	13	54	21
8			94
9	16	9,599	1,815

8. DURING THE MEASURED PERIOD A TOTAL OF 56,779 TSO TRANSACTIONS WERE PROCESSED.

	00:00 - 07:00	07:00 - 17:00	17:00 - 24:00
TSO SHORT	3,567	25,846	3,257
TSO MEDIUM	1,358	6,056	688
TSO LONG	2,617	11,723	1,667

9. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT PERCENTAGE CPU BUSY TIME WITHIN SHIFT AVERAGED:

	00:00 - 07:00	07:00 - 17:00	17:00 - 24:00
DATABASE	.82	18.48	8.09
ONLINE	.27	5.76	1.37
TSO	.17	.50	.15
NETWORK	.44	1.75	.78

```
STC                          6.46                          17.65                          11.67
     BATCH                  27.59                           5.94                          26.53
     O/S                     6.17                           9.06                           8.32
     TOTALS                 41.92                          59.14                          56.91
CPPR0040I: MEMBER NAMED: DO8ARPGN MISSING FROM CPPRPARM LIBRARY.
 10. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT PERCENTAGE CPU SERVICE WITHIN SHIFT AVERAGED:
                          00:00 - 07:00                  07:00 - 17:00                  17:00 - 24:00

CPPR0040I: MEMBER NAMED: DO8ARPGN MISSING FROM CPPRPARM LIBRARY.

                                              SUMMARY REPORT                                        SYSID:308A
 11. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT PERCENTAGE MSO SERVICE WITHIN SHIFT AVERAGED:
                          00:00 - 07:00                  07:00 - 17:00                  17:00 - 24:00

CPPR0040I: MEMBER NAMED: DO8ARPGN MISSING FROM CPPRPARM LIBRARY.
 12. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT PERCENTAGE IOC SERVICE WITHIN SHIFT AVERAGED:
                          00:00 - 07:00                  07:00 - 17:00                  17:00 - 24:00

 13. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT PAGING ACTIVITY PER SECOND WITHIN SHIFT AVERAGED:
                          00:00 - 07:00                  07:00 - 17:00                  17:00 - 24:00
     STC                                                         1                              5
     BATCH                                                                                      1
     O/S                             1
     TOTALS                          1                          1                              6
 14. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT DASD DEVICE BUSY PERCENT WITHIN SHIFT AVERAGED:
                          00:00 - 07:00                  07:00 - 17:00                  17:00 - 24:00
     SPL010(C58)             8.86%                         11.26%                          8.48%
     SPL012(C5A)             8.81%                         11.23%                          8.83%
     SPL013(71A)             9.34%                         11.21%                          9.15%
     SPL011(C59)             8.54%                         11.03%                          8.95%
     DPAC10(3C0)             3.14%                         10.23%                          7.52%
     CICS02(3F9)              .45%                         10.09%                          1.46%
     DPAC22(3CA)             4.30%                          9.76%                          7.39%
     DPAC23(3CB)            10.21%                          8.88%                         10.99%
     SAR104(623)            14.07%                          8.59%                         11.60%
     DPAC24(3CE)             6.48%                          8.41%                          8.68%
```

15. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT DASD I/O DELAY TIME IN MILLISECONDS AS A RESULT OF CONGESTION AVERAGED:

	00:00 - 07:00	07:00 - 17:00	17:00 - 24:00
PERM01(3E3)	.00	9.78	.00
PERM02(3E5)	.00	1.99	.00
SPL010(C58)	.86	1.03	.38
SPL012(C5A)	.80	.98	.39
SPL011(C59)	.79	.95	.34
SPL013(71A)	5.46	.85	.62
CICS02(3F9)	.00	.48	.00
DPAC23(3CB)	.29	.47	.88
ML1007(C48)	1.65	.43	.00
TPRM01(71D)	.00	.43	.00

16. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT DASD I/O SERVICE TIME IN MILLISECONDS, INCLUDING SEEK DELAYS AND RPS MISSES,

WITHIN SHIFT AVERAGED:

	00:00 - 07:00	07:00 - 17:00	17:00 - 24:00
VCOR05(614)	7.42	42.09	29.69
STC002(F02)	20.15	35.60	30.03
RESCUE(C5B)	19.65	32.70	25.14
PERM01(3E3)	15.29	24.36	11.58
JESSPL(3D7)	21.19	21.08	30.00
PAGB01(718)	17.43	20.96	.00
PAGA03(BA1)	20.51	19.42	26.56
VCOR03(612)	28.47	19.35	9.37
PAGA01(BA2)	20.86	19.21	25.36
PAGA02(BA0)	18.86	19.19	24.49

SUMMARY REPORT SYSID:308A

17. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT DASD STRING ACTIVITY PER SECOND WITHIN SHIFT AVERAGED:

	00:00 - 07:00	07:00 - 17:00	17:00 - 24:00
200-207	43.20	61.28	80.56
F00-F07	39.92	47.52	49.12
3C0-3C7	29.04	39.44	40.96
620-623	61.92	36.20	53.40
3C8-3CF	60.24	35.84	65.44
B98-B9B	22.16	35.60	44.40
B80-B87	24.96	26.96	28.24

618-61F	46.16	25.76	54.08
B90-B97	41.52	24.40	12.32
BB0-BB3	10.68	24.00	27.36

18. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT CHANNEL PERCENT BUSY WITHIN SHIFT AVERAGED:

	00:00 - 07:00	07:00 - 17:00	17:00 - 24:00
015	3.33%	29.53%	7.02%
043	33.95%	22.75%	30.56%
04B	25.18%	16.96%	24.43%
05B	25.16%	16.78%	24.53%
053	27.36%	16.03%	22.81%
013	25.31%	14.23%	20.74%
00B	12.70%	12.15%	16.39%
01B	12.72%	11.98%	16.34%
056	32.71%	11.55%	26.94%
046	32.50%	11.34%	26.58%

JOBNAME:CPU ACTIVITY REPORT

This report details all JOBs that were run during the measured period and reports the time that each job was resident and selected data related to the resource consumption. All values are average daily values. The data that are reported are:

System-Wide statistics:

- TIMEFRAM—The average number of seconds per day included in the measured period. If the BEGIN TIME:END TIME parameters are omitted, the entire day would be included and the TIMEFRAM would be 86,400 seconds (24x60x60).
- UP-TIME—The time in seconds that the CPU was available (daily average)
- CPU(nn)—The time in seconds that the CPU was busy during the measured period (daily average)
- NON-SYS—The number of seconds of CPU time expended in processing programs in problem state during the measured period (daily average)
- OTHER—The non-system CPU time not accounted for by individual JOBs
- SYSTEM—The number of seconds of CPU time consumed by the Operating System during the measured period.
- WAIT—The number of seconds that the CPU was in the WAIT State during the measured period.

Bear in mind that the total number of CPU seconds available during the day is a function of the number of physical CPU engines installed. Thus, for a 2 engine SYSPLEX, if the machine was up 100% of the time, the total UP-TIME would be 172,800 seconds.

JOB Related Statistics:

- JOB name
- TOTAL SECNDS—The number of CPU seconds consumed by the application (TCB + SRB)
- % UP TIME—The amount of CPU time consumed by the JOB expressed as a percent of the measured period

$$\%\ \text{UP TIME} = \frac{\text{TOTAL SECNDS}}{\text{UP-TIME}} \times 100$$

- % CPU TIME—The amount of CPU time consumed by the program expressed as a percentage of the time the CPU was busy.

$$\%\ \text{CPU TIME} = \frac{\text{TOTAL SECNDS}}{\text{UP-TIME}} \times 100$$

- % NON-SYSTEM—The amount of CPU time consumed by the JOB expressed as a percentage of the NON-SYSTEM time.

$$\%\ \text{NON-SYSTEM} = \frac{\text{TOTAL SECNDS}}{\text{NON-SYSTEM}} \times 100$$

- TIME ACTIVE—The total time in seconds that the JOB was resident in memory
- % AVAILABLE—The amount of time the JOB was available for processing expressed as a percentage of the TIMEFRAM.

$$\%\ \text{AVAILABLE} = \frac{\text{TOTAL SECNDS}}{\text{TIMEFRAM}} \times 100$$

This report has an option (**AVERAGES=NONE**) that produces a list of all JOBs that were executed during the named period (**BEGIN DATE:END DATE**) during the stated time (**BEGIN TIME:END TIME**), whether or not they consumed a significant percentage of CPU time. Furthermore, the report shows the total amount of CPU time used, in minutes, as opposed to a daily average value (the default for the Linear List format report).

Performance Reports

CIMS Capacity Planner produces two reports that present the Batch JOB turnaround performance for various classifications of JOBs and the TSO Response Performance for several classes of TSO transactions.

Batch Performance Report

The BATCH PERFORMANCE REPORT (Batch Turnaround Performance) provides a summary of the turnaround time experienced by batch JOBs within several sets of JOB classifications expressed as a percentage of the number of JOBs within each Category. A count of the number of JOBs within each Category is also provided. The JOB classifications are Short, Medium, and Long. Within each of these classifications the turnaround times are broken down by the Region Sizes and whether or not they use any Magnetic Tapes. The Response Times are the difference in the time when the JOBs are received into the input queue until they terminate and are available for output. The time that a JOB is awaiting output is not considered to be part of the turnaround time.

Following is a sample of the Batch Performance Report:

```
 CIMS LAB, INC.
                                                02/05/96-02/09/96
CLASS=P                                BATCH TURNAROUND PERFORMANCE                                SYSID:308A
                                                SHIFT SHOWN: 07:00 - 17:00

                        10 MIN      30 MIN      1.0 HR      2.0 HR      4.0 HR      8.0 HR      >8.0 HR          COUNT

SHORT JOBS (CPU < 10 SEC)
  NO TAPES
   EXCP COUNT  <10K
    REGION  <2048K      92.88%       4.60%       2.51%                                                          239
    REGION  >2048K      70.96%      29.03%                                                                      31
   EXCP COUNT  >10K
    REGION  <2048K     100.00%                                                                                  4
    REGION  >2048K
  TAPES
   EXCP COUNT  <10K
    REGION  <2048K      82.35%      17.64%                                                                      17
    REGION  >2048K
   EXCP COUNT  >10K
    REGION  <2048K      25.00%      75.00%                                                                      4
    REGION  >2048K
                       ________    ________    ________    ________    ________    ________    ________       ________
SUBTOTALS              89.15%       8.81%       2.03%                                                          295

MEDIUM JOBS (CPU < 1 MIN)
  NO TAPES
   EXCP COUNT  <10K
    REGION  <2048K      87.50%                  12.50%                                                          8
    REGION  >2048K      94.11%       5.88%                                                                      17
   EXCP COUNT  >10K
    REGION  <2048K      50.00%      50.00%                                                                      2
    REGION  >2048K      90.90%       9.09%                                                                      11
  TAPES
   EXCP COUNT  <10K
    REGION  <2048K      57.14%      28.57%                              14.28%                                  7
    REGION  >2048K
```

EXCP COUNT >10K								
REGION <2048K	42.85%	42.85%	14.28%					21
REGION >2048K	50.00%	50.00%						2
SUBTOTALS	70.58%	22.05%	5.88%		1.47%			68
LONG JOBS (CPU > 1 MIN)								
NO TAPES								
EXCP COUNT <10K								
REGION <2048K								
REGION >2048K	75.00%	25.00%						4
EXCP COUNT >10K								
REGION <2048K		33.33%	66.66%					3
REGION >2048K	46.66%	6.66%	6.66%	26.66%		13.33%		15
TAPES								
EXCP COUNT <10K								
REGION <2048K								
REGION >2048K								
EXCP COUNT >10K								
REGION <2048K		100.00%						2
REGION >2048K		9.09%	18.18%	63.63%	9.09%			11
SUBTOTALS	28.57%	17.14%	14.28%	31.42%	2.85%	5.71%		35
TOTALS	80.65%	11.80%	3.76%	2.76%	.50%	.50%		398

TSO PERFORMANCE REPORT

The TSO PERFORMANCE REPORT (TSO Response Performance) provides a summary of the TSO response time for Short, Medium, Long, and Long+ (extra long) transactions expressed as a percentage of the total transactions in each transaction Category. The above transaction categories are reported by Shift for each of the TSO Performance Groups.

The transaction categories are defined as follows:

- SHORT: transactions that completed in period 1 as defined in the IPS
- MEDIUM: transactions that completed in period 2 as defined in the IPS
- LONG: transactions that completed in period 3 as defined in the IPS

- LONG+: transactions that completed after period 3 as defined in the IPS

Following is a sample of the TSO Performance Report:

CIMS LAB, INC.

02/05/96-02/09/96

TSO RESPONSE PERFORMANCE SYSID:308A

SHIFT SHOWN: 07:00 - 17:00

FIRST TSO PGN	0.5 SEC	1.0 SEC	2.0 SEC	4.0 SEC	8.0 SEC	>8.0 SEC	COUNT
TSO SHORT	100.00%						19,248
TSO MEDIUM	95.06%	4.93%					3,973
TSO LONG		1.81%	47.76%	39.04%	7.58%	3.78%	7,975
SUBTOTALS	73.80%	1.09%	12.20%	9.98%	1.93%	.96%	31,196

SECOND TSO PGN	0.5 SEC	1.0 SEC	2.0 SEC	4.0 SEC	8.0 SEC	>8.0 SEC	COUNT
TSO SHORT	99.96%	.03%					5,140
TSO MEDIUM	95.32%	4.67%					1,112
TSO LONG	1.23%	13.40%	61.67%	20.29%	.45%	2.92%	1,537
SUBTOTALS	79.81%	3.33%	12.17%	4.00%	.08%	.57%	7,789

FOURTH TSO PGN	0.5 SEC	1.0 SEC	2.0 SEC	4.0 SEC	8.0 SEC	>8.0 SEC	COUNT
TSO SHORT	100.00%						1,458
TSO MEDIUM	100.00%						971
TSO LONG	1.04%	22.25%	63.27%	11.98%	.99%	.45%	2,211
SUBTOTALS	52.84%	10.60%	30.15%	5.71%	.47%	.21%	4,640
TOTALS	72.65%	2.50%	14.11%	8.46%	1.45%	.81%	43,625

Workload Statistics Reports

CIMS Capacity Planner produces a set of Workload Statistics Reports that are designed to indicate the major consumers of CPU resources. The reports are available for JOBs (Elapsed Time), JOBs (Frequency), JOBs (CPU Time), Programs (Elapsed Time), Programs (Frequency), Programs (CPU Time), TSO USERID (Connect Time), TSO Commands (Frequency), TSO User (CPU Time), Printers (Lines), Printers (Pages), and Printers (Data Sets). Each of the reports are described below.

JOB STATISTICS REPORT

The JOB STATISTICS REPORT provides the following information related to JOBs:

- The top forty JOBs in terms of elapsed (residency) time

  For each JOB listed, the report details the JOBNAME, the total amount of time that the JOB was resident, and the percentage of the measured period that the JOB was resident.

- The top forty JOBs in terms of their frequency of execution.

  For each JOB listed, the report details the JOBNAME, the number of times that the JOB, or another JOB with the same name, was executed, and the percentage of the total mix represented by the JOB.

- The top forty JOBs in terms of the amount of CPU time they consumed during the measured period.

  For each JOB listed, the report details the amount of CPU time consumed and the percentage of the total CPU time consumed during the measured period.

Specific JOBs can be included or excluded from the report through the use of the // INCLUDE or the //EXCLUDE DD Statements and their parameters that are described in the parameter section that follows the report descriptions.

Following is a sample of the JOB Statistics Report:

JOB STATISTICS REPORT SYSID:308A

CIMS LAB, INC.

02/05/96-02/09/96

JOB (ELAPSED TIME)	SAVER	RMFGAT	NETVDM	CICP	CICE	CICG	CICF	CICB	CICD	CICR
	114:56:54	105:53:55	105:21:44	98:27:17	98:27:05	98:25:32	98:24:58	98:24:39	98:24:33	98:24:18
	95.79%	88.24%	87.80%	82.04%	82.04%	82.02%	82.01%	82.00%	82.00%	82.00%
	PHOENIX	PHOENPAC	CICA	UCC7	LCB	IDMSDCP6	LCA	CT60	IDMSDCS4	MSP
	98:23:54	98:23:53	98:20:57	96:00:00	90:46:38	90:26:26	88:57:44	87:05:28	84:23:51	84:03:22
	81.99%	81.99%	81.95%	80.00%	75.64%	75.36%	74.13%	72.57%	70.33%	70.04%
	SARVTAM	IDMSDCT1	IDMSDCS5	CT70	IDMSDCT3	ATL	LCPW	TESTMSP	CT89	CT80
	83:41:27	83:11:11	81:52:07	80:22:10	80:20:53	76:01:02	67:31:54	65:21:03	62:44:11	62:43:44
	69.74%	69.32%	68.22%	66.97%	66.95%	63.34%	56.27%	54.45%	52.28%	52.27%
	CT10	TESTLCP	TESTLCPR	PHOET00	CT11	SHADMAP	CT83	TESTATL	SARA	CMF
	60:50:23	60:30:46	60:29:24	60:27:01	60:23:36	59:36:38	58:43:37	56:50:51	48:00:00	46:21:42
	50.69%	50.42%	50.40%	50.37%	50.32%	49.67%	48.93%	47.37%	40.00%	38.63%

JOB (FREQUENCY)	PCMSZRR1	PCMSZTMS	UCC7OPER	SMVS112T	PCMSZLAH	CICBARC	PTISTRA7	PSARFDDX	PCMSZKRJ	PKEYD080
	675	216	208	184	178	178	154	144	113	112
	2.62%	.83%	.80%	.71%	.69%	.69%	.59%	.55%	.43%	.43%
	PSARHORI	TMVS348P	PKEYD060	CICRARC	CICPARC	CICGARC	CICFARC	CICEARC	CICDARC	CICAARC
	111	106	105	104	104	104	104	104	104	104
	.43%	.41%	.40%	.40%	.40%	.40%	.40%	.40%	.40%	.40%
	PUSR781B	PSAREAST	PSARENTE	PCMSZKXB	TMVS480E	PCMSZJAD	PCMSZMXT	PSARSPB0	PSARCD40	PSARBCNT
	99	99	80	77	76	75	72	66	65	65
	.38%	.38%	.31%	.29%	.29%	.29%	.27%	.25%	.25%	.25%
	PCMSZLEP	PKEYD081	TUSR801T	PCMSZDLP	SMVS186	PCMSZLMM	QCMSZQAU	PCMSZRJW	PSARLAND	PCMSZJAK
	62	60	58	58	57	57	56	53	52	52
	.24%	.23%	.22%	.22%	.22%	.22%	.21%	.20%	.20%	.20%

JOB (CPU TIME) (NO DETAIL AVAILABLE)

PROGRAM STATISTICS REPORT

The PROGRAM STATISTICS REPORT provides the following information related to the programs exhibiting the highest Residence time, Frequency of execution, and CPU time.

- The top forty programs in terms of elapsed (residency) time

  For each program listed, the report details the program name and the total amount of time, in hours, minutes, and seconds, that the program was resident.

- The top forty programs in terms of their frequency of execution.

  For each program listed, the report details the program name, the number of times that the program was executed, and the percentage of the total mix represented by the program.

- The top forty programs in terms of the amount of CPU time that they consumed

  For each program that is listed, the report details the amount of CPU time that it consumed and its percentage of the total CPU time consumed, in hours, minutes, and seconds, during the measured period.

Specific programs can be included or excluded from the report through the use of the //INCLUDE or the //EXCLUDE DD Statements and their parameters that are described in the parameter section following the report descriptions.

Following is a sample of the Program Statistics Report:

PROGRAM STATISTICS REPORT SYSID:308A

CIMS LAB, INC.

02/05/96-02/09/96

PGM (ELAPSED TIME)	DFHSIP	IKJEFT01	IDMSPRG1	GOALSYS	SORT	TPX1	ADRDSSU	$AVRINIT	DSXTMM00	ERB3GMFC
	1288:35	576:08:07	428:10:00	257:04:11	198:15:58	139:01:21	135:14:09	114:56:54	106:10:09	105:53:55
	VSAMASST	ISHSYSLB	ISHSYSLA	UCC7	ISHSYSIA	SARVTAM	SYSR	ISHSYSF0	DMGSORT	ISHSYSBW
	97:43:34	90:46:06	88:57:12	84:22:43	84:02:57	83:37:05	81:14:03	76:00:37	74:11:12	67:31:33
	ISHSYS90	ISHSYS21	ISHSYS2R	ISHSYSC0	ISHSYS60	UCC11RMS	RAMISII	DMGMERGE	CMFEXT	IDCAMS
	65:20:04	59:38:47	59:37:18	59:36:08	56:47:09	50:21:38	48:48:05	45:43:19	45:20:48	39:53:46
	ISHSYS2W	SARSTC	ARCCTL	CULPRIT	CMSCP141	ISHSYS6A	CMSC2991	SASLPA	CMSCP894	CMSCPRSE
	39:21:11	37:35:26	34:01:37	32:41:51	27:09:46	22:54:15	21:15:20	21:06:15	19:47:43	18:53:32

PGM (FREQUENCY)	SORT	UCC11RMS	IEBGENER	IDCAMS	CMSC2991	DMGMERGE	DMGSORT	IEFBR14	IKJEFT01	AFOLIBR
	19,840	18,078	15,004	11,984	10,618	5,382	5,282	3,886	2,367	1,426
	13.49%	12.30%	10.20%	8.15%	7.22%	3.66%	3.59%	2.64%	1.61%	.97%
	VSAMASST	IEWL	RMODBASE	RMORAP	RMORPT	DYL280	TBEXEC	RMOBBP	SETSSI	DFHDUP
	1,358	1,334	1,321	1,315	1,311	1,274	1,271	1,245	1,104	908
	.92%	.90%	.89%	.89%	.89%	.86%	.86%	.84%	.75%	.61%
	TECBTRAN	SYNCSORT	ADRDSSU	PMPARM	CMSCP395	SASLPA	IDMSDMLC	LISTBILD	CAOTSMON	EXVAPRT1
	907	821	710	697	680	606	552	536	513	512
	.61%	.55%	.48%	.47%	.46%	.41%	.37%	.36%	.34%	.34%
	LCD020	SASSTRLR	LCD006	TECBATCH	CPXUPTSM	TECBSTRT	IDMSDDDL	RAMISII	TECBCONS	HSMCBILD
	491	412	369	333	328	300	285	276	273	268
	.33%	.28%	.25%	.22%	.22%	.20%	.19%	.18%	.18%	.18%

PGM (CPU TIME)	IDMSPRG1	DFHSIP	ADRDSSU	RAMISII	SORT	DMGMERGE	DMGSORT	LDS021	SASLPA	CMSCPRSE
	78:35:14	18:16:57	15:38:45	13:49:55	10:31:35	7:47:46	7:33:39	4:48:38	2:54:55	2:44:58
	30.93%	7.19%	6.15%	5.44%	4.14%	3.06%	2.97%	1.89%	1.14%	1.08%
	$AVRINIT	ISHSYSF0	D02YJS	IDCAMS	GOALSYS	VSAMASST	SARSTC	D70YCM	TPX1	ISHSYSLA
	2:14:18	2:08:36	2:07:49	2:05:46	2:04:52	2:01:21	1:51:23	1:49:53	1:47:44	1:46:56
	.88%	.84%	.83%	.82%	.81%	.79%	.73%	.72%	.70%	.70%

IKJEFT01	LDSCP510	UCC7	SARVTAM	ISHSYSLB	CMSCP141	LDS200	UCC11RMS	CULPRIT	LCPFP402	
	1:40:21	1:30:52	1:30:30	1:29:05	1:23:58	1:19:52	1:19:52	1:17:56	1:15:34	1:09:52
	.65%	.59%	.59%	.58%	.55%	.52%	.52%	.51%	.49%	.45%
	PGCB0550	QINDEX	UCC11RCP	CMSCP140	PGCB0090	IEBGENER	DYL280	CMSCP894	DSCICF	DMGPP305
	1:09:19	1:04:14	1:01:52	0:57:11	0:53:01	0:48:31	0:46:28	0:45:48	0:44:40	0:44:23
	.45%	.42%	.40%	.37%	.34%	.31%	.30%	.30%	.29%	.29%

TSO USER STATISTICS REPORT

The TSO USER STATISTICS REPORT provides the following information related to the TSO Users exhibiting the highest Connect time, number of TSO Commands executed, and CPU time.

- The top forty TSO Users in terms of Connect time

  For each TSO User listed, the report details the TSO Userid, the total amount of time, in hours, minutes, and seconds, that you were active, and the percentage of the measured period that you were active.

- The top forty TSO Users in terms of the number of TSO transactions executed.

  For each User listed, the report details the Userid, the number of TSO commands executed, and the percentage of the total TSO transactions submitted by you.

- The top forty TSO Users in terms of the amount of CPU time that they consumed

  For each TSO User listed, the report details the amount of CPU time, in hours, minutes, and seconds, that they consumed and their percentage of the total TSO CPU time consumed during the measured period.

Specific TSO Users can be included or excluded from the report through the use of the //INCLUDE or the //EXCLUDE DD Statements that are described in the parameter description section that follows the report descriptions.

Following is a sample of the TSO User Statistics Report:

TSO USER STATISTICS REPORT SYSID:308A

CIMS LAB, INC.

02/05/96-02/09/96

TSO USER CONNECTED	TUSR960	TMVS804	TMVS299	TMVS518	TUSR840	TDBA319	TMVS368	TDBA316	TDBA315	SMVS055
	46:18:25	30:58:53	29:08:24	24:57:17	22:35:47	22:25:36	21:47:37	21:23:05	19:23:21	17:57:02
	38.58%	25.81%	24.28%	20.79%	18.83%	18.68%	18.16%	17.82%	16.15%	14.95%
	TUSR808	TDBA320	TUSR850	TDBA325	TMVS371	SMVS053	SMVS025	SMVS042	SMVS051	TDBA318
	16:53:08	16:44:13	13:48:14	12:47:12	10:56:18	10:08:49	8:55:23	8:45:13	8:12:50	6:38:30
	14.07%	13.94%	11.50%	10.65%	9.11%	8.45%	7.43%	7.29%	6.84%	5.53%
	SMVS023	TDBA322	TMVS532	SMVS031	TMVS437	SMVS009	TMVS531	SMVS054	TMVS825	SMVS002
	6:25:59	4:52:28	2:58:41	2:07:55	1:35:43	1:22:00	1:20:19	1:09:38	1:03:41	0:55:14
	5.36%	4.06%	2.48%	1.77%	1.32%	1.13%	1.11%	.96%	.88%	.76%
	TUSR860	SMVS017	SMVS046	TUSR991	TMVS629	TMVS605	TMVS502	TMVS356	TMVS578	TMVS236
	0:50:48	0:48:07	0:41:28	0:28:27	0:22:44	0:21:02	0:09:56	0:07:44	0:07:20	0:07:04
	.70%	.66%	.57%	.39%	.31%	.29%	.13%	.10%	.10%	.09%
TSO USER COMMANDS	TMVS368	TMVS299	TDBA325	TUSR840	TUSR960	TDBA319	SMVS055	TDBA315	TDBA320	SMVS025
	8,285	5,043	4,972	4,403	3,287	3,122	3,072	2,562	2,347	2,298
	14.58%	8.87%	8.75%	7.75%	5.78%	5.49%	5.40%	4.51%	4.13%	4.04%
	TMVS371	SMVS053	TDBA318	TUSR808	TDBA316	TMVS804	TMVS532	TMVS518	TDBA322	SMVS002
	1,973	1,868	1,813	1,752	1,152	1,039	948	843	716	664
	3.47%	3.28%	3.19%	3.08%	2.02%	1.82%	1.66%	1.48%	1.26%	1.16%
	TUSR850	SMVS031	TMVS531	SMVS042	SMVS017	TMVS437	SMVS023	SMVS051	TMVS825	TMVS236
	600	575	477	475	371	342	289	260	193	166
	1.05%	1.01%	.83%	.83%	.65%	.60%	.50%	.45%	.33%	.29%
	SMVS046	SMVS054	SMVS009	TMVS605	TMVS502	TMVS629	TMVS356	TUSR860	TMVS578	SMVS049
	147	138	121	112	108	47	47	31	29	24
	.25%	.24%	.21%	.19%	.19%	.08%	.08%	.05%	.05%	.04%
TSO USER CPU TIME	TMVS299	SMVS025	TMVS368	TDBA325	TUSR840	TDBA319	TUSR960	TMVS532	TDBA320	TMVS371
	0:21:23	0:20:07	0:14:08	0:03:10	0:02:43	0:02:31	0:02:17	0:01:59	0:01:58	0:01:45
	24.49%	23.06%	16.20%	3.63%	3.12%	2.88%	2.61%	2.27%	2.27%	2.01%

TUSR808	SMVS055	TUSR850	SMVS053	TDBA318	TMVS804	TDBA316	TDBA315	TMVS518	TMVS531		
		0:01:45	0:01:25	0:01:24	0:01:12	0:01:04	0:01:00	0:00:58	0:00:52	0:00:42	0:00:37
		2.00%	1.63%	1.61%	1.38%	1.22%	1.15%	1.12%	1.00%	.82%	.71%
		SMVS017	SMVS002	SMVS042	TDBA322	SMVS051	SMVS023	TMVS825	SMVS031	TMVS437	TMVS236
		0:00:30	0:00:24	0:00:23	0:00:21	0:00:21	0:00:17	0:00:16	0:00:13	0:00:12	0:00:08
		.58%	.46%	.45%	.41%	.41%	.32%	.30%	.25%	.24%	.16%
		SMVS046	TMVS605	TUSR860	TMVS502	SMVS009	TUSR991	SMVS054	TMVS356	TMVS629	TMVS578
		0:00:08	0:00:05	0:00:05	0:00:04	0:00:04	0:00:03	0:00:03	0:00:03	0:00:02	0:00:02
		.15%	.10%	.09%	.08%	.07%	.07%	.07%	.05%	.05%	.05%

TSO COMMAND STATISTICS REPORT

The TSO COMMAND STATISTICS REPORT provides the following information related to the TSO commands exhibiting the highest usage.

- The top forty TSO commands in terms of Frequency of use

  For each TSO command listed, the report details the TSO command, the number of times that the command was issued, and its percentage of all TSO commands issued.

- The top forty TSO commands in terms of the amount of CPU time that they consumed

  For each TSO command listed, the report details the amount of CPU time, in hours, minutes, and seconds, that it consumed and its percentage of the total TSO CPU time consumed during the measured period.

Specific TSO Commands can be included or excluded from the report through the use of the //INCLUDE DD and/or the //EXCLUDE DD Statements that are described in the parameter description section that follows the report descriptions.

Following is a sample of the TSO Command Statistics Report:

TSO COMMAND STATISTICS REPORT SYSID:308A

CIMS LAB, INC.

02/05/96-02/09/96

TSO CMND FREQUENCY	***OTHER	FREE	ALLOC	EXEC	SUBMIT	PROFILE	SESSION	ALLOCATE	DELETE	LOGOFF
	12,842	4,226	2,853	2,212	843	686	670	241	182	176
	50.84%	16.73%	11.29%	8.75%	3.33%	2.71%	2.65%	.95%	.72%	.69%

	RENAME	ATTR	CALL	ATTRIB	SEND	LOGON	EX	TIME	RMFMON	DEL
	97	86	76	31	17	15	2	1	1	1
	.38%	.34%	.30%	.12%	.06%	.05%	.00%	.00%	.00%	.00%

TSO CMND (CPUTIME)	***OTHER	CALL	EXEC	ALLOC	FREE	SUBMIT	DELETE	PROFILE	ALLOCATE	LOGOFF
	1:25:00	0:11:07	0:01:53	0:01:50	0:01:41	0:01:35	0:00:27	0:00:15	0:00:10	0:00:04
	81.52%	10.67%	1.81%	1.77%	1.62%	1.52%	.43%	.24%	.17%	.06%

	RENAME	ATTR	SEND	ATTRIB	RMFMON	LOGON	EX	DEL	TIME
	0:00:03	0:00:02	0:00:01	0:00:01	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00
	.05%	.04%	.01%	.01%	.00%	.00%	.00%	.00%	.00%

PRINTER STATISTICS REPORT

The PRINTER STATISTICS REPORT provides the following information related to the printers that exhibit the highest activity in terms of the number of lines, pages, and data sets printed.

For each printer listed, the report details the printer id and the number of lines, pages, and datasets printed.

- The top forty printers in terms of the number of Lines printed

  For each printer listed, the report details the number of lines printed and its percentage of the total printing workload.

- The top forty printers in terms of the number of pages printed

  For each printer listed, the report details the printer ID, the number of pages printed and the its percentage of all pages printed.

- The top forty printers in terms of the number of print data sets that they processed.

  For each printer listed, the report details the printer id, the number of print data sets processed, and its percentage of all print data sets processed.

Specific printers can be included or excluded from the report through the use of the //INCLUDE or the //EXCLUDE DD Statements that are described in the parameter description section that follows the report descriptions.

Following is a sample of the Printer Statistics Report:

PRINTER STATISTICS REPORT SYSID:308A

CIMS LAB, INC.

02/05/96-02/09/96

PRINTER (LINES)	R162.PU1	R163.PU1	R156.PU1	R157.PU1	R158.PU1	R160.PU1	R153.PU1	R152.PU1	R151.PU1	R159.PU1
	3,910K	2,846K	2,378K	2,234K	2,047K	1,618K	1,555K	1,533K	1,470K	1,454K
	8.98%	6.53%	5.46%	5.13%	4.70%	3.71%	3.57%	3.52%	3.37%	3.34%
	R107.PR1	R156.PR1	R161.PR1	R155.PU1	R26.PR1	R7.PR1	R163.PR1	R24.PR1	R154.PR1	R106.PR1
	1,337K	1,199K	1,164K	1,044K	989,525	923,695	900,069	876,032	786,455	733,482
	3.07%	2.75%	2.67%	2.39%	2.27%	2.12%	2.06%	2.01%	1.80%	1.68%
	R27.PR1	R154.PU1	R153.PR1	R22.PR1	R217.PR1	R160.PR1	R17.PR1	R158.PR1	R1.PR1	R20.PR1
	710,959	611,465	581,566	539,078	533,902	525,207	505,134	505,049	488,397	464,880
	1.63%	1.40%	1.33%	1.23%	1.22%	1.20%	1.16%	1.15%	1.12%	1.06%
	R4.PR1	R159.PR1	R34.PR1	R3.PR1	R152.PR1	R447.PR1	R157.PR1	R150.PU1	R11.PR1	R151.PR1
	460,934	358,160	335,508	330,038	321,483	319,684	283,003	256,532	194,091	180,233
	1.05%	.82%	.77%	.75%	.73%	.73%	.64%	.58%	.44%	.41%
PRINTER (PAGES)	R107.PR1	R162.PU1	R26.PR1	R163.PU1	R24.PR1	R161.PR1	R156.PR1	R163.PR1	R156.PU1	R157.PU1
	42,613	39,173	29,250	28,619	27,315	26,107	25,185	23,626	23,255	22,423
	5.91%	5.43%	4.05%	3.97%	3.79%	3.62%	3.49%	3.27%	3.22%	3.11%
	R154.PR1	R106.PR1	R158.PU1	R27.PR1	R7.PR1	R22.PR1	R160.PU1	R153.PU1	R152.PU1	R151.PU1
	21,946	19,056	18,882	18,767	17,495	16,639	16,402	15,809	15,632	14,878
	3.04%	2.64%	2.62%	2.60%	2.42%	2.30%	2.27%	2.19%	2.16%	2.06%
	R159.PU1	R1.PR1	R160.PR1	R158.PR1	R4.PR1	R20.PR1	R17.PR1	R153.PR1	R217.PR1	R155.PU1
	14,662	14,395	13,353	13,157	12,666	12,353	11,714	11,596	10,690	10,569
	2.03%	1.99%	1.85%	1.82%	1.75%	1.71%	1.62%	1.60%	1.48%	1.46%
	R3.PR1	R34.PR1	R447.PR1	R159.PR1	R152.PR1	R5.PR1	R157.PR1	R151.PR1	R154.PU1	R11.PR1
	10,423	9,865	9,493	9,248	9,203	8,566	8,186	6,386	6,180	5,323
	1.44%	1.36%	1.31%	1.28%	1.27%	1.18%	1.13%	.88%	.85%	.73%
PRINTER (DATASETS)	R161.PR1	R1.PR1	R3.PR1	R106.PR1	R22.PR1	R447.PR1	R34.PR1	R150.PU1	R17.PR1	R107.PR1
	1,509	1,214	926	862	762	721	687	652	616	604

```
 4.89%     3.94%     3.00%     2.79%     2.47%     2.34%     2.22%     2.11%     1.99%     1.96%

                  R152.PU1  R156.PU1  R153.PU1  R24.PR1   R280.PR2  R4.PR1    R20.PR1   R160.PR1  R160.PU1  R27.PR1
                       554       547       489       472       469       448       432       417       400       352
                     1.79%     1.77%     1.58%     1.53%     1.52%     1.45%     1.40%     1.35%     1.29%     1.14%

                  R436.PR2  R201.PR1  R154.PR1  R26.PR1   R286.PR2  R157.PU1  R163.PU1  R217.PR1  R293.PR2  R265.PR2
                       319       295       291       288       286       284       283       262       249       248
                     1.03%      .95%      .94%      .93%      .92%      .92%      .91%      .85%      .80%      .80%

                   R16.PR1   R152.PR1  R159.PU1  R151.PU1  R155.PU1  R429.PR1  R379.PR2  R417.PR2   R7.PR1    R5.PR1
                       235       234       220       216       215       213       179       176       173       148
                      .76%      .75%      .71%      .70%      .69%      .69%      .58%      .57%      .56%      .48%
```

PRINTER ACTIVITY REPORT

A new Workload subsystem report, the Printer Linear List, shows actual printer activity (lines printed, pages printed, datasets processed) for all printers in the data center. This report is intended to supplement the Printer Statistics Report that shows the top 40 printers in each of the above three categories.

The Printer Activity Report is invoked through the SSA1RPT program. Sample JCL is available in member CPPRRPT in the CIMS Capacity Planner CNTL library.

Following is a sample of the Printer Activity Report:

```
PRINTER ACTIVITY REPORT                                          SYSID:CW01
                                                 CIMS LAB, INC.
                                                   02/26/91
ELEMENT   PRINT LINES              PRINT PAGES     DATASETS
PRT1             3,897                      110           21
R1.PR1          25,086                      453           26
R2.PR1           2,079                       45           21
```

PGN SERVICE UNIT STATISTICS REPORT

The PGN Service Unit Statistics Report provides the following information related to Performance Groups as defined in the IPS:

- The top forty PGNs in terms of CPU Service Units
- The top forty PGNs in terms of MSO Service Units

- The top forty PGNs in terms of IOC Service Units
- The top forty PGNs in terms of Paging Activity

Specific Performance Groups Numbers can be included or excluded from the report through the use of the //INCLUDE or //EXCLUDE DD Statements. In either case, the PGN to be included/excluded must be preceded by PGN followed by 5 numeric digits (PGN00001, PGN00100) or by PGN plus a wild card (PGN001*) to include/exclude a range.

Following is a sample of the PGN Service Unit Statistics Report:

PGN SERVICE UNIT STATISTICS REPORT SYSID:TDC1

CIMS LAB, INC.

02/01/97-02/11/97

CPU SRVC(K)	PGN00110	PGN00112	PGN00026	PGN00307	PGN00000	PGN00306	PGN00010	PGN00102	PGN00020	PGN00116
	144,752	102,295	102,295	91,044	55,199	53,702	49,590	34,680	13,205	7,770
	21.29%	15.05%	15.05%	13.39%	8.12%	7.90%	7.29%	5.10%	1.94%	1.14%
	PGN00308	PGN00101	PGN00103	PGN00111	PGN00011	PGN00309	PGN00012	PGN00899	PGN00200	PGN00210
	5,753	5,102	4,255	3,893	3,893	2,011	194	52	12	3
	.84%	.75%	.62%	.57%	.57%	.29%	.02%	.00%	.00%	.00%
MSO SRVC(M)	PGN00112	PGN00026	PGN00110	PGN00307	PGN00306	PGN00010	PGN00102	PGN00116	PGN00308	PGN00020
	17,963	17,963	14,998	10,547	4,443	2,471	1,313	757	689	496
	24.87%	24.87%	20.76%	14.60%	6.15%	3.42%	1.81%	1.04%	.95%	.68%
	PGN00111	PGN00011	PGN00103	PGN00000	PGN00309	PGN00101				
	156	156	111	67	60	28				
	.21%	.21%	.15%	.09%	.08%	.03%				
IOC SRVC(K)	PGN00102	PGN00010	PGN00110	PGN00020	PGN00307	PGN00306	PGN00112	PGN00026	PGN00899	PGN00308
	1,079	911	373	319	208	161	147	147	85	22
	31.00%	26.17%	10.71%	9.16%	5.97%	4.62%	4.22%	4.22%	2.44%	.63%
	PGN00116	PGN00012								
	22	6								
	.63%	.17%								

PROCESSOR EXCEPTION ANALYSIS Report

The PROCESSOR EXCEPTION ANALYSIS Report provides exception data related to each fifteen-minute period during which the CPU utilization and/or the paging rates exceed the predefined levels specified in the CPPR.PARMLIB member &sidXCPT.

The following information is included in the report for each fifteen-minute period during which the CPU utilization or the paging rates exceed the specified limits:

- Date and time of the fifteen-minute period
- The type of limit that was exceeded (either BUSY or PAGES)
- The CPU number if the CPU busy limit was exceeded
- The amount of CPU time consumed (% BUSY)
- The number of pages per second if the paging rate was exceeded

Following is a sample of the Processor Exception Analysis report:

```
PROCESSOR EXCEPTION ANALYSIS                                    SYSID:308A
                                          CIMS LAB, INC.
                                          02/05/96-02/09/96

02/05 10.00 - 10.15 : BUSY%  CPU (0) (86.87) CPU (1) (85.64)
02/05 10.15 - 10.30 : BUSY%  CPU (0) (85.56) CPU (1) (85.30)
02/05 10.45 - 11.00 : BUSY%  CPU (1) (85.36)
02/05 17.15 - 17.30 : BUSY%  CPU (0) (87.65) CPU (1) (86.16)
02/05 17.30 - 17.45 : BUSY%  CPU (0) (86.61)
02/05 17.45 - 18.00 : BUSY%  CPU (0) (89.89) CPU (1) (87.85) CPU (2) (85.93)
02/05 18.00 - 18.15 : BUSY%  CPU (0) (95.14) CPU (1) (94.76) CPU (2) (94.54) CPU (3) (94.35) CPU (4) (93.84) CPU (5) (93.56)
02/05 18.15 - 18.30 : BUSY%  CPU (0) (94.47) CPU (1) (93.86) CPU (2) (93.38) CPU (3) (92.92) CPU (4) (92.16) CPU (5) (91.85)
02/05 18.30 - 18.45 : BUSY%  CPU (0) (85.93)
02/06 05.15 - 05.30 : BUSY%  CPU (0) (87.02)
02/06 05.30 - 05.45 : BUSY%  CPU (0) (86.92)
02/06 17.45 - 18.00 : BUSY%  CPU (0) (87.55)
02/06 18.00 - 18.15 : BUSY%  CPU (0) (86.19)
02/06 19.15 - 19.30 : BUSY%  CPU (0) (85.67)
02/07 02.00 - 02.15 : BUSY%  CPU (0) (91.46) CPU (1) (89.59) CPU (2) (88.13) CPU (3) (86.31)
02/07 03.00 - 03.15 : BUSY%  CPU (0) (85.73)
02/07 16.30 - 16.45 : BUSY%  CPU (1) (85.72)
02/07 17.45 - 18.00 : BUSY%  CPU (0) (92.02) CPU (1) (91.05) CPU (2) (90.13) CPU (3) (89.05) CPU (4) (88.11) CPU (5) (87.70)
02/07 18.00 - 18.15 : BUSY%  CPU (0) (92.13) CPU (1) (91.14) CPU (2) (90.28) CPU (3) (89.31) CPU (4) (88.00) CPU (5) (87.72)
02/07 18.15 - 18.30 : BUSY%  CPU (0) (90.72) CPU (1) (89.29) CPU (2) (88.17) CPU (3) (87.11) CPU (4) (85.59) CPU (5) (85.06)
02/07 18.30 - 18.45 : BUSY%  CPU (0) (88.73) CPU (1) (87.00) CPU (2) (85.35)
02/07 19.00 - 19.15 : BUSY%  CPU (0) (85.06)
02/07 19.15 - 19.30 : BUSY%  CPU (0) (85.24)
02/07 20.00 - 20.15 : BUSY%  CPU (0) (85.71)
02/07 21.00 - 21.15 : BUSY%  CPU (0) (85.90)
02/07 21.30 - 21.45 : BUSY%  CPU (0) (87.27)
02/07 22.00 - 22.15 : BUSY%  CPU (0) (87.31)
02/07 22.15 - 22.30 : BUSY%  CPU (0) (87.66) CPU (1) (85.62)
02/07 22.30 - 22.45 : BUSY%  CPU (0) (92.19) CPU (1) (91.07) CPU (2) (89.92) CPU (3) (88.79) CPU (4) (87.46) CPU (5) (87.45)
02/07 22.45 - 23.00 : BUSY%  CPU (0) (91.64) CPU (1) (90.50) CPU (2) (89.41) CPU (3) (88.01) CPU (4) (86.75) CPU (5) (86.59)
02/07 23.00 - 23.15 : BUSY%  CPU (0) (87.37)
02/07 23.15 - 23.30 : BUSY%  CPU (0) (88.12) CPU (1) (86.05)
02/07 23.30 - 23.45 : BUSY%  CPU (0) (88.98) CPU (1) (87.14) CPU (2) (85.51)
```

```
02/08 00.45 - 01.00 : BUSY%  CPU (0) (85.36)
02/08 01.00 - 01.15 : BUSY%  CPU (0) (85.57)
02/08 01.30 - 01.45 : BUSY%  CPU (0) (89.58) CPU (1) (87.54) CPU (2) (85.32)
02/08 01.45 - 02.00 : BUSY%  CPU (0) (90.32) CPU (1) (88.12) CPU (2) (85.91)
02/08 02.00 - 02.15 : BUSY%  CPU (0) (91.74) CPU (1) (89.94) CPU (2) (88.36) CPU (3) (86.26)
02/08 18.00 - 18.15 : BUSY%  CPU (0) (85.56)
02/09 02.00 - 02.15 : BUSY%  CPU (0) (85.06)
02/09 13.45 - 14.00 : BUSY%  CPU (0) (85.69) CPU (1) (86.87) CPU (2) (85.26)
02/09 14.00 - 14.15 : BUSY%  CPU (0) (90.88) CPU (1) (90.95) CPU (2) (90.30) CPU (3) (88.90) CPU (4) (89.08) CPU (5) (87.62)
02/09 14.15 - 14.30 : BUSY%  CPU (0) (89.29) CPU (1) (89.86) CPU (2) (89.10) CPU (3) (86.80) CPU (4) (87.33)
02/09 14.45 - 15.00 : BUSY%  CPU (1) (85.53)
02/09 15.15 - 15.30 : BUSY%  CPU (0) (86.72) CPU (1) (86.38)




   BUSY%=AVERAGE PERCENTAGE BUSY FOR A GIVEN CPU
   PAGES=AVERAGE PAGES PER SECOND DURING A GIVEN PERIOD
```

DASD EXCEPTION ANALYSIS Report

The DASD EXCEPTION ANALYSIS Report provides exception data related to each one-hour period during which the percentage busy by device, queue length exceptions by device, or I/O service times by device exceed a set of pre-established limits. The limits are specified in the CPPR.PARMLIB member &sidXCPT.

The following information is included in the report for each one-hour period during which one or more of the above limits are exceeded.

- Date and time during which the limits were exceeded
- The type of limit(s) exceeded
- Device busy

  Whenever a device is exceeds the specified limit, the type of exception is listed (BUSY) along with the percent of the period that the device was busy, and the volume serial number.

- Queue Length

  Whenever the queue length is exceeded for a device, the type of exception is listed (QLEN) along with the average queue length, and the volume serial number.

Following is a sample of the DASD Exception Analysis Report:

```
DASD EXCEPTION ANALYSIS                                        SYSID:308A

                                          CIMS LAB, INC.

                                          02/05/96-02/09/96

02/05 00.00 - 01.00 : SRVCE  CMC002  (48.46) JESSPL  (26.91) PERM06  (34.21) PERM03  (26.11) CAP001  (94.66) SYSDAD
(27.54)
                           PAGB01  (25.45) STC002  (38.51)
02/05 01.00 - 02.00 : SRVCE  SYSDAA  (60.04) SYSDAE  (41.39) TPRM04  (28.63) STC002  (52.52)
02/05 02.00 - 03.00 : SRVCE  TSO001  (299.68)PERM02  (31.43) STC002  (65.76)
02/05 03.00 - 04.00 : DELAY  VCOR11  (8.64)
                  SRVCE  MVS103  (38.84) PERM04  (33.22) MVS500  (51.77) VCOR03  (71.04) SYSDA2  (29.71) SYSDA3  (27.10)
                         SYSDAA  (35.40) SYSDA5  (36.05) SYSDAB  (29.03) SYSDAC  (25.07) SYSDAD  (27.37) SYSDAE  (30.04)
                         SYSDA7  (37.92) MVS505  (81.02) PAGA02  (62.60) PAGA03  (105.00)PAGA01  (105.00)SAFC50  (81.33)
                           SYSDA8  (34.52) STC002  (63.82)
02/05 04.00 - 05.00 : DELAY  CICS02  (4.40)  CICS03  (5.18)
                  SRVCE  DPAC11  (27.27) PERM01  (73.59) TSO001  (26.15) TSO004  (38.67) PERM05  (29.38) VCOR03  (36.80)
                         SYSDA2  (35.21) SYSDA3  (29.04) SYSDAA  (47.75) SYSDA5  (29.18) SYSDAB  (35.61) SYSDAD  (26.38)
                           SYSDAE  (28.74) SYSDA9  (38.37) SYSDA8  (33.24) SYSDAF  (33.40) STC002  (60.84)
02/05 05.00 - 06.00 : DELAY  VCOR04  (6.53)
                      SRVCE  PAGA02  (28.80) PAGA03  (43.20) PAGA01  (45.00) SYSDA9  (27.86) STC002  (58.17)
02/05 06.00 - 07.00 : DELAY  CICS01  (4.01)
                      SRVCE  STC002  (37.12)
02/05 07.00 - 08.00 : DELAY  MVS014  (7.67)
                      SRVCE  STC002  (33.41)
02/05 08.00 - 09.00 : DELAY  UCC000  (1.76)  CICS02  (8.23)
                      SRVCE  MVS100  (28.17) STC002  (30.45)
02/05 09.00 - 10.00 : DELAY  VLCP31  (8.11)
                  SRVCE  PERM06  (26.25) PERM03  (32.07) VCOR03  (26.36) PAGA02  (33.16) PAGA03  (34.36) PAGA01  (36.85)
                           MVS109  (41.50) MVS100  (36.80) STC002  (51.92)
02/05 10.00 - 11.00 : DELAY  TVSM02  (4.68)
                      SRVCE  PAGA02  (36.50) PAGA03  (35.10) PAGA01  (34.03) MVS100  (31.52) STC002  (28.91)
02/05 11.00 - 12.00 : SRVCE  VCOR05  (25.71) MVS109  (52.07) MVS100  (32.76) STC002  (34.26)
02/05 12.00 - 13.00 : SRVCE  PERM01  (30.73) PERM04  (30.66) VCOR03  (31.54) VCOR05  (58.59) MVS109  (61.23) MVS100
(29.33)
                           STC002  (37.35)
02/05 13.00 - 14.00 : SRVCE  VCOR05  (55.92) MVS109  (38.63) MVS100  (31.16) STC002  (34.04)
02/05 14.00 - 15.00 : DELAY  UCC000  (6.40)  MVS503  (7.97)
                  SRVCE  PAGB03  (27.69) PAGA02  (31.85) PAGA03  (33.79) PAGA01  (35.27) MVS100  (28.02) STC002  (42.71)
```

```
02/05 15.00 - 16.00 : DELAY  VPRO07  (9.95)  MVS700  (5.66)  MVS117  (8.21)
                      SRVCE  PAGB01  (26.52) SAFC51  (30.31) MVS100  (36.99) STC002  (43.35)
02/05 16.00 - 17.00 : DELAY  MVS503  (6.45)  MVS701  (9.79)  M8ACAT  (3.57)  MVS700  (8.64)
                      SRVCE  JESSPL  (45.00) MVS100  (34.55) STC002  (59.69)
02/05 17.00 - 18.00 : DELAY  TSO004  (2.63)  CICS02  (10.00) M8ACAT  (3.12)  SAR104  (7.32)  DPAC28  (9.94)  RAM103  (8.52)
                  SRVCE  VCOR05  (35.22) PAGA02  (62.32) PAGA03  (74.50) PAGA01  (91.60) MVS100  (37.26) STC002  (33.27)
02/05 18.00 - 19.00 : DELAY  MVS117  (4.76)  RAM103  (7.83)
                      SRVCE  VCOR03  (68.88) VCOR05  (69.22) MVS100  (28.38) STC002  (33.62)
02/05 19.00 - 20.00 : DELAY  DPAC28  (8.94)  RAM101  (7.65)  RAM105  (4.16)
                      SRVCE  NET001  (44.26) VCOR05  (101.33)NET011  (31.34) STC002  (33.49) STC006  (82.64)
02/05 20.00 - 21.00 : DELAY  VCOR08  (6.63)  RAM101  (4.45)  RAM105  (5.76)
                  SRVCE  PERM06  (26.40) SYSDA2  (29.86) SYSDA5  (33.43) SYSDAD  (30.27) SYSDA4  (25.99) SYSDA8  (59.90)
                             STC002  (36.36) STC006  (47.57)
02/05 21.00 - 22.00 : DELAY  DPAC16  (8.41)  DPAC24  (7.22)  SAR104  (8.56)  VLCP11  (9.37)
                  SRVCE  DTRN01  (33.45) VPRO06  (27.99) SYSDA2  (28.07) SYSDA3  (28.98) SYSDAA  (27.13) SYSDA5  (27.70)
                             TVSM52  (26.54) SYSDAC  (26.53) SYSDAE  (30.18) SYSDA4  (27.82) STC002  (30.34)
02/05 22.00 - 23.00 : DELAY  DTRN02  (6.30)  CICS03  (3.78)  MVS701  (8.19)  MVS105  (4.02)
   BUSY%=AVERAGE PERCENTAGE BUSY FOR A GIVEN DASD VOLUME
   DELAY=AVERAGE I/O DELAY DUE TO IN-STORAGE CONGESTION
   SRVCE=AVERAGE I/O SERVICE TIME IN MILLISECONDS
```

CHANNEL EXCEPTION ANALYSIS Report

The CHANNEL EXCEPTION ANALYSIS Report provides exception data related to the data channel traffic whenever the percentage of time that a channel is busy exceeds a pre-specified limit within any given one-hour period. The Pre-specified limit is contained in the CPPR.PARMLIB member &sidXCPT.

Whenever an exception is detected, the following information is listed on the report:

- Date and time period during which the norm is exceeded
- BUSY % indicates that the channel busy percent limit was exceeded
- The three-digit channel (CHPID) identifier of each channel exceeding the reporting threshold
- The percentage of the time that the channel was busy

Following is a sample of the Channel Exception Analysis Report:

```
CHANNEL EXCEPTION ANALYSIS                                    SYSID:308A

                                        CIMS LAB, INC.

                                        02/05/96-02/09/96

02/06 03.00 - 04.00 : BUSY%   00A    (70.06)  01A    (67.57)  043    (64.52)  05A    (68.60)
02/06 04.00 - 05.00 : BUSY%   00A    (74.30)  01A    (72.25)  043    (65.06)  053    (60.21)  05A    (72.74)
02/06 05.00 - 06.00 : BUSY%   057    (60.19)
02/06 06.00 - 07.00 : BUSY%   00A    (66.44)  01A    (61.89)  047    (72.59)  057    (73.03)  05A    (62.29)
02/06 07.00 - 08.00 : BUSY%   047    (61.28)  057    (60.22)
02/07 00.00 - 01.00 : BUSY%   046    (62.35)  056    (62.18)
02/07 01.00 - 02.00 : BUSY%   047    (64.61)  057    (63.71)
02/07 02.00 - 03.00 : BUSY%   00A    (67.22)  01A    (65.28)  047    (74.01)  057    (73.60)  05A    (64.90)
02/07 03.00 - 04.00 : BUSY%   00A    (76.85)  01A    (74.68)  043    (64.22)  047    (66.29)  057    (67.18)  05A    (74.75)
02/07 04.00 - 05.00 : BUSY%   00A    (72.24)  01A    (70.19)  05A    (70.34)
02/07 05.00 - 06.00 : BUSY%   00A    (76.09)  01A    (73.67)  05A    (72.95)
02/07 06.00 - 07.00 : BUSY%   00A    (61.63)
02/07 22.00 - 23.00 : BUSY%   00A    (66.51)  01A    (65.41)  05A    (66.19)
02/07 23.00 - 24.00 : BUSY%   00A    (63.73)  01A    (61.26)  05A    (61.02)
02/08 00.00 - 01.00 : BUSY%   046    (73.09)  056    (73.55)
02/08 02.00 - 03.00 : BUSY%   047    (72.65)  057    (71.63)
02/08 03.00 - 04.00 : BUSY%   043    (61.03)
02/08 05.00 - 06.00 : BUSY%   01A    (79.14)  05A    (79.37)
02/09 02.00 - 03.00 : BUSY%   047    (69.46)  057    (69.16)
02/09 03.00 - 04.00 : BUSY%   043    (63.40)
02/09 22.00 - 23.00 : BUSY%   00A    (72.99)  01A    (70.26)  05A    (70.76)

   BUSY%=AVERAGE PERCENTAGE BUSY FOR A GIVEN CHANNEL
```

DASD Activity Report

This report shows, for all volumes in the DASD farm, the daily average values for the following categories:

- SIOs per Second
- Queue Delay in Milliseconds
- Percent Busy
- Average I/O Service Time exclusive of Queue Delay in Milliseconds

In addition, the values are summarized by LCU (Logical Control Unit).

The time frame for the report is bounded through the use of BEGIN TIME and END TIME parameter statements.

Following is a sample of the DASD Activity Report:

DASD VOLUME ACTIVITY REPORT SYSID:308A

CIMS LAB, INC.
02/05/96-02/09/96

LCU	ADDR	VOLSER	SIO / SECOND	QUEUE DELAY	PERCENT BUSY	SERVICE TIME
000	0201	SAREXP	6.31		1.31%	2.07
000	0203	RESC02	.03		.01%	8.95
000	0205	DTRN04	20.61	.01	3.75%	1.80
000	0207	UCC000	23.54		7.24%	3.05
000	020C	SAR103	1.48		1.18%	7.97
000	0215	DTRN03	2.91	.03	2.19%	7.48
000	0216	DTRN02	2.38		1.82%	7.63
000	0217	DTRN01	1.72		1.82%	10.53
000	0218	DB2005	.01		.04%	24.77
000	021A	CAP003	.10		.11%	10.10
000	03C0	DPAC10	6.76	.22	7.35%	10.86
000	03C1	DPAC11	6.10	.11	4.64%	7.59
000	03C2	DPAC12	3.62	.10	4.23%	11.64
000	03C3	DPAC13	4.36	.09	4.01%	9.18
000	03C4	DPAC14	4.02	.11	4.88%	12.11
000	03C5	DPAC15	3.96	.16	5.24%	13.19
000	03C6	DPAC16	3.43	.08	3.37%	9.77
000	03C7	DPAC17	4.45	.14	6.32%	14.17
000	03C8	DPAC18	3.84	.06	4.56%	11.82
000	03C9	DPAC19	3.16	.16	3.56%	11.23
000	03CA	DPAC22	5.35	.23	7.47%	13.88
000	03CB	DPAC23	11.40	.48	9.88%	8.64
000	03CC	DPAC20	4.51	.22	5.34%	11.82
000	03CD	DPAC21	5.10	.45	4.75%	9.27
000	03CE	DPAC24	10.50	.28	7.92%	7.52
000	03CF	DPAC25	7.56	.22	7.72%	10.18
000	03D0	SYSE01	.27		.28%	9.97
000	03D3	CMC001	2.45		1.85%	7.50
000	03D6	CMC002	.19		.34%	16.57
000	03E0	PERM06	.60		.89%	14.33
000	03E1	SAR101	3.07	.06	2.88%	9.35
000	03E2	SAR102	1.80		2.00%	11.01
000	03E3	PERM01	.58	.27	.93%	15.59
000	03E4	TSO001	3.10		1.41%	4.47
000	03E5	PERM02	.73	.22	1.02%	13.83
000	03E6	TSO002	2.13		.69%	3.23

000	03E7	PERM03	.56		.80%	14.01
000	03E8	TSO003	1.00		.50%	4.49
000	03E9	PERM04	.59		.78%	12.96
000	03EA	TSO004	.72		.35%	5.00
000	03EB	PERM05	.64		1.04%	15.92
000	03F0	DPAC05	.08		.17%	19.48
000	03F1	VPR003	2.68	.19	3.06%	11.35
000	03F2	VPR004	1.48	.06	1.56%	10.44
000	03F3	VPR005	3.23		3.39%	10.47
000	03F4	VPR006	3.55	.14	4.43%	12.42
000	03F5	VPR007	5.51	.24	3.78%	6.85
000	03F6	VPR008	4.25	.10	5.18%	12.14
000	03F7	VPR009	3.71		3.94%	10.57
000	03F8	CICS01	3.15		2.33%	7.37
000	03F9	CICS02	5.27	.13	4.76%	8.98

DASD DETAIL REPORT

The DASD Detail Report shows, by day, the total number of SIO incidents for each specific volume in the DASD farm. The SIO count is further broken down by shift. The values are presented by logical string.

Following is a sample of the DASD Detail Report:

DASD DETAIL REPORT CIMS LAB, INC. SYSID:

VOLSER CUU	0000-0700	0700-1700	1700-2400	0000-2400	VOLSER CUU	0000-0700	0700-1700	1700-2400	0000-2400	05.FEB
PAGC04 200	88	142	4	234	SAREXP 201	4,127	55,892	101,790	161,809	
PAGC06 202	88	142	4	234	RESC02 203	104	190	4	298	
MVS601 204	8,041	29,769	37,748	75,558	DTRN04 205	3,581	12,072	284,319	299,972	
MVS507 206	21,134	240,327	121,038	382,499	UCC000 207	174,077	1,093,693	548,893	1,816,663	
PAGB04 208	67	79	4	150	RESB01 209	104	190	4	298	
MVS011 20A	3,878	16,073	11,102	31,053	PAGB02 20B	74	100	4	178	
SAR103 20C	7,977	126,439	26,547	160,963	M8BCAT 20D	960	86	11	1,057	
DB2001 20E	83	127	4	214	DB2004 20F	125	278	79	482	
	41,356	413,098	196,451	650,905		183,152	1,162,501	935,104	2,280,757	2,931,662
M8CCAT 210	156	86	11	253	MVSTSO 211	41,079	51,526	20,320	112,925	
RESC01 212	104	194	4	302	MVS600 213	4,804	12,194	24,529	41,527	
MVS603 214	345	23,132	13,484	36,961	DTRN03 215	428	57,699	92,174	150,301	
DTRN02 216	640	107,059	92,905	200,604	DTRN01 217	896	43,740	74,498	119,134	
DB2005 218	161	1,333	552	2,046	DB2002 219	116	226	4	346	
CAP003 21A	291	341	473	1,105	MVS702 21B	8,092	113,410	59,298	180,800	
MVS504 21C	13,692	90,359	70,638	174,689	MVS503 21D	15,726	322,580	96,832	435,138	
RESB02 21E	104	192	4	300	MVS103 21F	10,857	75,549	14,327	100,733	
	15,493	222,696	178,071	416,260		81,998	676,924	381,982	1,140,904	1,557,164
DPAC10 3C0	42,012	272,807	175,285	490,104	DPAC11 3C1	40,164	153,506	148,193	341,863	
DPAC12 3C2	35,686	190,971	114,847	341,504	DPAC13 3C3	48,283	127,752	196,598	372,633	
DPAC14 3C4	39,068	139,845	123,436	302,349	DPAC15 3C5	38,691	176,727	129,868	345,286	
DPAC16 3C6	36,570	145,707	177,854	360,131	DPAC17 3C7	31,026	197,422	129,862	358,310	
DPAC18 3C8	30,584	160,858	85,636	277,078	DPAC19 3C9	31,977	57,027	85,714	174,718	
DPAC22 3CA	23,195	237,671	160,891	421,757	DPAC23 3CB	426,779	388,618	405,597	1,220,994	
DPAC20 3CC	40,520	135,832	138,651	315,003	DPAC21 3CD	38,330	38,597	84,368	161,295	
DPAC24 3CE	33,375	292,607	330,853	656,835	DPAC25 3CF	472,965	219,689	307,851	1,000,505	
	281,010	1,576,298	1,307,453	3,164,761		1,128,215	1,359,338	1,488,051	3,975,604	7,140,365
SYSE01 3D0	10,602	8,367	7,954	26,923	RESE01 3D1	104	196	4	304	
RESE02 3D2	104	196	4	304	CMC001 3D3	8,601	151,887	32,287	192,775	
PAGE01 3D4	149	327	4	480	PAGE02 3D5	149	329	347	825	
CMC002 3D6	3,676	9,379	4,845	17,900	JESSPL 3D7	149	327	4	480	
	14,531	18,269	12,807	45,607		9,003	152,739	32,642	194,384	239,991
PERM06 3E0	19,047	10,742	30,972	60,761	SAR101 3E1	32,708	127,353	51,388	211,449	
SAR102 3E2	7,094	101,848	47,824	156,766	PERM01 3E3	6,259	9,064	29,468	44,791	
TSO001 3E4	3,278	75,091	62,537	140,906	PERM02 3E5	18,208	22,249	31,629	72,086	
TSO002 3E6	692	86,645	64,266	151,603	PERM03 3E7	5,617	9,346	33,474	48,437	
TSO003 3E8	1,488	45,825	41,438	88,751	PERM04 3E9	8,789	11,626	26,646	47,061	
TSO004 3EA	2,113	15,236	44,862	62,211	PERM05 3EB	21,123	18,523	23,550	63,196	
	33,712	335,387	291,899	660,998		92,704	198,161	196,155	487,020	1,148,018

Workload Graphs

CPPR produces a number of reports that graphically depict selected elements of the workload. These graphs are produced on the printer as part of the workload report generation program. Each graph is individually selectable using the various SYSIN parameters included in the SSA1RPT Jobstream.

CPU ACTIVITY GRAPH

The CPU ACTIVITY GRAPH is produced by day of the week such as Monday, Tuesday, etc. In the event that the reporting period, as defined by the BEGIN DATE and the END DATE, contains more than one Monday, for example, the graph produced for Monday would include more than one days' worth of data. If a list of specific days is not specified, the CPU ACTIVITY GRAPHs for all days (Sunday through Saturday) are produced.

When more than one day's worth the data is combined into a single graph, the CPU BUSY percentages for each 15 minute period throughout the day are averaged together for reporting purposes. The high water mark average value is also retained so that the graph will present both the average and maximum CPU percent utilization for each 15 minute period throughout each day. The average and maximum percent utilization values are presented on each line of the graph.

The graph is presented in a Horizontal Bar Chart format with the horizontal axis representing the CPU utilization percent and the Vertical axis representing the time of day in 15 minute intervals. The data is presented in four groups of six hours each.

The peak periodic CPU Utilization value is represented by a line of dashes (-) while the average values are represented by a set of asterisks (*). When no dashes are visible, it means that the average and peak values are identical or nearly so.

For the various parameters that apply to the CPU activity graph, see the parameters under the report generation parameter section following the report descriptions.

Following is a sample of the CPU Activity Graph:

```
WORKLOAD ANALYSIS GRAPHS.                          DAY SHOWN: MONDAY                                M/P(0)  SYSID:308A
                                                   02/05/96-02/09/96
                                          C P U   A C T I V I T Y   G R A P H

00.00 - 00.15 |**********************  0044:0044                12.00 - 12.15 |************************0070:0070**
00.15 - 00.30 |**********************   0041:0041               12.15 - 12.30 |************************0062:0062
00.30 - 00.45 |************************0077:0077******          12.30 - 12.45 |************************0066:0066
00.45 - 01.00 |************************0067:0067*              12.45 - 13.00 |************************0066:0066
01.00 - 01.15 |************************ 0046:0046              13.00 - 13.15 |************************0068:0068*
01.15 - 01.30 |************************0056:0056              13.15 - 13.30 |************************0072:0072***
01.30 - 01.45 |************************0065:0065              13.30 - 13.45 |************************0072:0072***
01.45 - 02.00 |************************0053:0053              13.45 - 14.00 |************************0070:0070**
02.00 - 02.15 |********************     0038:0038              14.00 - 14.15 |************************0075:0075*****
02.15 - 02.30 |**********************   0042:0042              14.15 - 14.30 |************************0078:0078******
02.30 - 02.45 |********************     0039:0039              14.30 - 14.45 |************************0077:0077******
02.45 - 03.00 |***************          0030:0030              14.45 - 15.00 |************************0076:0076*****
03.00 - 03.15 |************************0072:0072***           15.00 - 15.15 |************************0076:0076*****
03.15 - 03.30 |************************0072:0072***           15.15 - 15.30 |************************0076:0076*****
03.30 - 03.45 |************************0072:0072***           15.30 - 15.45 |************************0077:0077******
03.45 - 04.00 |************************0065:0065              15.45 - 16.00 |************************0074:0074****
04.00 - 04.15 |************************0060:0060              16.00 - 16.15 |************************0075:0075*****
04.15 - 04.30 |************************0058:0058              16.15 - 16.30 |************************0076:0076*****
04.30 - 04.45 |***************          0030:0030              16.30 - 16.45 |************************0077:0077******
04.45 - 05.00 |******************       0036:0036              16.45 - 17.00 |************************0076:0076*****
05.00 - 05.15 |**********************   0039:0039              17.00 - 17.15 |************************0081:0081********
05.15 - 05.30 |*****************        0032:0032              17.15 - 17.30 |************************0087:0087***********
05.30 - 05.45 |******************       0037:0037              17.30 - 17.45 |************************0086:0086**********
05.45 - 06.00 |**********************   0040:0040              17.45 - 18.00 |************************0089:0089************
              +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
             0...10...20...30...40...50...60...70...80...90..100               0...10...20...30...40...50...60...70...80...90..100


06.00 - 06.15 |**********************   0039:0039              18.00 - 18.15 |************************0095:0095***************
06.15 - 06.30 |*****************        0034:0034              18.15 - 18.30 |************************0094:0094**************
06.30 - 06.45 |************           0024:0024                18.30 - 18.45 |************************0085:0085**********
06.45 - 07.00 |***************          0029:0029              18.45 - 19.00 |************************0078:0078******
07.00 - 07.15 |************************0049:0049              19.00 - 19.15 |************************0081:0081********
07.15 - 07.30 |************************0053:0053              19.15 - 19.30 |************************0083:0083**********
07.30 - 07.45 |************************0057:0057              19.30 - 19.45 |************************0080:0080*******
07.45 - 08.00 |************************0047:0047              19.45 - 20.00 |************************0080:0080*******
08.00 - 08.15 |************************0067:0067*             20.00 - 20.15 |************************0081:0081********
08.15 - 08.30 |************************0070:0070**            20.15 - 20.30 |************************0073:0073****
08.30 - 08.45 |************************0072:0072***           20.30 - 20.45 |************************0073:0073****
08.45 - 09.00 |************************0076:0076*****         20.45 - 21.00 |************************0056:0056
09.00 - 09.15 |************************0077:0077******        21.00 - 21.15 |************************0070:0070**
09.15 - 09.30 |************************0076:0076*****         21.15 - 21.30 |************************0067:0067*
09.30 - 09.45 |************************0079:0079*******       21.30 - 21.45 |************************0065:0065
09.45 - 10.00 |************************0080:0080*******       21.45 - 22.00 |************************0054:0054
10.00 - 10.15 |************************0086:0086**********    22.00 - 22.15 |************************0069:0069**
10.15 - 10.30 |************************0085:0085**********    22.15 - 22.30 |************************0071:0071***
10.30 - 10.45 |************************0083:0083**********    22.30 - 22.45 |************************0073:0073****
10.45 - 11.00 |************************0084:0084*********     22.45 - 23.00 |************************0076:0076*****
11.00 - 11.15 |************************0083:0083*********     23.00 - 23.15 |************************0069:0069**
11.15 - 11.30 |************************0081:0081********      23.15 - 23.30 |************************0072:0072***
11.30 - 11.45 |************************0074:0074****          23.30 - 23.45 |************************0076:0076*****
11.45 - 12.00 |************************0071:0071***           23.45 - 24.00 |************************0079:0079*******
              +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
             0...10...20...30...40...50...60...70...80...90..100               0...10...20...30...40...50...60...70...80...90..100

 LEGEND: (*) = AVERAGE  (-) = PEAK
```

TSO ACTIVITY GRAPH

The TSO ACTIVITY GRAPH is produced by day of the week such as Monday, Tuesday, etc. In the event that the reporting period, as defined by the BEGIN DATE and the END DATE contains more than one Monday, for example, the graph produced for Monday would include more than one days' worth of data. If a list of specific days is not specified, the TSO ACTIVITY GRAPHs for all days (Sunday through Saturday) are produced.

When more than one day's worth the data is combined into a single graph, the TSO Activity values for each 15 minute period throughout the day are averaged together for reporting purposes. The high water mark value is also retained so that the graph will present both the average and maximum value for each 15 minute period throughout each day. The average and maximum values are presented on each line of the graph.

The graph is presented in a Horizontal Bar Chart format with the horizontal axis representing TSO Users Active and the Vertical axis representing the time of day in 15 minute intervals. The data is presented in four groups of six hours each.

The maximum TSO Activity value is represented by a line of dashes (-) while the average values are represented by a set of asterisks (*). When no dashes are visible, it means that the average and peak values are identical or virtually so.

For the various parameters that apply to the TSO ACTIVITY GRAPH, see the parameters under the report generation parameter section following the report descriptions.

Following is a sample of the TSO Activity Graph:

```
WORKLOAD ANALYSIS GRAPHS.                    DAY SHOWN: MONDAY                    SYSID:308A
                                             02/05/96-02/09/96
                                   T S O   A C T I V I T Y   G R A P H

00.00 - 00.15 |******              0011:0011      12.00 - 12.15 |*******             0014:0014
00.15 - 00.30 |*                   0001:0001      12.15 - 12.30 |********            0015:0015
00.30 - 00.45 |**                  0004:0004      12.30 - 12.45 |********            0016:0016
00.45 - 01.00 |**                  0003:0003      12.45 - 13.00 |*******             0014:0014
01.00 - 01.15 |*                   0002:0002      13.00 - 13.15 |*******             0014:0014
01.15 - 01.30 |                    0000:0000      13.15 - 13.30 |*********           0018:0018
01.30 - 01.45 |                    0000:0000      13.30 - 13.45 |**********          0020:0020
01.45 - 02.00 |                    0000:0000      13.45 - 14.00 |***********         0021:0021
02.00 - 02.15 |*                   0001:0001      14.00 - 14.15 |***********         0021:0021
02.15 - 02.30 |*                   0001:0001      14.15 - 14.30 |**********          0020:0020
02.30 - 02.45 |*                   0001:0001      14.30 - 14.45 |**********          0020:0020
02.45 - 03.00 |*                   0002:0002      14.45 - 15.00 |***********         0021:0021
03.00 - 03.15 |*                   0002:0002      15.00 - 15.15 |***********         0022:0022
03.15 - 03.30 |**                  0003:0003      15.15 - 15.30 |************        0023:0023
03.30 - 03.45 |**                  0003:0003      15.30 - 15.45 |**************      0026:0026
03.45 - 04.00 |**                  0003:0003      15.45 - 16.00 |**************      0025:0025
04.00 - 04.15 |**                  0003:0003      16.00 - 16.15 |**************      0025:0025
04.15 - 04.30 |**                  0003:0003      16.15 - 16.30 |***********         0022:0022
04.30 - 04.45 |**                  0004:0004      16.30 - 16.45 |***********         0022:0022
04.45 - 05.00 |**                  0004:0004      16.45 - 17.00 |***********         0021:0021
05.00 - 05.15 |**                  0004:0004      17.00 - 17.15 |***********         0021:0021
05.15 - 05.30 |**                  0003:0003      17.15 - 17.30 |*********           0018:0018
05.30 - 05.45 |**                  0003:0003      17.30 - 17.45 |*******             0014:0014
05.45 - 06.00 |**                  0004:0004      17.45 - 18.00 |******              0012:0012
              +----+----+----+----+----+----+----+----+----+----+                    +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100                   0...10...20...30...40...50...60...70...80...90..100

06.00 - 06.15 |**                  0003:0003      18.00 - 18.15 |******              0012:0012
06.15 - 06.30 |**                  0004:0004      18.15 - 18.30 |******              0012:0012
06.30 - 06.45 |**                  0004:0004      18.30 - 18.45 |******              0012:0012
06.45 - 07.00 |***                 0005:0005      18.45 - 19.00 |******              0011:0011
07.00 - 07.15 |***                 0005:0005      19.00 - 19.15 |******              0011:0011
07.15 - 07.30 |**                  0004:0004      19.15 - 19.30 |*****               0010:0010
07.30 - 07.45 |****                0007:0007      19.30 - 19.45 |*****               0010:0010
07.45 - 08.00 |****                0007:0007      19.45 - 20.00 |*****               0009:0009
08.00 - 08.15 |*****               0009:0009      20.00 - 20.15 |*****               0009:0009
08.15 - 08.30 |******              0011:0011      20.15 - 20.30 |*****               0009:0009
08.30 - 08.45 |*******             0014:0014      20.30 - 20.45 |*****               0009:0009
08.45 - 09.00 |*******             0014:0014      20.45 - 21.00 |****                0008:0008
09.00 - 09.15 |*******             0014:0014      21.00 - 21.15 |*****               0009:0009
09.15 - 09.30 |********            0015:0015      21.15 - 21.30 |*****               0009:0009
09.30 - 09.45 |********            0015:0015      21.30 - 21.45 |*****               0009:0009
09.45 - 10.00 |********            0015:0015      21.45 - 22.00 |*****               0010:0010
10.00 - 10.15 |*********           0017:0017      22.00 - 22.15 |*****               0010:0010
10.15 - 10.30 |*********           0017:0017      22.15 - 22.30 |****                0008:0008
10.30 - 10.45 |*********           0017:0017      22.30 - 22.45 |****                0008:0008
10.45 - 11.00 |*********           0017:0017      22.45 - 23.00 |*****               0010:0010
11.00 - 11.15 |*********           0018:0018      23.00 - 23.15 |*****               0010:0010
11.15 - 11.30 |*********           0018:0018      23.15 - 23.30 |*****               0009:0009
11.30 - 11.45 |*********           0018:0018      23.30 - 23.45 |******              0011:0011
11.45 - 12.00 |*********           0018:0018      23.45 - 24.00 |******              0012:0012
              +----+----+----+----+----+----+----+----+----+----+                    +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100                   0...10...20...30...40...50...60...70...80...90..100

 LEGEND: (*) = AVERAGE  (-) = PEAK
```

PAGING ACTIVITY GRAPH

The PAGING ACTIVITY GRAPH is produced by day of the week such as Monday, Tuesday, etc. In the event that the reporting period, as defined by the BEGIN DATE and the END DATE contains more than one Monday, for example, the graph produced for Monday would include more than one days' worth of data. If a list of specific days is not specified, the PAGING ACTIVITY GRAPHs for all days (Sunday through Saturday) are produced.

When more than one day's worth the data is combined into a single graph, the paging rates for each 15 minute period throughout the day are averaged together for reporting purposes. The peak value for each 15 minute period is retained so that the graph will present both the average and peak paging rates for each 15 minute period throughout each day. The average and peak paging rates are printed on each line of the graph.

The graph is presented in a Horizontal Bar Chart format with the horizontal axis representing the paging rates (pages per second) and the Vertical axis representing the time of day in 15 minute intervals. The data is presented in four groups of six hours each.

The maximum paging rate is represented by a line of dashes (-) while the average values are represented by a set of asterisks (*). When no dashes are visable, it means that the average and peak values are identical or virtually so.

For the various parameters that apply to the PAGING ACTIVITY GRAPH, see the parameters under the report generation parameter section following the report descriptions.

Following is a sample of the Paging Activity Graph:

```
WORKLOAD ANALYSIS GRAPHS.                    DAY SHOWN: MONDAY                    SYSID:308A
                                             02/05/96-02/09/96
                                   P A G I N G  A C T I V I T Y  G R A P H

00.00 - 00.15 |                    0000:0000      12.00 - 12.15 |                    0000:0000
00.15 - 00.30 |                    0000:0000      12.15 - 12.30 |                    0000:0000
00.30 - 00.45 |                    0000:0000      12.30 - 12.45 |                    0000:0000
00.45 - 01.00 |                    0000:0000      12.45 - 13.00 |                    0000:0000
01.00 - 01.15 |                    0000:0000      13.00 - 13.15 |                    0000:0000
01.15 - 01.30 |                    0000:0000      13.15 - 13.30 |                    0000:0000
01.30 - 01.45 |                    0000:0000      13.30 - 13.45 |                    0000:0000
01.45 - 02.00 |                    0000:0000      13.45 - 14.00 |                    0000:0000
02.00 - 02.15 |                    0000:0000      14.00 - 14.15 |*                   0001:0001
02.15 - 02.30 |                    0000:0000      14.15 - 14.30 |                    0000:0000
02.30 - 02.45 |                    0000:0000      14.30 - 14.45 |**                  0004:0004
02.45 - 03.00 |                    0000:0000      14.45 - 15.00 |                    0000:0000
03.00 - 03.15 |                    0000:0000      15.00 - 15.15 |                    0000:0000
03.15 - 03.30 |**                  0004:0004      15.15 - 15.30 |                    0000:0000
03.30 - 03.45 |                    0000:0000      15.30 - 15.45 |                    0000:0000
03.45 - 04.00 |                    0000:0000      15.45 - 16.00 |                    0000:0000
04.00 - 04.15 |                    0000:0000      16.00 - 16.15 |                    0000:0000
04.15 - 04.30 |                    0000:0000      16.15 - 16.30 |                    0000:0000
04.30 - 04.45 |                    0000:0000      16.30 - 16.45 |                    0000:0000
04.45 - 05.00 |                    0000:0000      16.45 - 17.00 |                    0000:0000
05.00 - 05.15 |                    0000:0000      17.00 - 17.15 |**********          0044:0044
05.15 - 05.30 |                    0000:0000      17.15 - 17.30 |                    0000:0000
05.30 - 05.45 |                    0000:0000      17.30 - 17.45 |**                  0003:0003
05.45 - 06.00 |*                   0002:0002      17.45 - 18.00 |                    0000:0000
              +----+----+----+----+----+----+----+----+----+----+                    +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100                   0...10...20...30...40...50...60...70...80...90..100

06.00 - 06.15 |                    0000:0000      18.00 - 18.15 |                    0000:0000
06.15 - 06.30 |                    0000:0000      18.15 - 18.30 |                    0000:0000
06.30 - 06.45 |                    0000:0000      18.30 - 18.45 |                    0000:0000
06.45 - 07.00 |                    0000:0000      18.45 - 19.00 |                    0000:0000
07.00 - 07.15 |                    0000:0000      19.00 - 19.15 |                    0000:0000
07.15 - 07.30 |                    0000:0000      19.15 - 19.30 |                    0000:0000
07.30 - 07.45 |                    0000:0000      19.30 - 19.45 |                    0000:0000
07.45 - 08.00 |                    0000:0000      19.45 - 20.00 |                    0000:0000
08.00 - 08.15 |                    0000:0000      20.00 - 20.15 |                    0000:0000
08.15 - 08.30 |                    0000:0000      20.15 - 20.30 |                    0000:0000
08.30 - 08.45 |                    0000:0000      20.30 - 20.45 |                    0000:0000
08.45 - 09.00 |*                   0001:0001      20.45 - 21.00 |                    0000:0000
09.00 - 09.15 |                    0000:0000      21.00 - 21.15 |                    0000:0000
09.15 - 09.30 |                    0000:0000      21.15 - 21.30 |                    0000:0000
09.30 - 09.45 |*                   0001:0001      21.30 - 21.45 |                    0000:0000
09.45 - 10.00 |                    0000:0000      21.45 - 22.00 |                    0000:0000
10.00 - 10.15 |*                   0001:0001      22.00 - 22.15 |                    0000:0000
10.15 - 10.30 |*                   0001:0001      22.15 - 22.30 |                    0000:0000
10.30 - 10.45 |*                   0001:0001      22.30 - 22.45 |                    0000:0000
10.45 - 11.00 |                    0000:0000      22.45 - 23.00 |                    0000:0000
11.00 - 11.15 |                    0000:0000      23.00 - 23.15 |                    0000:0000
11.15 - 11.30 |                    0000:0000      23.15 - 23.30 |                    0000:0000
11.30 - 11.45 |                    0000:0000      23.30 - 23.45 |                    0000:0000
11.45 - 12.00 |                    0000:0000      23.45 - 24.00 |*                   0001:0001
              +----+----+----+----+----+----+----+----+----+----+                    +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100                   0...10...20...30...40...50...60...70...80...90..100

 LEGEND: (*) = AVERAGE  (-) = PEAK
```

CHANNEL ACTIVITY GRAPH

The CHANNEL ACTIVITY GRAPH presents the average and peak channel utilization (% busy) for each day of the week by channel for the reporting period included within the BEGIN DATE and END DATE parameters specified with the report request. The data is reported by shift for each data channel. A performance threshold is drawn on each chart so that is is obvious when any channel activity exceeds the system performance threshold.

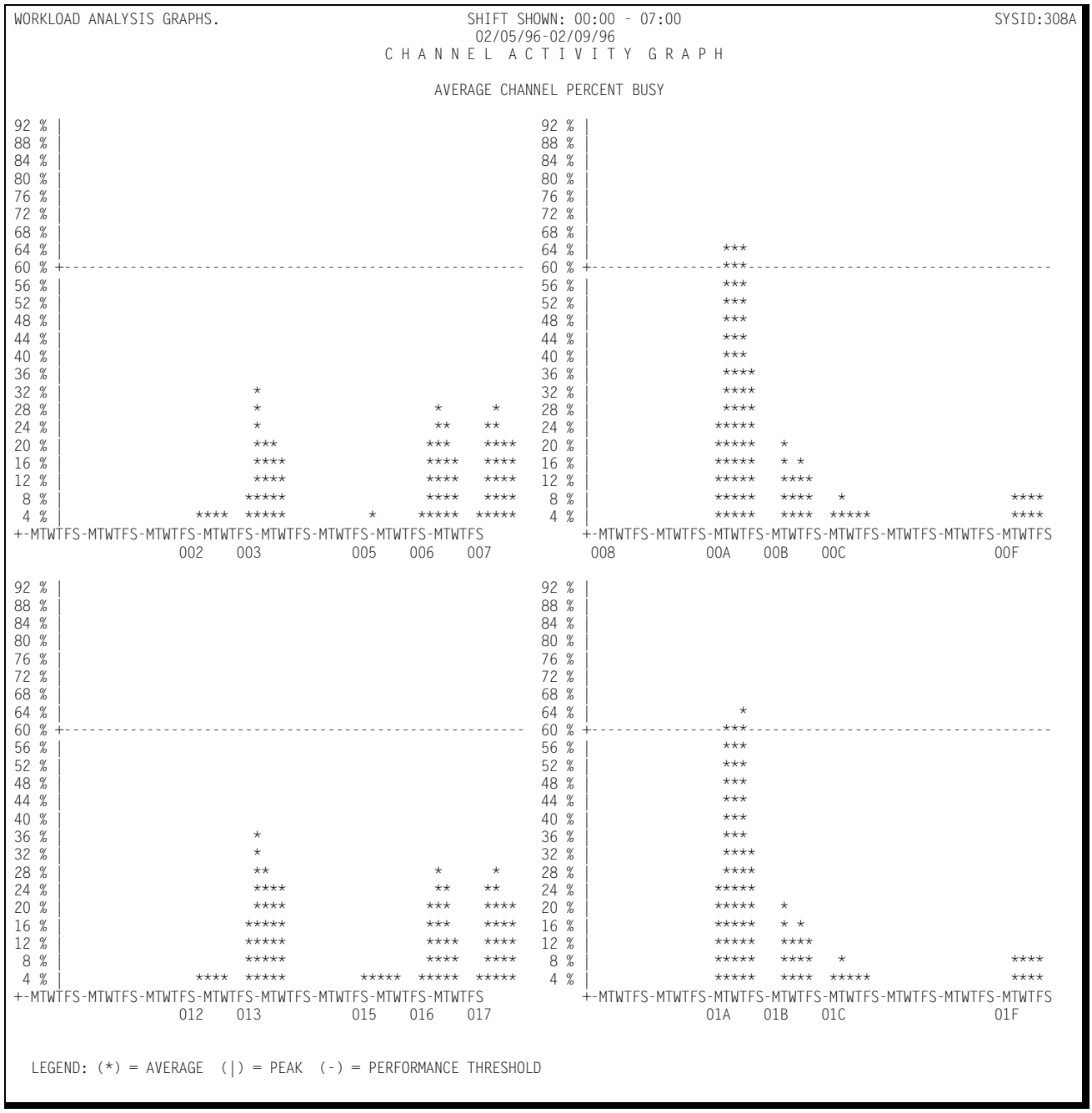
The data is presented in a vertical bar chart format with the horizontal axis depicting the days of the week by data channel and the vertical axis denoting the channel utilization levels.

The average channel busy percentages are determined by averaging together the channel busy percentages for each of the 15 minute periods throughout each shift for the days specified in the report request. The peak values are determined by retaining the maximum of all channel busy percentages during each shift for each day.

Each request for the CHANNEL ACTIVITY GRAPH will result in three sets of graphs being produced (one set for each shift). When the reporting period exceeds one week, multiple days are averaged together (multiple Mondays are taken together and reported as Monday's average and peak values, and so on throughout the remaining days of the week). The weekly average and peak values are reported for each data channel.

Average values are represented by asterisks "*", while peak values are represented by vertical bars "|."

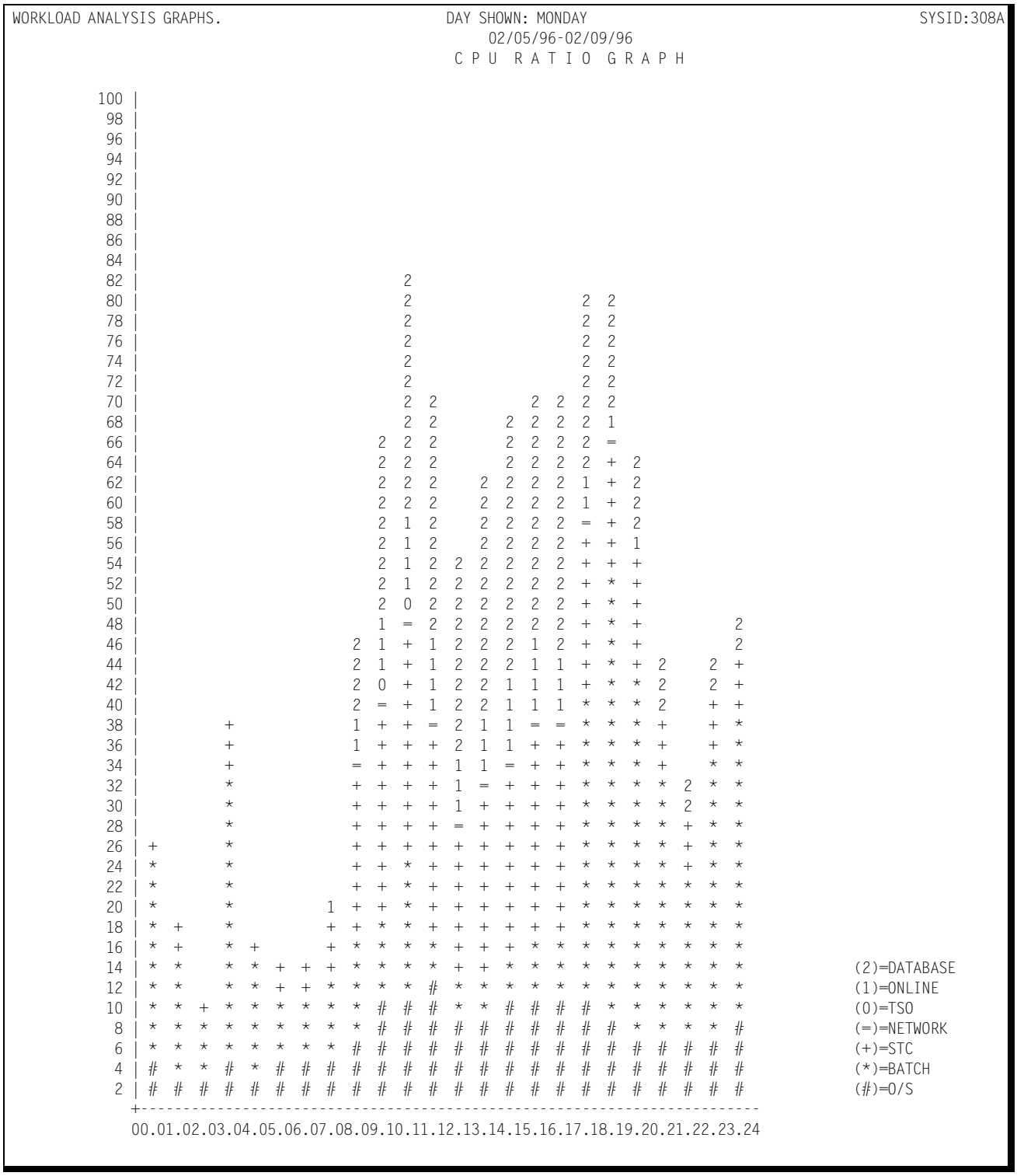
Following is a sample of the Channel Activity Graph:



CPU RATIO GRAPH

The CPU Ratio Graph shows the percent CPU busy by Hour broken down into categories of Workload as specified in the Local member of the CPPR.PARMLIB.

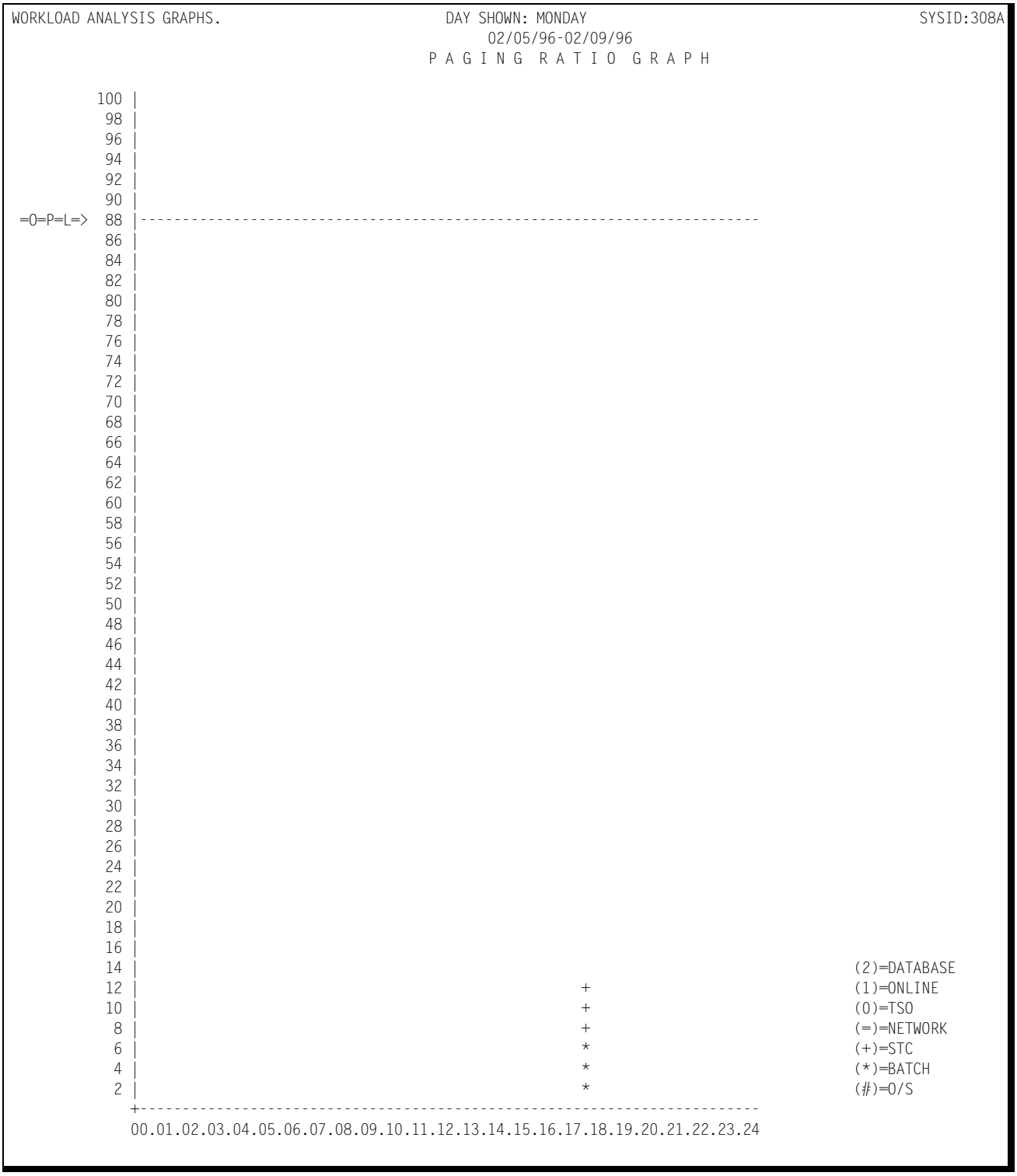
Following is a sample of the CPU Ratio Graph:



PAGING RATIO GRAPH

The Paging Ratio Graph shows Paging Activity (Central to Auxiliary and Auxiliary to Central) in terms of Pages per second, by hour of the day, broken down into categories of Workload as specified in the Local member of CPPR.PARMLIB.

Following is a sample of the Paging Ratio Graph:



DASD I/O SERVICE TIME GRAPH

The DASD I/O SERVICE TIME GRAPH presents the average and peak I/O service times in milliseconds for each day of the week by DASD VOLSER/Channel address for the reporting period included within the BEGIN DATE and END DATE parameters specified with the report request. The data is reported by shift for each device. A performance threshold is drawn on each chart so that is is obvious when any service times exceed the system performance threshold.

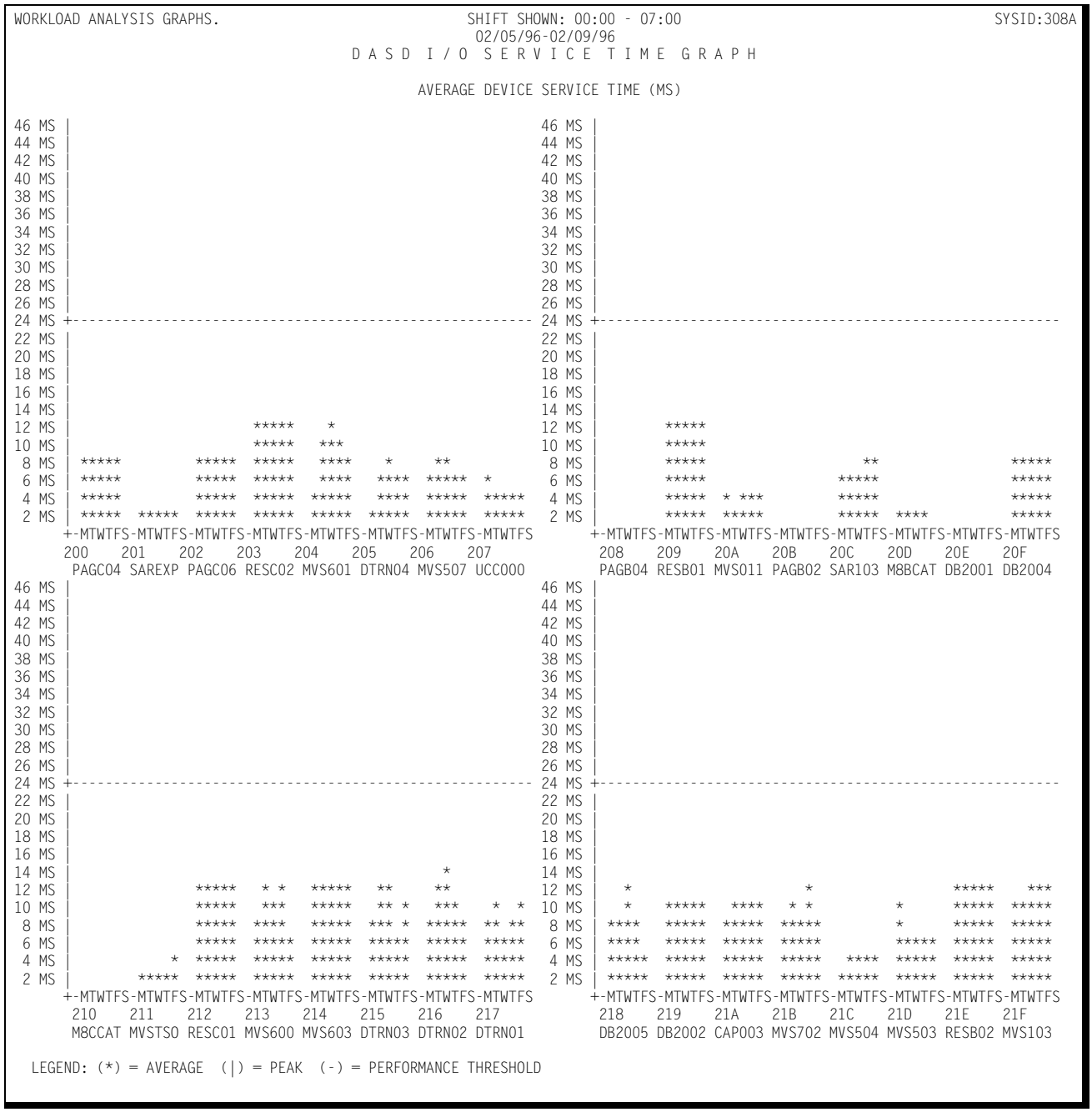
The data is presented in a vertical bar chart format with the horizontal axis depicting the days of the week by device and with the vertical axis denoting the service times.

The average service times are determined by averaging together the service times for each of the 15 minute periods throughout each shift for the days specified in the report request. The peak values are determined by retaining the maximum of all service times encountered during each shift for each day.

Each request for the DASD I/O SERVICE TIME GRAPH will result in three sets of graphs being produced (one set for each shift). When the reporting period exceeds one week, multiple days are averaged together (multiple Mondays are taken together and reported as Monday's average and peak values, and so on throughout the remaining days of the week). The weekly average and peak values are reported for each data channel.

Average values are represented by asterisks "*", while peak values are represented by vertical bars "|". When the average values are equal to the peak values, the vertical bars are overlaid with asterisks. The absence of any vertical bars indicates that the peak and the average values are either equal or nearly so.

Following is a sample of the DASF I/O Service Time Graph:



DASD DEVICE ACTIVITY GRAPH

The DASD DEVICE ACTIVITY GRAPH presents the average and peak loads in I/O operations per second for each day of the week for each DASD string by VOLSER/ Channel address within the reporting period defined by the BEGIN DATE and END DATE parameters specified with the report request. The data is reported by shift for each DASD string.

The data is presented in a vertical bar chart format with the horizontal axis depicting the days of the week by device and with the vertical axis denoting the number of I/O operations per second for each device.

The average I/O's per second are determined by averaging together the number of I/O's per second for each of the 15 minute periods throughout each shift for the days specified in the report request. The peak values are determined by retaining the maximum average of all I/O's per second encountered during each shift for each day.

Each request for the DASD DEVICE ACTIVITY GRAPH will result in three sets of graphs being produced (one set for each shift). When the reporting period exceeds one week, multiple days are averaged together (multiple Mondays are taken together and reported as Monday's average and peak values, and so on throughout the remaining days of the week). The weekly average and peak values are reported for each DASD string.

Average values are represented by asterisks "*", while peak values are represented by vertical bars "|". When the average values are equal to the peak values, the vertical bars are overlaid with asterisks. The absence of any vertical bars indicates that the peak and the average values are either equal or nearly so.

Following is a sample of the DASD Device Activity Graph:

```
DASD VOLUME ACTIVITY REPORT                                    SYSID:CWO1
                                          CIMS LAB, INC.
                                            02/26/91
 LCU  ADDR VOLSER SIO / SECOND  QUEUE DELAY PERCENT BUSY SERVICE TIME
 000  0140 MVSRES          .77                   1.65%        21.17
 000  0141 TSO001         1.97                   4.33%        21.89
 000  0142 AXP001          .70                   1.30%        18.29
 000  0143 SYS001          .73                   1.27%        17.15
 000  0144 SYS008          .09                    .28%        28.52
 000  0145 SYS009          .28                    .53%        18.15
 000  0146 AXP007         2.38                   3.63%        15.19
 000  0147 SYS010          .29                    .49%        16.85
 000  0150 SYS002         2.49          .39      4.92%        19.69
 000  0151 SYS006          .50                   1.10%        21.63
 000  0152 SYS003         1.22                   2.60%        21.27
 000  0153 TSO002         1.96                   4.03%        20.54
 000  0154 SYS004         3.48                   7.33%        21.04
 000  0155 SYS017          .38                    .69%        17.68
 000  0156 AXP002         4.02          .09      3.88%         9.64
 000  0157 SYS005         1.64                   2.82%        17.11
 000  0721 SSP001         1.88                   3.36%        17.81
 000  0722 SSP002          .35                    .67%        18.90
 000  0726 DMS001         1.90                   2.19%        11.51
 000  0727 AXP004         2.40          .76      3.68%        15.26
 000  0728 SPOOL1         1.86                   2.84%        15.19
 000  0729 AXP005          .46                    .88%        19.07
 000  072A TSO003         1.29                   2.76%        21.19
 000  072B SYS007         1.29                   2.27%        17.43
 000  08C0 PAG001          .68                   1.30%        18.86
 000  08C1 MVSESA          .64                   1.26%        19.37
 000  08C2 ESA001          .41                    .94%        22.42
 000  08C5 ESA002          .40                    .71%        17.48
 000  08C6 AXP006         1.46                   2.65%        18.04
 000  08C7 AXP003          .35                    .63%        17.89
 000  0EC0 PAG002          .38                    .23%         5.91
 000  0EC1 PAG003          .37                    .23%         6.23
 000  0EC2 PAG004          .36                    .24%         6.49
 000  0EC3 PAG005          .39                    .24%         6.05
 000  0EC4 PAG006          .37                    .24%         6.42
 000  0EC5 PAG007          .40                    .24%         5.88
 000  0EC6 PAG008          .40                    .24%         6.04
 000  0EC7 PAG009          .37                    .24%         6.55
 000  0EC8 PAG010          .37                    .24%         6.41
 000  0EC9 PAG011          .40                    .24%         6.03
 000  0ECA PAG012          .39                    .24%         6.07
 000  0ECB PAG013          .39                    .24%         5.96
 000  0ECC PAG014          .39                    .22%         5.74
 000  0ECD PAG015          .39                    .22%         5.81
 000  0ECE PAG016          .39                    .23%         5.83
 000  LCU SUMMARY        44.03          .07     70.52%        17.61
```

DASD QUEUE DELAY GRAPH

The DASD QUEUE DELAY GRAPH presents the average and peak DASD queue delay times in milliseconds for each day of the week for each DASD string by VOLSER/ Channel address for the reporting period included within the BEGIN DATE and END DATE parameters specified with the report request. The data is reported by shift for each DASD string.

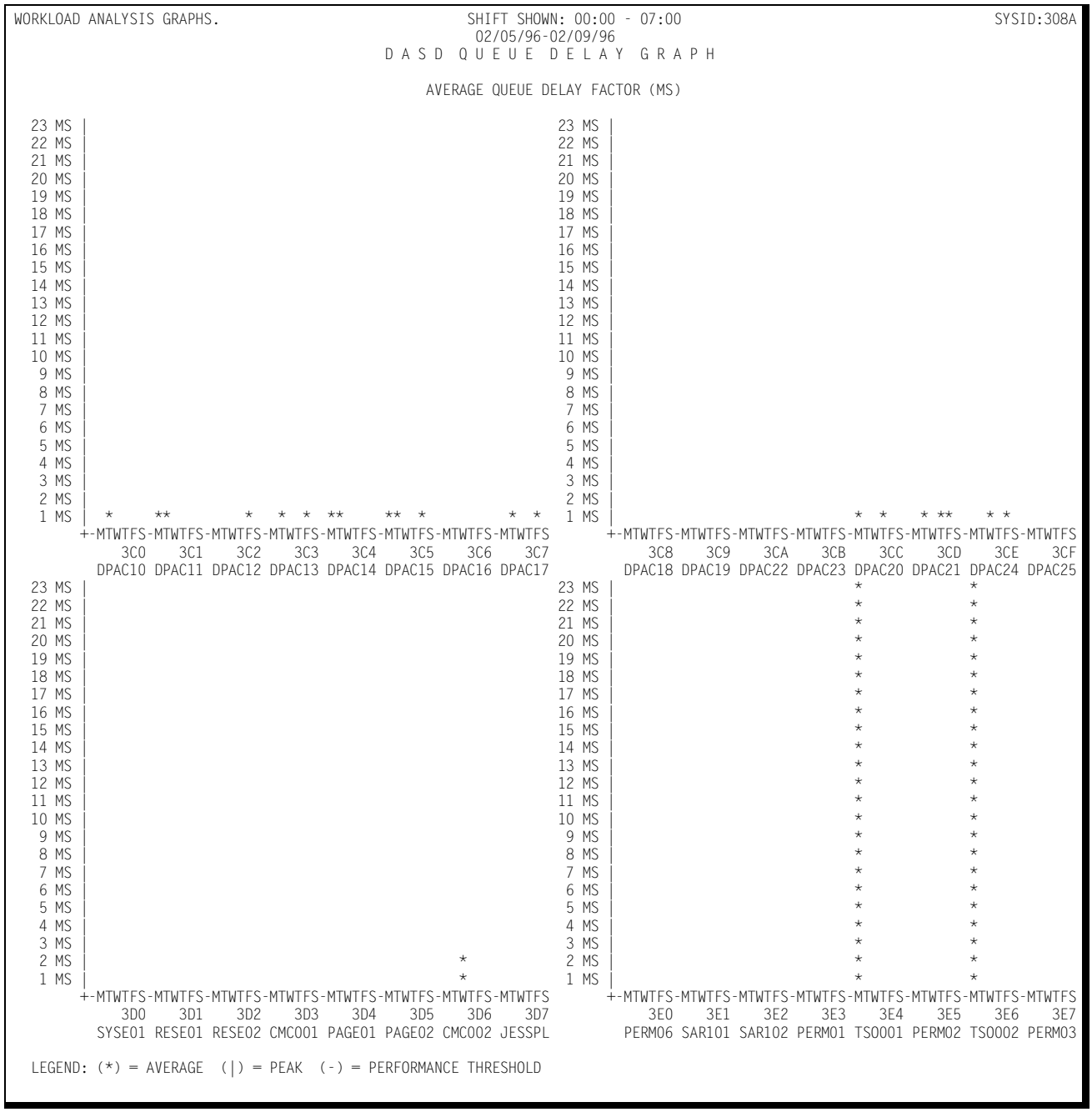
The data is presented in a vertical bar chart format with the horizontal axis depicting the days of the week by device and with the vertical axis denoting the queue delays.

The average queue delay times are determined by averaging together the queue delay times for each of the 15 minute periods throughout each shift for the days specified in the report request. The peak values are determined by retaining the maximum of all queue delay times encountered during each shift for each day.

Each request for the DASD QUEUE DELAY GRAPH will result in three sets of graphs being produced (one set for each shift). When the reporting period exceeds one week, multiple days are averaged together (multiple Mondays are taken together and reported as Monday's average and peak values, and so on throughout the remaining days of the week). The weekly average and peak values are reported for each DASD string.

Average values are represented by asterisks "*", while peak values are represented by vertical bars "|". When the average values are equal to the peak values, the vertical bars are overlaid with asterisks. The absence of any vertical bars indicates that the peak and the average values are either equal or nearly so.

Following is a sample of the DASD Queue Delay Graph:



DASD DEVICE BUSY GRAPH

The DASD DEVICE BUSY GRAPH presents the average and peak loads in percent busy for each day of the week for each DASD string by VOLSER/Channel address for the reporting period included within the BEGIN DATE and END DATE parameters specified with the report request. The data is reported by shift for each DASD string.

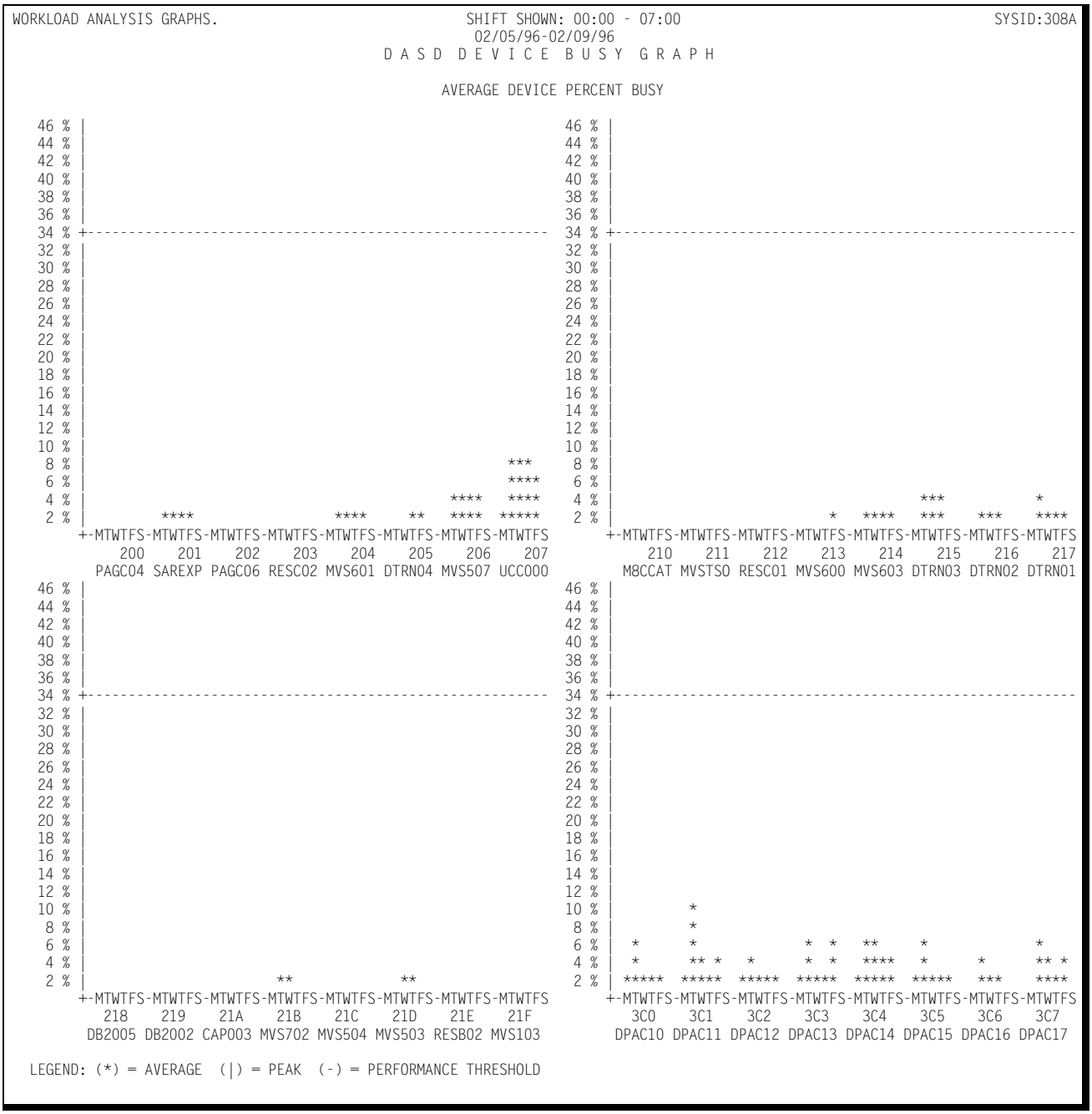
The data is presented in a vertical bar chart format with the horizontal axis depicting the days of the week by device and with the vertical axis denoting the percentage of time each device was busy.

The average device busy percentages are determined by averaging together the device busy percentages for each of the 15 minute periods throughout each shift for the days specified in the report request. The peak values are determined by retaining the maximum of all device busy percentages encountered during each shift for each day.

Each request for the DASD DEVICE BUSY GRAPH will result in three sets of graphs being produced (one set for each shift). When the reporting period exceeds one week, multiple days are averaged together (multiple Mondays are taken together and reported as Monday's average and peak values, and so on throughout the remaining days of the week). The weekly average and peak values are reported for each DASD string.

Average values are represented by asterisks "*", while peak values are represented by vertical bars "|". When the average values are equal to the peak values, the vertical bars are overlaid with asterisks. The absence of any vertical bars indicates that the peak and the average values are either equal or nearly so.

Following is a sample of the DASD Device Busy Graph:



Central/Expanded/Auxiliary Storage Activity Graphs (ESA only)

CIMS Capacity Planner produces five graphs that depict the paging activity between Central, Expanded, and Auxiliary storage. They are:

CENTRAL-TO-EXPANDED STORAGE ACTIVITY GRAPH

This graph shows Page Move activity from Central Storage to Expanded Storage in terms of Pages per second. The average value for each fifteen minute period is shown, along with the peak value for that fifteen minute period.

Following is a sample of the Central-to-Expanded Storage Activity Graph:

```
WORKLOAD ANALYSIS GRAPHS.                            DAY SHOWN: MONDAY                                      SYSID:308A
                                                     02/05/96-02/09/96
                                                CENTRAL-TO-EXPANDED STORAGE ACTIVITY GRAPH

 00.00 - 00.15 |*                       0002:0002        12.00 - 12.15 |****                    0057:0057
 00.15 - 00.30 |*                       0004:0004        12.15 - 12.30 |***                     0054:0054
 00.30 - 00.45 |                        0000:0000        12.30 - 12.45 |****                    0059:0059
 00.45 - 01.00 |*                       0001:0001        12.45 - 13.00 |****                    0067:0067
 01.00 - 01.15 |                        0000:0000        13.00 - 13.15 |****                    0062:0062
 01.15 - 01.30 |                        0000:0000        13.15 - 13.30 |*****                   0079:0079
 01.30 - 01.45 |                        0000:0000        13.30 - 13.45 |*****                   0077:0077
 01.45 - 02.00 |                        0000:0000        13.45 - 14.00 |*****                   0082:0082
 02.00 - 02.15 |                        0000:0000        14.00 - 14.15 |*****                   0081:0081
 02.15 - 02.30 |                        0000:0000        14.15 - 14.30 |******                  0100:0100
 02.30 - 02.45 |                        0000:0000        14.30 - 14.45 |*******                 0125:0125
 02.45 - 03.00 |                        0000:0000        14.45 - 15.00 |******                  0098:0098
 03.00 - 03.15 |*                       0002:0002        15.00 - 15.15 |******                  0093:0093
 03.15 - 03.30 |*                       0003:0003        15.15 - 15.30 |******                  0095:0095
 03.30 - 03.45 |*                       0001:0001        15.30 - 15.45 |*****                   0090:0090
 03.45 - 04.00 |*                       0001:0001        15.45 - 16.00 |*****                   0084:0084
 04.00 - 04.15 |*                       0001:0001        16.00 - 16.15 |*****                   0084:0084
 04.15 - 04.30 |*                       0001:0001        16.15 - 16.30 |******                  0098:0098
 04.30 - 04.45 |*                       0001:0001        16.30 - 16.45 |******                  0096:0096
 04.45 - 05.00 |                        0000:0000        16.45 - 17.00 |*****                   0087:0087
 05.00 - 05.15 |*                       0001:0001        17.00 - 17.15 |*************           0211:0211
 05.15 - 05.30 |                        0000:0000        17.15 - 17.30 |*********               0154:0154
 05.30 - 05.45 |                        0000:0000        17.30 - 17.45 |******                  0105:0105
 05.45 - 06.00 |**                      0023:0023        17.45 - 18.00 |*********               0152:0152
               +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900                0...90..180..270..360..450..540..630..720..810..900


 06.00 - 06.15 |**                      0026:0026        18.00 - 18.15 |*****                   0073:0073
 06.15 - 06.30 |*                       0004:0004        18.15 - 18.30 |**                      0036:0036
 06.30 - 06.45 |*                       0004:0004        18.30 - 18.45 |**                      0036:0036
 06.45 - 07.00 |*                       0015:0015        18.45 - 19.00 |*                       0012:0012
 07.00 - 07.15 |*                       0015:0015        19.00 - 19.15 |**                      0023:0023
 07.15 - 07.30 |**                      0019:0019        19.15 - 19.30 |*                       0013:0013
 07.30 - 07.45 |**                      0028:0028        19.30 - 19.45 |*                       0018:0018
 07.45 - 08.00 |***                     0037:0037        19.45 - 20.00 |*                       0014:0014
 08.00 - 08.15 |**                      0030:0030        20.00 - 20.15 |*                       0018:0018
 08.15 - 08.30 |***                     0037:0037        20.15 - 20.30 |*                       0007:0007
 08.30 - 08.45 |***                     0045:0045        20.30 - 20.45 |*                       0005:0005
 08.45 - 09.00 |***                     0050:0050        20.45 - 21.00 |*                       0004:0004
 09.00 - 09.15 |****                    0059:0059        21.00 - 21.15 |*                       0013:0013
 09.15 - 09.30 |****                    0059:0059        21.15 - 21.30 |*                       0011:0011
 09.30 - 09.45 |****                    0067:0067        21.30 - 21.45 |*                       0008:0008
 09.45 - 10.00 |*****                   0078:0078        21.45 - 22.00 |*                       0004:0004
 10.00 - 10.15 |******                  0097:0097        22.00 - 22.15 |*                       0011:0011
 10.15 - 10.30 |*******                 0115:0115        22.15 - 22.30 |*                       0015:0015
 10.30 - 10.45 |******                  0107:0107        22.30 - 22.45 |*                       0003:0003
 10.45 - 11.00 |******                  0100:0100        22.45 - 23.00 |*                       0005:0005
 11.00 - 11.15 |*******                 0119:0119        23.00 - 23.15 |**                      0025:0025
 11.15 - 11.30 |*******                 0117:0117        23.15 - 23.30 |*                       0017:0017
 11.30 - 11.45 |******                  0097:0097        23.30 - 23.45 |*                       0014:0014
 11.45 - 12.00 |****                    0069:0069        23.45 - 24.00 |*                       0005:0005
               +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900                0...90..180..270..360..450..540..630..720..810..900

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

EXPANDED-TO-CENTRAL STORAGE ACTIVITY GRAPH

This graph shows Page Move activity from Expanded Storage to Central Storage in terms of Pages per second. The average value for each fifteen minute period is shown, along with the peak value for that fifteen minute period.

Following is a sample of the Expanded-to-Central Storage Activity Graph:

```
WORKLOAD ANALYSIS GRAPHS.                    DAY SHOWN: MONDAY                    SYSID:308A
                                             02/05/96-02/09/96
                                EXPANDED-TO-CENTRAL STORAGE ACTIVITY GRAPH

00.00 - 00.15 |*                    0001:0001      12.00 - 12.15 |***                  0052:0052
00.15 - 00.30 |*                    0001:0001      12.15 - 12.30 |***                  0050:0050
00.30 - 00.45 |                     0000:0000      12.30 - 12.45 |****                 0055:0055
00.45 - 01.00 |                     0000:0000      12.45 - 13.00 |****                 0067:0067
01.00 - 01.15 |                     0000:0000      13.00 - 13.15 |****                 0059:0059
01.15 - 01.30 |                     0000:0000      13.15 - 13.30 |*****                0075:0075
01.30 - 01.45 |                     0000:0000      13.30 - 13.45 |*****                0076:0076
01.45 - 02.00 |                     0000:0000      13.45 - 14.00 |*****                0080:0080
02.00 - 02.15 |                     0000:0000      14.00 - 14.15 |*****                0085:0085
02.15 - 02.30 |                     0000:0000      14.15 - 14.30 |******               0099:0099
02.30 - 02.45 |                     0000:0000      14.30 - 14.45 |*******              0126:0126
02.45 - 03.00 |                     0000:0000      14.45 - 15.00 |******               0091:0091
03.00 - 03.15 |                     0000:0000      15.00 - 15.15 |*****                0088:0088
03.15 - 03.30 |                     0000:0000      15.15 - 15.30 |******               0091:0091
03.30 - 03.45 |                     0000:0000      15.30 - 15.45 |*****                0086:0086
03.45 - 04.00 |                     0000:0000      15.45 - 16.00 |*****                0082:0082
04.00 - 04.15 |                     0000:0000      16.00 - 16.15 |*****                0084:0084
04.15 - 04.30 |                     0000:0000      16.15 - 16.30 |******               0094:0094
04.30 - 04.45 |                     0000:0000      16.30 - 16.45 |******               0092:0092
04.45 - 05.00 |                     0000:0000      16.45 - 17.00 |*****                0086:0086
05.00 - 05.15 |                     0000:0000      17.00 - 17.15 |***********          0188:0188
05.15 - 05.30 |                     0000:0000      17.15 - 17.30 |********             0127:0127
05.30 - 05.45 |                     0000:0000      17.30 - 17.45 |*****                0087:0087
05.45 - 06.00 |*                    0003:0003      17.45 - 18.00 |******               0107:0107
              +----+----+----+----+----+----+----+----+----+----+                     +----+----+----+----+----+----+----+----+----+----+
              0...90..180..270..360..450..540..630..720..810..900                     0...90..180..270..360..450..540..630..720..810..900

06.00 - 06.15 |*                    0006:0006      18.00 - 18.15 |****                 0065:0065
06.15 - 06.30 |*                    0003:0003      18.15 - 18.30 |**                   0031:0031
06.30 - 06.45 |*                    0004:0004      18.30 - 18.45 |**                   0033:0033
06.45 - 07.00 |*                    0011:0011      18.45 - 19.00 |*                    0012:0012
07.00 - 07.15 |*                    0014:0014      19.00 - 19.15 |**                   0019:0019
07.15 - 07.30 |*                    0014:0014      19.15 - 19.30 |*                    0011:0011
07.30 - 07.45 |**                   0023:0023      19.30 - 19.45 |*                    0013:0013
07.45 - 08.00 |**                   0027:0027      19.45 - 20.00 |*                    0011:0011
08.00 - 08.15 |**                   0027:0027      20.00 - 20.15 |*                    0013:0013
08.15 - 08.30 |**                   0032:0032      20.15 - 20.30 |*                    0004:0004
08.30 - 08.45 |***                  0040:0040      20.30 - 20.45 |*                    0004:0004
08.45 - 09.00 |***                  0049:0049      20.45 - 21.00 |*                    0001:0001
09.00 - 09.15 |****                 0056:0056      21.00 - 21.15 |*                    0007:0007
09.15 - 09.30 |****                 0060:0060      21.15 - 21.30 |*                    0008:0008
09.30 - 09.45 |****                 0066:0066      21.30 - 21.45 |*                    0006:0006
09.45 - 10.00 |*****                0073:0073      21.45 - 22.00 |*                    0004:0004
10.00 - 10.15 |******               0094:0094      22.00 - 22.15 |*                    0007:0007
10.15 - 10.30 |*******              0114:0114      22.15 - 22.30 |*                    0006:0006
10.30 - 10.45 |******               0105:0105      22.30 - 22.45 |*                    0005:0005
10.45 - 11.00 |******               0093:0093      22.45 - 23.00 |*                    0002:0002
11.00 - 11.15 |*******              0123:0123      23.00 - 23.15 |*                    0008:0008
11.15 - 11.30 |********             0129:0129      23.15 - 23.30 |*                    0005:0005
11.30 - 11.45 |******               0102:0102      23.30 - 23.45 |*                    0005:0005
11.45 - 12.00 |****                 0067:0067      23.45 - 24.00 |*                    0005:0005
              +----+----+----+----+----+----+----+----+----+----+                     +----+----+----+----+----+----+----+----+----+----+
              0...90..180..270..360..450..540..630..720..810..900                     0...90..180..270..360..450..540..630..720..810..900

 LEGEND: (*) = AVERAGE  (-) = PEAK
```

EXPANDED-TO-AUXILIARY STORAGE ACTIVITY GRAPH

This graph shows Page Out activity from Expanded Storage to Auxiliary Storage through Central Storage in terms of Pages per second. The average value for each fifteen minute period is shown, along with the peak value for that fifteen minute period.

Following is a sample of the Expanded-to-Auxiliary Storage Activity Graph:

```
WORKLOAD ANALYSIS GRAPHS.                    DAY SHOWN: MONDAY                    SYSID:308A
                                             02/05/96-02/09/96
                                EXPANDED-TO-AUXILIARY STORAGE ACTIVITY GRAPH

 00.00 - 00.15 |                      0000:0000    12.00 - 12.15 |                      0000:0000
 00.15 - 00.30 |                      0000:0000    12.15 - 12.30 |                      0000:0000
 00.30 - 00.45 |                      0000:0000    12.30 - 12.45 |                      0000:0000
 00.45 - 01.00 |                      0000:0000    12.45 - 13.00 |                      0000:0000
 01.00 - 01.15 |                      0000:0000    13.00 - 13.15 |                      0000:0000
 01.15 - 01.30 |                      0000:0000    13.15 - 13.30 |                      0000:0000
 01.30 - 01.45 |                      0000:0000    13.30 - 13.45 |                      0000:0000
 01.45 - 02.00 |                      0000:0000    13.45 - 14.00 |                      0000:0000
 02.00 - 02.15 |                      0000:0000    14.00 - 14.15 |*                     0002:0002
 02.15 - 02.30 |                      0000:0000    14.15 - 14.30 |*                     0001:0001
 02.30 - 02.45 |                      0000:0000    14.30 - 14.45 |*                     0009:0009
 02.45 - 03.00 |                      0000:0000    14.45 - 15.00 |                      0000:0000
 03.00 - 03.15 |                      0000:0000    15.00 - 15.15 |                      0000:0000
 03.15 - 03.30 |                      0000:0000    15.15 - 15.30 |                      0000:0000
 03.30 - 03.45 |                      0000:0000    15.30 - 15.45 |                      0000:0000
 03.45 - 04.00 |                      0000:0000    15.45 - 16.00 |                      0000:0000
 04.00 - 04.15 |                      0000:0000    16.00 - 16.15 |                      0000:0000
 04.15 - 04.30 |                      0000:0000    16.15 - 16.30 |                      0000:0000
 04.30 - 04.45 |                      0000:0000    16.30 - 16.45 |                      0000:0000
 04.45 - 05.00 |                      0000:0000    16.45 - 17.00 |                      0000:0000
 05.00 - 05.15 |                      0000:0000    17.00 - 17.15 |*                     0007:0007
 05.15 - 05.30 |                      0000:0000    17.15 - 17.30 |                      0000:0000
 05.30 - 05.45 |                      0000:0000    17.30 - 17.45 |*                     0001:0001
 05.45 - 06.00 |                      0000:0000    17.45 - 18.00 |                      0000:0000
               +----+----+----+----+----+----+----+----+----+----+                    +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900                    0...90..180..270..360..450..540..630..720..810..900

 06.00 - 06.15 |                      0000:0000    18.00 - 18.15 |                      0000:0000
 06.15 - 06.30 |                      0000:0000    18.15 - 18.30 |                      0000:0000
 06.30 - 06.45 |                      0000:0000    18.30 - 18.45 |                      0000:0000
 06.45 - 07.00 |                      0000:0000    18.45 - 19.00 |                      0000:0000
 07.00 - 07.15 |                      0000:0000    19.00 - 19.15 |                      0000:0000
 07.15 - 07.30 |                      0000:0000    19.15 - 19.30 |                      0000:0000
 07.30 - 07.45 |                      0000:0000    19.30 - 19.45 |                      0000:0000
 07.45 - 08.00 |                      0000:0000    19.45 - 20.00 |                      0000:0000
 08.00 - 08.15 |                      0000:0000    20.00 - 20.15 |                      0000:0000
 08.15 - 08.30 |                      0000:0000    20.15 - 20.30 |                      0000:0000
 08.30 - 08.45 |*                     0001:0001    20.30 - 20.45 |                      0000:0000
 08.45 - 09.00 |*                     0005:0005    20.45 - 21.00 |                      0000:0000
 09.00 - 09.15 |*                     0001:0001    21.00 - 21.15 |                      0000:0000
 09.15 - 09.30 |*                     0003:0003    21.15 - 21.30 |                      0000:0000
 09.30 - 09.45 |*                     0004:0004    21.30 - 21.45 |                      0000:0000
 09.45 - 10.00 |*                     0001:0001    21.45 - 22.00 |                      0000:0000
 10.00 - 10.15 |*                     0004:0004    22.00 - 22.15 |                      0000:0000
 10.15 - 10.30 |*                     0005:0005    22.15 - 22.30 |                      0000:0000
 10.30 - 10.45 |*                     0001:0001    22.30 - 22.45 |                      0000:0000
 10.45 - 11.00 |                      0000:0000    22.45 - 23.00 |                      0000:0000
 11.00 - 11.15 |*                     0001:0001    23.00 - 23.15 |                      0000:0000
 11.15 - 11.30 |*                     0001:0001    23.15 - 23.30 |                      0000:0000
 11.30 - 11.45 |                      0000:0000    23.30 - 23.45 |                      0000:0000
 11.45 - 12.00 |                      0000:0000    23.45 - 24.00 |                      0000:0000
               +----+----+----+----+----+----+----+----+----+----+                    +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900                    0...90..180..270..360..450..540..630..720..810..900

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

CENTRAL-TO-AUXILIARY STORAGE ACTIVITY GRAPH

This graph shows Page Out activity from Central Storage to Auxiliary Storage in terms of Pages per second. The average value for each fifteen minute period is shown, along with the peak value for that fifteen minute period.

Following is a sample of the Central-to-Auxiliary Storage Activity Graph:

```
WORKLOAD ANALYSIS GRAPHS.                              DAY SHOWN: MONDAY                                    SYSID:308A
                                                        02/05/96-02/09/96
                                                 CENTRAL-TO-AUXILIARY STORAGE ACTIVITY GRAPH

 00.00 - 00.15 |                       0000:0000           12.00 - 12.15 |                       0000:0000
 00.15 - 00.30 |                       0000:0000           12.15 - 12.30 |                       0000:0000
 00.30 - 00.45 |                       0000:0000           12.30 - 12.45 |                       0000:0000
 00.45 - 01.00 |                       0000:0000           12.45 - 13.00 |                       0000:0000
 01.00 - 01.15 |                       0000:0000           13.00 - 13.15 |                       0000:0000
 01.15 - 01.30 |                       0000:0000           13.15 - 13.30 |                       0000:0000
 01.30 - 01.45 |                       0000:0000           13.30 - 13.45 |                       0000:0000
 01.45 - 02.00 |                       0000:0000           13.45 - 14.00 |                       0000:0000
 02.00 - 02.15 |                       0000:0000           14.00 - 14.15 |                       0000:0000
 02.15 - 02.30 |                       0000:0000           14.15 - 14.30 |                       0000:0000
 02.30 - 02.45 |                       0000:0000           14.30 - 14.45 |                       0000:0000
 02.45 - 03.00 |                       0000:0000           14.45 - 15.00 |                       0000:0000
 03.00 - 03.15 |                       0000:0000           15.00 - 15.15 |                       0000:0000
 03.15 - 03.30 |*                      0002:0002           15.15 - 15.30 |                       0000:0000
 03.30 - 03.45 |                       0000:0000           15.30 - 15.45 |                       0000:0000
 03.45 - 04.00 |                       0000:0000           15.45 - 16.00 |                       0000:0000
 04.00 - 04.15 |                       0000:0000           16.00 - 16.15 |                       0000:0000
 04.15 - 04.30 |                       0000:0000           16.15 - 16.30 |                       0000:0000
 04.30 - 04.45 |                       0000:0000           16.30 - 16.45 |                       0000:0000
 04.45 - 05.00 |                       0000:0000           16.45 - 17.00 |                       0000:0000
 05.00 - 05.15 |                       0000:0000           17.00 - 17.15 |**                     0019:0019
 05.15 - 05.30 |                       0000:0000           17.15 - 17.30 |                       0000:0000
 05.30 - 05.45 |                       0000:0000           17.30 - 17.45 |*                      0001:0001
 05.45 - 06.00 |*                      0001:0001           17.45 - 18.00 |                       0000:0000
               +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900                0...90..180..270..360..450..540..630..720..810..900


 06.00 - 06.15 |                       0000:0000           18.00 - 18.15 |                       0000:0000
 06.15 - 06.30 |                       0000:0000           18.15 - 18.30 |                       0000:0000
 06.30 - 06.45 |                       0000:0000           18.30 - 18.45 |                       0000:0000
 06.45 - 07.00 |                       0000:0000           18.45 - 19.00 |                       0000:0000
 07.00 - 07.15 |                       0000:0000           19.00 - 19.15 |                       0000:0000
 07.15 - 07.30 |                       0000:0000           19.15 - 19.30 |                       0000:0000
 07.30 - 07.45 |                       0000:0000           19.30 - 19.45 |                       0000:0000
 07.45 - 08.00 |                       0000:0000           19.45 - 20.00 |                       0000:0000
 08.00 - 08.15 |                       0000:0000           20.00 - 20.15 |                       0000:0000
 08.15 - 08.30 |                       0000:0000           20.15 - 20.30 |                       0000:0000
 08.30 - 08.45 |                       0000:0000           20.30 - 20.45 |                       0000:0000
 08.45 - 09.00 |                       0000:0000           20.45 - 21.00 |                       0000:0000
 09.00 - 09.15 |                       0000:0000           21.00 - 21.15 |                       0000:0000
 09.15 - 09.30 |                       0000:0000           21.15 - 21.30 |                       0000:0000
 09.30 - 09.45 |                       0000:0000           21.30 - 21.45 |                       0000:0000
 09.45 - 10.00 |                       0000:0000           21.45 - 22.00 |                       0000:0000
 10.00 - 10.15 |                       0000:0000           22.00 - 22.15 |                       0000:0000
 10.15 - 10.30 |                       0000:0000           22.15 - 22.30 |                       0000:0000
 10.30 - 10.45 |                       0000:0000           22.30 - 22.45 |                       0000:0000
 10.45 - 11.00 |                       0000:0000           22.45 - 23.00 |                       0000:0000
 11.00 - 11.15 |                       0000:0000           23.00 - 23.15 |                       0000:0000
 11.15 - 11.30 |                       0000:0000           23.15 - 23.30 |                       0000:0000
 11.30 - 11.45 |                       0000:0000           23.30 - 23.45 |                       0000:0000
 11.45 - 12.00 |                       0000:0000           23.45 - 24.00 |*                      0001:0001
               +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900                0...90..180..270..360..450..540..630..720..810..900

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

AUXILIARY-TO-CENTRAL STORAGE ACTIVITY GRAPH

This graph shows Page In activity from Auxiliary Storage to Central Storage in terms of Pages per second. The average value for each fifteen minute period is shown, along with the peak value for that fifteen minute period.

Following is a sample of the Auxiliary-to-Central Storage Activity Graph:

```
WORKLOAD ANALYSIS GRAPHS.                                    DAY SHOWN: MONDAY                                              SYSID:308A
                                                             02/05/96-02/09/96
                                                 AUXILIARY-TO-CENTRAL STORAGE ACTIVITY GRAPH

 00.00 - 00.15 |                       0000:0000        12.00 - 12.15 |                       0000:0000
 00.15 - 00.30 |                       0000:0000        12.15 - 12.30 |                       0000:0000
 00.30 - 00.45 |                       0000:0000        12.30 - 12.45 |                       0000:0000
 00.45 - 01.00 |                       0000:0000        12.45 - 13.00 |                       0000:0000
 01.00 - 01.15 |                       0000:0000        13.00 - 13.15 |                       0000:0000
 01.15 - 01.30 |                       0000:0000        13.15 - 13.30 |                       0000:0000
 01.30 - 01.45 |                       0000:0000        13.30 - 13.45 |                       0000:0000
 01.45 - 02.00 |                       0000:0000        13.45 - 14.00 |                       0000:0000
 02.00 - 02.15 |                       0000:0000        14.00 - 14.15 |                       0000:0000
 02.15 - 02.30 |                       0000:0000        14.15 - 14.30 |                       0000:0000
 02.30 - 02.45 |                       0000:0000        14.30 - 14.45 |*                      0003:0003
 02.45 - 03.00 |                       0000:0000        14.45 - 15.00 |                       0000:0000
 03.00 - 03.15 |                       0000:0000        15.00 - 15.15 |                       0000:0000
 03.15 - 03.30 |*                      0002:0002        15.15 - 15.30 |                       0000:0000
 03.30 - 03.45 |                       0000:0000        15.30 - 15.45 |                       0000:0000
 03.45 - 04.00 |                       0000:0000        15.45 - 16.00 |                       0000:0000
 04.00 - 04.15 |                       0000:0000        16.00 - 16.15 |                       0000:0000
 04.15 - 04.30 |                       0000:0000        16.15 - 16.30 |                       0000:0000
 04.30 - 04.45 |                       0000:0000        16.30 - 16.45 |                       0000:0000
 04.45 - 05.00 |                       0000:0000        16.45 - 17.00 |                       0000:0000
 05.00 - 05.15 |                       0000:0000        17.00 - 17.15 |**                     0025:0025
 05.15 - 05.30 |                       0000:0000        17.15 - 17.30 |                       0000:0000
 05.30 - 05.45 |                       0000:0000        17.30 - 17.45 |*                      0002:0002
 05.45 - 06.00 |*                      0001:0001        17.45 - 18.00 |                       0000:0000
               +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900                0...90..180..270..360..450..540..630..720..810..900

 06.00 - 06.15 |                       0000:0000        18.00 - 18.15 |                       0000:0000
 06.15 - 06.30 |                       0000:0000        18.15 - 18.30 |                       0000:0000
 06.30 - 06.45 |                       0000:0000        18.30 - 18.45 |                       0000:0000
 06.45 - 07.00 |                       0000:0000        18.45 - 19.00 |                       0000:0000
 07.00 - 07.15 |                       0000:0000        19.00 - 19.15 |                       0000:0000
 07.15 - 07.30 |                       0000:0000        19.15 - 19.30 |                       0000:0000
 07.30 - 07.45 |                       0000:0000        19.30 - 19.45 |                       0000:0000
 07.45 - 08.00 |                       0000:0000        19.45 - 20.00 |                       0000:0000
 08.00 - 08.15 |                       0000:0000        20.00 - 20.15 |                       0000:0000
 08.15 - 08.30 |                       0000:0000        20.15 - 20.30 |                       0000:0000
 08.30 - 08.45 |                       0000:0000        20.30 - 20.45 |                       0000:0000
 08.45 - 09.00 |                       0000:0000        20.45 - 21.00 |                       0000:0000
 09.00 - 09.15 |                       0000:0000        21.00 - 21.15 |                       0000:0000
 09.15 - 09.30 |                       0000:0000        21.15 - 21.30 |                       0000:0000
 09.30 - 09.45 |                       0000:0000        21.30 - 21.45 |                       0000:0000
 09.45 - 10.00 |                       0000:0000        21.45 - 22.00 |                       0000:0000
 10.00 - 10.15 |*                      0001:0001        22.00 - 22.15 |                       0000:0000
 10.15 - 10.30 |*                      0001:0001        22.15 - 22.30 |                       0000:0000
 10.30 - 10.45 |                       0000:0000        22.30 - 22.45 |                       0000:0000
 10.45 - 11.00 |                       0000:0000        22.45 - 23.00 |                       0000:0000
 11.00 - 11.15 |                       0000:0000        23.00 - 23.15 |                       0000:0000
 11.15 - 11.30 |                       0000:0000        23.15 - 23.30 |                       0000:0000
 11.30 - 11.45 |                       0000:0000        23.30 - 23.45 |                       0000:0000
 11.45 - 12.00 |                       0000:0000        23.45 - 24.00 |                       0000:0000
               +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900                0...90..180..270..360..450..540..630..720..810..900

  LEGEND: (*) = AVERAGE   (-) = PEAK
```

DASM REPORTS

You can produce a variety of reports using the DASM Subsystem. All the reports are selectable and are produced dynamically whenever the DASM Subsystem is executed (SSA1DASM). The same reports can be produced up to the last time that the DASM tables are COMMITted to the Online Performance Data Base by executing SSA1DASH or SSA1RPT. The DASM reports are discussed in detail below.

DASD Space Allocation—By Device Type (SSA1DASM or SSA1DASH)

This report indicates how much DASD space is allocated to each specific "OWNER" by device type on all the DASD devices attached to the processor on which the program is executed.

If SSA1DASM is being executed, the report data is obtained by scanning the VTOCs on the DASD devices attached to the system on which the program is executed. When running SSA1DASM, you can commit the allocation tables that are used to prepare the report to the On-line Performance Data Base using the SYSIN parameter COMMIT.

If SSA1DASH is run, the data used to construct the report is taken from the On-line Performance Data Base and is current up to the point that the data was most recently COMMITted.

The report is presented in columnar format with a column for User ID and separate columns for each type of device detected during the process of scanning the DASD devices. For each user, the number of tracks allocated to each type of device is reported in the appropriate column.

Following is a sample of the DASD Space Allocation—By Device Type Report:

DASD SPACE ALLOCATION BY DEVICE TYPE CIMS LAB, INC. PAGE 001
SMFSID=CPPR 03/24/96

OWNER ID	* * TRACKS ALLOCATED ON DEVICE TYPE * * 3350 TRACKS (19 KB/TRK)	3380 TRACKS (47.5 KB/TRK)	3390 TRACKS (56.7 KB/TRK)	TOTAL ALLOCATED (KB)	IDLE SPACE (KB)	SPACE UNREFERENCED SINCE: (KB) > 30 DAYS	> 60 DAYS	> 90 DAYS
ASM2		1,432		68,020				
CATALOG		1,470		69,825				
CICS161		3,498		166,155				
CLPD		1,346		63,935				
CLTD		4,903		232,892				
DCAF		12,333		585,817				
DVCMCO		2,423		115,092				
DVCXBO		1,151		54,672				
DVDAGO		1,573		74,717				
DVDXKO		7,606		361,285				
DVDXWO		982		46,645				
DVGMMO		1,648		78,280				
DVJXPO		2,545		120,887				
DVLLRO		1,681		79,847				
DVMXNO		2,586		122,835				
DVREGO		2,905		137,987				
FCPD		1,245		59,137				
FCTD		3,129		148,627				
FINALIST		1,803		85,642				
FIPD		2,445		116,137				
FITD		7,069		335,777				
ICPD		9,986		474,335				
ICQ		1,800		85,500				
ICTD		2,908		138,130				
IFPD		24,026		1,141,235				
IMTD		24,480		1,162,800				
INFOPAC		2,624		124,640				
CPPR		1,555		73,862				
KOPD		6,198		294,405				
KOTD		1,608		76,380				
MVSDZN		990		47,025				
MVSTZN		1,065		50,587				
M211TAA		1,065		50,587				
OLD		4,253		202,017				
OPTURNO		1,874		89,015				
PAGE		6,405		304,237				
PROD		3,345		158,887				
PRODD		3,525		167,437				
PVPD		4,884		231,990				
PVTD		1,023		48,592				
SMPEMVS		1,994		94,715				
STPD		6,152		292,220				
STTD		7,347		348,982				
STTT		1,163		55,242				
STUD		4,110		195,225				
SYS1		54,817		2,603,807				

DASD Space Allocation—By Device Volume (SSA1DASM or SSA1DASH)

This report indicates how much DASD space is allocated to each specific OWNER by volume, or set of volumes, on all the DASD devices attached to the processor on which the program is executed.

If SSA1DASM is being executed, the report data is obtained by scanning the VTOCs on the DASD devices attached to the system on which the program is executed. When running SSA1DASM, you can use the SYSIN parameter COMMIT to commit the allocation tables that are used to prepare the report to the Online Performance Data Base the.

If SSA1DASH is run, the data used to construct the report is taken from the Online Performance Data Base and is current up to the point that the data was most recently COMMITted.

The report is presented in columnar format with a column for User Id and separate columns for each type of device detected during the process of scanning the DASD devices. For each user, the number of tracks allocated to each type of device is reported in the appropriate column.

Following is a sample of the DASD Space Allocation—By Device Volume Report:

DASD SPACE ALLOCATION BY VOLSER CIMS LAB, INC. PAGE 001
SMFSID=CPPR 03/24/96

OWNER ID	BOWCAT	BOWDLB	BOWSP1	BOW000	BOW001	BOW002	BOW003	BOW004
VTOC	15	28	45	15	45	10	45	15
ASM2	1,177				105			
ASM22	90							
A0782619	30							
BNJLGPRI								301
BNJLGSEC						76		
CATALOG	300		368					45
CATINDEX	8		17					1
CICS161	2,723				285		56	434
CLPD			914	188		65		50
CLTD			689	176	1,473	71	1,919	53
CMTD					15		5	
CMUD					1		16	
DCAF	5,553							
DVBH00					30		2	
DVBJN0					59		2	
DVBXS0					133		30	
DVCAL0			8	8	58		2	
DVCHC0							15	
DVCMC0					1,175	13	678	
DVCMS0							2	
DVCXB0					932		143	
DVDAG0		544			486		162	
DVDRM0			5		396		248	
DVDXK0					6			
DVDXK0					2,677		3,592	
DVDXW0					173		217	
DVFXG0					30		2	
DVGFT0							5	
DVGHK0					15		2	
DVGMM0		8			890		606	
DVJXK0							52	
DVJXP0					589		451	
DVKJK0		2			227		78	
DVKOL0					14		16	
DVLLR0		332			1,100		18	
DVLXE0					225			
DVMDA0							2	
DVMMD0					45		2	
DVMXN0		2			1,520		578	
DVNEM0					2		17	
DVPMT0					73		2	
DVPRH0					17			
DVRCA0					11		133	
DVREG0					586		1,116	
DVRKB0					302		107	
DVRMC0					25		200	
DVRXD0							2	

DASD Volume Map by CCHH (SSA1DASM)

This report details how the space on a DASD volume is allocated, sorted by the address of the space on the volume (CCHH).

The data used to produce the DASD Volume Map is taken from the VTOC of the volume being mapped.

Following is a sample of the DASD Volume Map by CCHH:

```
DASD VOLUME MAP BY CCHH (PAG510)                CIMS LAB, INC.                                  PAGE 001
                                                  04/24/97
 DSNAME                              C C H H  C C H H TRKALLOC          DSORG LRECL BLKSZ RECFM
 SYS1.VTOCIX.PAG510                        00000001 0000000E       14        PS  2048  2048     F
 ** V T O C **                             00010000 0004000E       60
 PAGE.PT51.PLPA.DATA                       00050000 0005000E       15        VS
 SYS1.VVDS.VPAG510                         00060000 00060009       10        VS
 PTIDCS.SPOOL.OFFLOAD                      0006000A 0006000A        1        PS                 U
 PTIDCS.SPOOL.OFFLOAD                      0006000B 0006000E        4        PS                 U
 PAGE.PT51.COMMON.DATA                     00070000 00B5000E    2,625        VS
 SYS1.PT51.SMF1.DATA                       00B60000 0119000E    1,500        VS
 SYS1.PT51.SMF2.DATA                       011A0000 017D000E    1,500        VS
 SYS1.PT51.SMF3.DATA                       017E0000 01E1000E    1,500        VS
 PTIDCS.SPOOL.OFFLOAD                      01E20000 01E20003        4        PS                 U
 PTIDCS.SPOOL.OFFLOAD                      01E20004 01E20007        4        PS                 U
 PTIDCS.SPOOL.OFFLOAD                      01E20008 01E2000A        3        PS                 U
 * * F R E E S P A C E * *                 01E2000B 0D0A000E    42844
```

Volume Map by Dsname (SSA1DASM)

This report details how space on a DASD volume is allocated by DSNAME.

The data used to produce the DASD Volume Map is taken from the VTOC of the volume being mapped

Following is a sample of the Volume Map by DSNAME:

DASD VOLUME MAP BY DSNAME (TSO001) CIMS LAB, INC. PAGE 001
02/14/97

DSNAME	C C H H	C C H H	CREATED	LAST REF	TRKALLOC	TRK USED	TRK IDLE	DSORG	LRECL	BLKSZ	RECFM
** V T O C **	00020000	0006000E			75	75					
ACAWA.RECEIVE.MAIL	01650007	01650007	02/11/97	02/12/97	1	1		PS	150	1500	FB
ADCRS.U2D.VBASE	04940000	04A2000E	12/18/96	01/17/97	225	214	11	PO	80	27920	FB
ADDAB.DBCOM.SOURCE	0A26000C	0A26000C	01/10/97	01/31/97	1	1		PO	80	23440	FB
ADDAB.ISPPROF	0BEB0007	0BEB000A	09/19/96	02/14/97	4	4		PO	80	6160	FB
ADDAM.TEST.REPORTS	0B9F000A	0BCE0002	07/04/96	02/14/97	698	927	71	PO	133	23408	FBA
	0BCE0003	0BD30002			75						
	0BD30003	0BD80002			75						
	02CE0000	02D2000E			75						
	02D80000	02DC000E			75						
ADDAMA.RECEIVE.MAIL	01EA0006	01EA0006	02/10/97	02/14/97	1	1		PS	150	1500	FB
ADDDM.ISPPROF	0BEC0000	0BEC0003	09/19/96	02/14/97	4	4		PO	80	6160	FB
ADDMB.C305M0.ISPPROF	00AE0009	00AE0009	12/17/96	01/23/97	1	1		PO	80	6160	FB
ADDMB.ISPPROF	0BE80000	0BE80004	09/19/96	02/14/97	5	5		PO	80	6160	FB
ADDMBA.DG.DEVP.ISPPLIB	0A26000D	0A270000	11/07/96	02/14/97	3	3		PO	80	27920	FB
ADDMBA.DG.V1R1.SKEL80	0A2B0003	0A2B0003	11/07/96	01/29/97	1	1		PO	80	27920	FB
ADGFK.ADPAC300.LST	024A0000	024B0006	09/27/95	01/20/97	22	22		PS	121	1210	FBA
ADGFK.DOSVSE.CNTL	023F0004	02410008	07/30/92	01/20/97	35	35		PO	80	27920	FB
ADGFK.GFASM.LST	0181000D	0182000C	12/23/96	02/11/97	15	15		PS	121	1210	FBA
ADGFK.GFJ.OBJECT	01C50004	01CE0001	08/02/96	02/11/97	133	133		PO	80	1600	FB
ADGFK.GFUT2E.CNTL	003C0002	00400002	04/29/93	01/20/97	61	1	60	PO	80	3600	FB
ADGFK.MTTPT2.OUTFILE2	02F40007	02F4000E	10/24/96	01/20/97	8	8		PS	80	23440	FB
ADGFK.PMSS.INSTALL	04C80005	04C8000C	01/22/92	01/20/97	8	8		PO	80	27920	FB
ADGFK.RECEIVE.MAIL	0168000A	0168000A	02/11/97	02/13/97	1	1		PS	150	1500	FB
ADGFK.USER.ISPSLIB	0A280007	0A280007	02/10/94	02/13/97	1	1		PO	80	3120	FB
ADGFK.USER.ISPTLIB	04DA0008	04DA0008	02/10/94	01/20/97	1	1		PO	80	23440	FB
ADGFKA.RECEIVE.MAIL	0168000B	0168000B	02/11/97	02/13/97	1	1		PS	150	1500	FB
ADJJP.JIM.CLIST	07160004	07180005	03/29/94	02/14/97	32	1	31	PO	80	3120	FB
ADJXS.P	0D080008	0D0A000A	01/31/96	02/13/97	33	42		PO	80	23440	FB
	00D3000D	00D40006			9						
ADJXS.SPLIT.PRINT1	0166000B	01670000	02/06/97	02/12/97	5	7		PS	133	27930	FBA
	01C1000E	01C20000			2						
ADJXS.SPLIT.PRINT7	01640007	01640007	02/06/97	02/12/97	1	5		PS	133	27930	FBA
	01CE0002	01CE0005			4						
ADJXSA.PMLIB	01640005	01640005	02/11/97	02/12/97	1	1		PO	80	3600	FB
ADJXSA.USERPARM	01640004	01640004	02/11/97	02/11/97	1	1		PO	80	3600	FB
ADMEL.GFADPACC.LST	0A2F0008	0A2F0008	05/14/93	11/02/96	1	1			133	1330	FBA
ADMMM.PLI.PMLIB	00A70000	00A70001	01/31/97	02/12/97	2	3		PO	80	27920	FB
	018B000A	018B000A			1						
ADMMM.PLIIMS.PMLIB	00A6000D	00A6000E	01/31/97	02/04/97	2	2		PO	80	27920	FB
ADMOCA.UST.VBASE	00C60000	00C60002	02/12/97	02/12/97	3	3		PO	80	27920	FB
ADMTT.DUMP1	0CF40005	0CF5000B	01/09/97	02/13/97	22	22		PS	132	6204	FB
ADMTT.MTT.SASLIB	03D0000D	03D50002	02/28/96	01/31/97	65	65		PO	80	23440	FB
ADMTT.RECEIVE.MAIL	01EA0009	01EA0009	02/10/97	02/14/97	1	1		PS	150	1500	FB
ADP.CLIENT.GEICO.COPYLIB	06DD0000	06DD000E	12/19/96	02/03/97	15	6	9	PO	80	27920	FB
ADP.CS.C305M0.MB5.VBASE	02E10000	02E1000E	12/12/96	02/10/97	15	15		PO	80	27920	FB
ADP.CS.C305M0.SQ1.VBASE	023A0003	023C000A	12/19/96	02/10/97	38	38		PO	80	27920	FB
ADP.PMSS.C305M1A.ISPTABL	0BEE000E	0BEF0002	01/09/97	01/23/97	4	4		PO	80	3120	FB
ADPJWA.RECEIVE.MAIL	01E70006	01E70006	02/10/97	02/14/97	1	1		PS	150	1500	FB
ADRAW.ISPX.ISPPROF	0A2D0006	0A2D0008	07/29/96	02/14/97	3	3		PO	80	3120	FB
ADRAW.MA2.UNIT.VBASE	09090002	090B0004	01/22/97	01/23/97	33	33		PO	80	27920	FB

Volume Activity Report (SSA1RPT)

The Volume Activity Report shows the data set activity by volume for the 50 most heavily used data sets on each reported volume. The data set listing for each volume is ordered by the number of I/O operations during the measured period.

The data used to produce the Volume Activity Report is taken from the On-line Performance Data Base.

Following is a sample of the Volume Activity Report:

DASD VOLUME ACTIVITY REPORT SYSID:TDC1
CIMS LAB, INC.
02/01/97-02/11/97

LCU	ADDR	VOLSER	SIO / SECOND	QUEUE DELAY	PERCENT BUSY	SERVICE TIME
010	0201	DB2501	.02		.01%	6.47
010	0224	PHSMCD	.01			.68
010	0225	DB2509	.01			.66
010	022A	DB2504	.01			.66
010	022B	PLXSHR	.01			.66
010	022C	DB2508	.01			.65
010	022D	SISP03	1.21	.25	1.19%	9.84
010	022E	PROD40	.01			.66
010	022F	DB2507	.01			.65
010	0230	COMMON	.01			.65
010	0231	PROD42	.01			.64
010	0232	DB2503	.01			.64
010	0233	DB2502	.01			.64
010	0234	DB2506	.01			.64
010	0235	DB2505	.01			.65
010	0236	TDV006	.05	.05	.02%	5.09
010	0237	APPRES	.01			.65
010	0239	PROD38	.01	.05		2.75
010	023A	TECH11	.42	4.22	.32%	7.62
010	023B	TDV008	.01			.66
010	023C	TDV002	.02			2.99
010	023D	TDV003	.12	.10	.10%	8.18
010	LCU	SUMMARY	2.00	1.01	1.64%	9.22
011	0307	PROD30	.02		.05%	20.82
011	0309	SISP00	.20	56.40	.67%	32.47
011	LCU	SUMMARY	.22	52.48	.72%	31.66
012	0401	PROD32	.02	175.79	.04%	15.00
012	0402	DEAD02	.01			.74
012	0404	WORK08	.01			.72
012	0406	WORK09	.01			.71
012	0409	PROD37	.01			2.96
012	040A	WORK05	.01			.69
012	040B	PHSM01	.01			.70
012	040E	WORK07	.01			.70
012	040F	WORK03	.01			.69
012	0411	PROD35	.01			.93
012	0412	DEAD12	.01			.70
012	0413	WORK01	.01			.70
012	0414	TSO002	.01			1.16
012	0415	WORK02	.01			.69
012	0416	WORK04	.01			.69
012	0417	SPOOL2	.07	.81	.05%	6.66
012	0418	DEAD18	.01			.69
012	0419	DEAD19	.01			.68
012	041A	SPOOL1	.07	1.10	.04%	6.33
012	041B	PROD33	.01	313.20	.02%	13.14
012	041C	DUMP01	.01			.68
012	041D	PROD34	.01			1.14
012	041E	PROD36	.01			2.35

Data Set Activity Report (SSA1RPT)

The Data Set Activity Report shows the 25 most active data sets within the data center for a specified reporting period in terms of the average daily activity per data set.

The data used to produce the Data Set Activity Report is taken from the On-line Performance Data Base.

Following is a sample of the Data Set Activity Report:

DATASET ACTIVITY REPORT CIMS LAB, INC. SYSID:TDC1
02/01/97-02/11/97

RANK	VOLSER	EXCP COUNT	DSNAME
1	SISP03	452,573	SISP.TMONCICS.TDC1.TMON01A.DATA
2	SISP03	387,700	SISP.TMONCICS.TDC1.TMON01B.DATA
3	SISP00	67,726	SISP.TMONMVS.TDC1.TMVS02A.DATA
4	SISP03	40,690	SISP.TMONMVS.TDC1.TMVS02B.DATA
5	SISP00	34,206	SISP.TMONMVS.TDC1.TMVS04A.DATA
6	SISP03	28,366	SISP.TMONMVS.TDC1.TMVS03A.DATA
7	SISP00	21,776	SISP.TMONMVS.TDC1.TMVS04B.DATA
8	TDV003	19,419	TECH.CICS410.PTB1.DFHGCD
9	SISP00	17,161	SISP.TMONCICS.TDC1.HISTORYA.DATA
10	SISP03	15,862	SISP.TMONCICS.TDC1.ALERTB.DATA
11	SISP03	15,353	SISP.TMONCICS.TDC1.ALERTA.DATA
12	TDV002	10,551	TECH.CICS410.GCB1.DFHJ01A
13	CATMVS	10,500	SYS1.TDC1.MAN1.DATA
14	TDV002	9,960	TECH.CICS410.GCB1.DFHJ01B
15	TDV001	8,313	TECH.CICS410.PPB1.DFHGCD
16	PAGL12	7,500	SYS1.TDC1.MAN2.DATA
17	SISP00	6,767	SISP.TMONMVS.TDC1.TMVS03B.DATA
18	TDV006	4,629	TECH.CICS410.PTB1.DFHJ01A
19	TDV006	3,915	TECH.CICS410.PPB1.DFHDMPA
20	TDV001	2,741	TECH.CICS410.PTB1.DFHJ01B
21	SYSRS1	1,902	SYS1.DAE
22	SYSRS1	1,897	SYS1.LINKLIB
23	SISP00	1,407	PDCA.PROD.LOADONL.NEW
24	SISP03	1,354	SISP.TMONMVS.TDC1.TMVS01A.DATA
25	SYSRS1	1,130	SYS1.SCBDHENU

Data Set Detail Report (SSA1RPT)

This report provides detailed I/O activity information regarding datasets whose names conform to the specifications provided in the "DSNAME" and "VOLSER" parameters. The I/O count for each of the selected datasets is shown for each date in the date range (Begin Date/End Date) along with the actual dataset name and the volume serial number upon which the dataset resides.

Following is a sample of the Data Set Detail Report:

SYSSID	DATE	# EXCPS	VOLSER	DSNAME
WJXA	02/23	4	WJOS75	GPROD.APFACCR
WJXA	02/23	6	WJOS75	GPROD.APPSRTST
WJXA	02/23	11	WJOS75	GPROD.APPUNCH.OUTPUT
WJXA	02/23	67,656	WJOS75	GPROD.DAILY.SHOP.RPT
WJXA	02/23	2	WJOS75	GPROD.DUMYZERO.LRECL80
WJXA	02/23	602	WJOS75	GPROD.EPDIRDEP
WJXA	02/23	27	WJOS75	GPROD.INVTRY.FAILSAFE
WJXA	02/23	1	WJOS75	GPROD.INVTRY.MONITOR
WJXA	02/23	75	WJOS75	GPROD.INVTRY.PARTNO
WJXA	02/23	10	WJOS75	GPROD.INVTRY.WDTHDRWL.DLY
WJXA	02/23	6	WJOS75	GPROD.JCODC
WJXA	02/23	2,619	WJOS75	GPROD.JRECP
WJXA	02/23	2	WJOS75	GPROD.PO.FILE.KEY
WJXA	02/23	4,829	WJOS75	GPROD.POCLOSED.BACKUP
WJXA	02/23	10	WJOS75	GPROD.PREPROC.CPL
WJXA	02/23	124	WJOS75	GPROD.PSR.SW
WJXA	02/23	18	WJOS75	GPROD.REQUPDT.FILE
WJXA	02/23	61	WJOS75	GPROD.SPLTBLMR.RANSCAN
WJXA	02/23	12	WJOS75	GPROD.S7.LOCABREV
WJXA	02/23	1	WJOS75	GPROD.ZERODUE.PO
WJXA	TOTAL	76,076	WJOS75	GPROD*

DASM Volume Summary Report (SSA1DASV)

This report provides summarized information with respect to the individual volumes in the DASD farm. The data comes from the DASM Performance Database. A COMMIT must have been done in order for the report to produce any information. The following lists the columns of information available on the Volume Summary Report:

DEVICE	The type of device (3380, 3390)
TRACKS TOTAL	The total number of tracks on the volume
TRACKS FREE	The total number of free tracks on the volume
FREE(%)	The percentage of space on the volume that is available for allocation
TRACKS IDLE	The total number of tracks that, although allocated, are not in use
IDLE(%)	The percentage of idle tracks as a function of allocated space

Following is a sample of the DASM Volume Summary report:

DASD VOLUME SPACE SUMMARY SYSID:WJXA

05/19/92

CIMS LAB, INC.

VOLSER	DEVICE	TRACKS TOTAL	TRACKS FREE	FREE(%)	TRACKS IDLE	IDLE(%)
JESSPL	3380	26,544	10,941	41.21%	13,265	49.97%
MVXDLB	3380	26,544	7,110	26.78%	2,690	10.13%
MVXPR0	3380	26,544	2,778	10.46%	6,184	23.29%
MVXPR1	3380	26,544	7,332	27.62%	4,536	17.08%
MVXPR2	3380	26,544	2,179	8.20%	933	3.51%
MVXRES	3380	26,544	8,135	30.64%	8,583	32.33%
MVXSMP	3380	26,544	10,194	38.40%	5,190	19.55%
PUB001	3380	26,544	14,942	56.29%	319	1.20%
WJDB01	3380	26,544	16,012	60.32%		
WJOS5E	3380	26,535	6,463	24.35%	26	.09%
WJOS5F	3380	26,535	7,664	28.88%	3	.01%
WJOS52	3380	26,535	8,608	32.44%	4	.01%
WJOS53	3380	26,535	8,461	31.88%	2,288	8.62%
WJOS60	3380	26,535	13,252	49.94%	1,475	5.55%
WJOS61	3380	26,535	1,354	5.10%		
WJOS62	3380	26,535	24,878	93.75%	146	.55%
WJOS67	3380	26,544	5,992	22.57%	1,735	6.53%
WJOS72	3380	26,551	10,687	40.25%	3,086	11.62%
WJOS73	3380	26,535	9,382	35.35%	1,499	5.64%
WJOS74	3380	26,551	1,876	7.06%	5,056	19.04%
WJOS75	3380	26,535	7,963	30.00%	2,947	11.10%
WJOS76	3380	26,551	8,699	32.76%	1,987	7.48%
WJOS77	3380	26,551	2,226	8.38%	4,964	18.69%

DASM Selected VSAM Summary Report (SSA1DASV)

This report provides summarized information with respect to a specific VSAM Cluster or set of Clusters. The data comes from the System Catalog.. The following lists the information available on the VSAM Summary Report:

LOGICAL REC-LEN	The logical record length for the cluster
HIGH-ALLOC-RBA	The highest allocated Relative Byte Address for the cluster
HIGH-USED-RBA	The highest used Relative Byte Address for the cluster
CISIZE	The Control Interval size
CI/CA	The number of Control Intervals per Control Area
CYLINDERS ALLOC	The number of cylinders allocated to the cluster
CYLINDERS USED	The number of cylinders actually used
% SPACE USED	The percentage of allocated space that was used

Following is a sample of the DASM Selected VSAM Summary Report:

```
LOGICAL REC-LEN  HIGH-ALLOC-RBA   HIGH-USED-RBA         CISIZE          CI/CA CYLINDERS ALLOC  CYLINDERS USED    %
SPACE USED
        PAGE.PT51.COMMON.DATA
                                                          4,096            180
        PAGE.PT51.PLPA.DATA
                                                          4,096            180
        SYS1.PT51.SMF1.DATA
            22,518                                       26,624             30
        SYS1.PT51.SMF2.DATA
            22,518                                       26,624             30
        SYS1.PT51.SMF3.DATA
            22,518                                       26,624             30
```

DASM VTOC Selected DSN on Volume Report (SSA1DASM)

This report provides data set characteristics information with respect to selected data sets on specific Volumes. The data comes from the VTOC, either using CVAF or the DASM Scan. The following lists the columns of information available on the VTOC Selected DSN on Volume Report:

DSNAME	The name of the data set
C C H H	The address of the beginning of the extent
C C H H	The address of the end of the extent
CREATED	The date the data set was created
LAST REF	The date the data set was last referenced
TRKALLOC	The number of tracks allocated to the extent
TRK USED	The number of tracks used by the entire data set
TRK IDLE	The number of tracks idle in the allocated space
DSORG	The data set organization
LRECL	The logical record length of the data set
BLKSZ	The block size of the data set
RECFM	The record format of the data set

This report is also available online through the DASM section of the CIMS Capacity Planner ISPF/PDF interface.

Following is a sample of the DASM VTOC by Selected DSN on Volume report:

```
DASD VOLUME MAP BY DSNAME (TS0001 )                              CIMS LAB, INC.                                              PAGE 001
                                                                          02/14/97

 DSNAME                                       C C H H  C C H H CREATED  LAST REF TRKALLOC TRK USED TRK IDLE DSORG LRECL BLKSZ RECFM
 ** V T O C **                                 00020000 0006000E                        75        75
 ACAWA.RECEIVE.MAIL                           01650007 01650007 02/11/97 02/12/97        1         1              PS   150  1500    FB
 ADCRS.U2D.VBASE                              04940000 04A2000E 12/18/96 01/17/97      225       214        11    PO    80 27920    FB
 ADDAB.DBCOM.SOURCE                           0A26000C 0A26000C 01/10/97 01/31/97        1         1              PO    80 23440    FB
 ADDAB.ISPPROF                                0BEB0007 0BEB000A 09/19/96 02/14/97        4         4              PO    80  6160    FB
 ADDAM.TEST.REPORTS                           0B9F000A 0BCE0002 07/04/96 02/14/97      698       927        71    PO   133 23408   FBA
                                               0BCE0003 0BD30002                        75
                                               0BD30003 0BD80002                        75
                                               02CE0000 02D2000E                        75
                                               02D80000 02DC000E                        75
 ADDAMA.RECEIVE.MAIL                          01EA0006 01EA0006 02/10/97 02/14/97        1         1              PS   150  1500    FB
 ADDDM.ISPPROF                                0BEC0000 0BEC0003 09/19/96 02/14/97        4         4              PO    80  6160    FB
 ADDMB.C305M0.ISPPROF                         00AE0009 00AE0009 12/17/96 01/23/97        1         1              PO    80  6160    FB
 ADDMB.ISPPROF                                0BE80000 0BE80004 09/19/96 02/14/97        5         5              PO    80  6160    FB
 ADDMBA.DG.DEVP.ISPPLIB                       0A26000D 0A270000 11/07/96 02/14/97        3         3              PO    80 27920    FB
 ADDMBA.DG.V1R1.SKEL80                        0A2B0003 0A2B0003 11/07/96 01/29/97        1         1              PO    80 27920    FB
 ADGFK.ADPAC300.LST                           024A0000 024B0006 09/27/95 01/20/97       22        22              PS   121  1210   FBA
 ADGFK.DOSVSE.CNTL                            023F0004 02410008 07/30/92 01/20/97       35        35              PO    80 27920    FB
 ADGFK.GFASM.LST                              0181000D 0182000C 12/23/96 02/11/97       15        15              PS   121  1210   FBA
 ADGFK.GFJ.OBJECT                             01C50004 01CE0001 08/02/96 02/11/97      133       133              PO    80  1600    FB
 ADGFK.GFUT2E.CNTL                            003C0002 00400002 04/29/93 01/20/97       61         1        60    PO    80  3600    FB
 ADGFK.MTTPT2.OUTFILE2                        02F40007 02F4000E 10/24/96 01/20/97        8         8              PS    80 23440    FB
 ADGFK.PMSS.INSTALL                           04C80005 04C8000C 01/22/92 01/20/97        8         8              PO    80 27920    FB
 ADGFK.RECEIVE.MAIL                           0168000A 0168000A 02/11/97 02/13/97        1         1              PS   150  1500    FB
 ADGFK.USER.ISPSLIB                           0A280007 0A280007 02/10/94 02/13/97        1         1              PO    80  3120    FB
 ADGFK.USER.ISPTLIB                           04DA0008 04DA0008 02/10/94 01/20/97        1         1              PO    80 23440    FB
 ADGFKA.RECEIVE.MAIL                          0168000B 0168000B 02/11/97 02/13/97        1         1              PS   150  1500    FB
 ADJJP.JIM.CLIST                              07160004 07180005 03/29/94 02/14/97       32         1        31    PO    80  3120    FB
 ADJXS.P                                      0D080008 0D0A000A 01/31/96 02/13/97       33        42              PO    80 23440    FB
                                               00D3000D 00D40006                         9
 ADJXS.SPLIT.PRINT1                           0166000B 01670000 02/06/97 02/12/97        5         7              PS   133 27930   FBA
                                               01C1000E 01C20000                         2
 ADJXS.SPLIT.PRINT7                           01640007 01640007 02/06/97 02/12/97        1         5              PS   133 27930   FBA
                                               01CE0002 01CE0005                         4
 ADJXSA.PMLIB                                 01640005 01640005 02/11/97 02/12/97        1         1              PO    80  3600    FB
 ADJXSA.USERPARM                              01640004 01640004 02/11/97 02/11/97        1         1              PO    80  3600    FB
 ADMEL.GFADPACC.LST                           0A2F0008 0A2F0008 05/14/93 11/02/96        1         1                   133  1330   FBA
 ADMMM.PLI.PMLIB                              00A70000 00A70001 01/31/97 02/12/97        2         3              PO    80 27920    FB
                                               018B000A 018B000A                         1
 ADMMM.PLIIMS.PMLIB                           00A6000D 00A6000E 01/31/97 02/04/97        2         2              PO    80 27920    FB
 ADMOCA.UST.VBASE                             00C60000 00C60002 02/12/97 02/12/97        3         3              PO    80 27920    FB
 ADMTT.DUMP1                                  0CF40005 0CF5000B 01/09/97 02/13/97       22        22              PS   132  6204    FB
 ADMTT.MTT.SASLIB                             03D0000D 03D50002 02/28/96 01/31/97       65        65              PO    80 23440    FB
 ADMTT.RECEIVE.MAIL                           01EA0009 01EA0009 02/10/97 02/14/97        1         1              PS   150  1500    FB
 ADP.CLIENT.GEICO.COPYLIB                     06DD0000 06DD000E 12/19/96 02/03/97       15         6         9    PO    80 27920    FB
 ADP.CS.C305M0.MB5.VBASE                      02E10000 02E1000E 12/12/96 02/10/97       15        15              PO    80 27920    FB
 ADP.CS.C305M0.SQ1.VBASE                      023A0003 023C000A 12/19/96 02/10/97       38        38              PO    80 27920    FB
 ADP.PMSS.C305M1A.ISPTABL                     0BEE000E 0BEF0002 01/09/97 01/23/97        4         4              PO    80  3120    FB
 ADPJWA.RECEIVE.MAIL                          01E70006 01E70006 02/10/97 02/14/97        1         1              PS   150  1500    FB
 ADRAW.ISPX.ISPPROF                           0A2D0006 0A2D0008 07/29/96 02/14/97        3         3              PO    80  3120    FB
 ADRAW.MA2.UNIT.VBASE                         09090002 090B0004 01/22/97 01/23/97       33        33              PO    80 27920    FB
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DASM VTOC by CCHH on Volume Report (SSA1DASM)

This report provides a listing of the actual space allocation by address (CCHH) on specific Volumes. The data comes from the VTOC, either using CVAF or the DASM Scan. The following lists the columns of information available on the VTOC by CCHH on Volume Report:

DSNAME	The name of the data set occupying the extent
C C H H	The address of the beginning of the extent
C C H H	The address of the end of the extent
TRKALLOC	The number of tracks in the extent
DSORG	The organization of the data set occupying the extent
LRECL	The logical record length of the data set
BLKSZ	The block size of the data set
RECFM	The record format of the data set

Following is a sample of the VTOC by CCHH on Volume Report:

TSDAWN.USER.JCLLIB	M O D E L	D S C B					
SYS1.VVDS.VTSO001	00000002	0000000B	10	VS			
PDMAC.CUTLOG.DATA	0000000C	0000000C	1	PS	80	15440	FB
TSSJDA.RECEIVE.MAIL	0000000D	0000000D	1	PS	150	1500	FB
TSAYG.PARMLIB.CNTL	0000000E	0000000E	1	PO	80	3120	FB
SYS1.VTOCIX.TSO001	00010000	0001000E	15	PS	2048	2048	F
** V T O C **	00020000	0006000E	75				
SALESSUP.PRMVS.S31A.LOADLIB	00070000	0010000E	150	PO		23360	U
PDDAN.B512IA.IPROJDB.DATA	00110000	00110004	5	VS			
PDDAN.B512IA.IPROJDB.DATA	00110005	00120009	20	VS			
TSOTA.CRC.INPUT2	0012000A	0012000A	1	PS	80	80	FB
ICF.TSO.CAT3.CATINDEX	0012000B	0012000B	1	VS			
PDDAN.B512IA.IPROJDB.DATA	0012000C	0016000B	60	VS			
PDDAN.B512IA.IPROJDB.DATA	0016000C	00170006	10	VS			
PDDAN.B512IA.IPROJDB.DATA	00170007	00180006	15	VS			
PDDAN.B512IA.IPROJDB.DATA	00180007	0019000B	20	VS			
PDDAN.B512IA.IPROJDB.DATA	0019000C	001B0006	25	VS			
PDDAN.B512IA.IPROJDB.DATA	001B0007	001C0001	10	VS			
PDDAN.B512IA.IPROJDB.DATA	001C0002	001C0006	5	VS			
PDDAN.B512IA.IPROJDB.DATA	001C0007	001D0001	10	VS			
PDDAN.B512IA.IPROJDB.DATA	001D0002	001D0006	5	VS			
PDKGSA.ISPPROF	001D0007	001D000E	8	PO	80	6160	FB
PDJSC.PAR.CNTL2	001E0000	002F000E	270	PO	80	6320	FB
PDJHSA.DDIR.D	00300000	0032000E	45	VS			
PDRYAN.ISPPROF	00330000	0033000A	11	PO	80	3120	FB
DCPROD.MVSCICS.LOAD	0033000B	0033000B	1	PO		6144	U
PCFRN16.RECEIVE.MAIL	0033000C	0033000C	1	PS	150	1500	FB
EDENGI1.RECEIVE.MAIL	0033000D	0033000D	1	PS	150	1500	FB
DCBWH.RECEIVE.MAIL	0033000E	0033000E	1	PS	150	1500	FB
PDCJC.PDCJC.SPACEMAP.BYTEN	00340000	0034000E	15	PS	250	25000	FB
TSOSTWV.VOLKER.CLISTALT	00350000	00350009	10	PO	80	6160	FB
PDPANI.PPX.PID.T41C.PDPANI.JPTOA01.J4	0035000A	0035000A	1	PO	80	800	FB
SSPLTM.RECEIVE.MAIL	0035000B	0035000B	1	PS	150	1500	FB
PDPANI.PPX.PLQ.T41C.PDPANI.JPTOA01.J7.PRE	0035000C	0035000C	1	PS	518	10360	FB
TSCXRA.RECEIVE.MAIL	0035000D	0035000D	1	PS	150	1500	FB
TSMAIL.MAIL.D970212.T100926	0035000E	0035000E	1	PS	255	3120	VB
PDSAF.PDA.JCL	00360000	0036000E	15	PO	80	9040	FB
TSCALL.SUB.PROTERM	00370000	00370008	9	PO	80	8000	FB
SALESUP.PMSS.INSTALL.CLIST	00370009	00370009	1	PO	80	27920	FB
TSTWM.RECEIVE.MAIL	0037000A	0037000A	1	PS	150	1500	FB
TSOTA.CRC.INPUT3	0037000B	0037000B	1	PS	80	80	FB
TSSIL.ISPPROF	0037000C	0037000C	1	PO	80	27920	FB
TSTXZ.RECEIVE.MAIL	0037000D	0037000D	1	PS	150	1500	FB
TSIVYH.WRK010S.ACCOUNT.INDEX	0037000E	0037000E	1	VS			
SSLEJA.QRF.DBRMLIB	00380000	0038000E	15	PO	80	6160	FB
PDCTH.GENERAL.EXAM	00390000	00390009	10	PO	133	3990	FB
PCFRN02.RECEIVE.MAIL	0039000A	0039000A	1	PS	150	1500	FB
TSVIS.RECEIVE.MAIL	0039000B	0039000B	1	PS	150	1500	FB
TSCXR.SNAT.MAPCPY	0039000C	0039000E	3	PO	80	27920	FB
TSMAIL.MAIL.D970214.T074508	003A0000	003A0000	1	PS	255	3120	VB
TSRNO.RECEIVE.MAIL	003A0001	003A0001	1	PS	150	1500	FB
PDHULM.DB2.PROCLIB	003A0002	003A0002	1	PO	80	6160	FB
PDMJC.XDC.CMDLIB	003A0003	003A0003	1	PO	80	9040	FB
PDTDBA.PDTV30.DTR0003.D41B.DATA	003A0004	003A000D	10	VS			
PDHULM.DB2.MACLIB	003A000E	003B0000	2	PO	80	6160	FB
PDCELAA.RECEIVE.MAIL	003B0001	003B0002	2	PS	150	1500	FB
INFOHUB.R200X.CONTROL	003B0003	003B0003	1	PO	80	3120	FB
PDPEB.RECEIVE.MAIL	003B0004	003B0004	1	PS	150	1500	FB
PDPEBA.RECEIVE.MAIL	003B0005	003B0005	1	PS	150	1500	FB
PDPEBA.USR1MSL.INDEX	003B0006	003B0006	1	VS			
TSJVBA.RECEIVE.MAIL	003B0007	003B0007	1	PS	150	1500	FB
PDRWA.PDRWAB.QATBAC1A.LOADDATA.PART1	003B0008	003B0008	1	PS	87	27927	FB
TSPGR.RECEIVE.MAIL	003B0009	003B0009	1	PS	150	1500	FB

PDPANI.PPX.PLR.T41C.PDPANI.JPTOB01.J2	003B000A	003B000A	1	PS			
PDPANN.RECEIVE.MAIL	003B000B	003B000B	1	PS	150	1500	FB
PIP.COM0300.CNTL	003B000C	003C0001	5	PO	80	3120	FB
ADGFK.GFUT2E.CNTL	003C0002	00400002	61	PO	80	3600	FB
TSGEJA.GMF.PQCSOC4	00400003	0043000A	53	PS	133	6118	VBA
TSGEJA.GMF.PFC01	0043000B	0043000B	1	PS	133	6118	VBA
TSMAIL.MAIL.D970204.T060014	0043000C	0043000C	1	PS	255	3120	VB
TSFIEN.RECEIVE.MAIL	0043000D	0043000D	1	PS	150	1500	FB
SSLEWIB.DEMO.RESET.JCL	0043000E	0043000E	1	PO	80	3120	FB
SALESSUP.PRMVS.S31A.SAMPJCL	00440000	0046000E	45	PO	80	6160	FB
ANLQA.SQE.P512AA.SCRIPT	00470000	004C000E	90	PO	80	6160	FB
TSCALL.SUB.PROTERM	004D0000	00500006	52	PO	80	8000	FB
TSGTNB.RECEIVE.MAIL	00500007	00500007	1	PS	150	1500	FB
SSLBO.BBB.VBASE	00500008	00540000	53	PO	80	27920	FB
PDRYANB.ISPPROF	00540001	0054000D	13	PO	80	3120	FB
TSSJD.RECEIVE.MAIL	0054000E	0054000E	1	PS	150	1500	FB
PDTBJ.PDA.JCL	00550000	005C000E	120	PO	80	9040	FB
DCPROD.FS500.SQRINC	005D0000	0060000E	60	PO	256	15476	VB
PDWITA.ISR0001.BACKUP	00610000	00610000	1	PS		13680	U

DASM VTOC FREESPACE on Volume Report (SSA1DASM)

This report provides a list of all Free Space extents on specific Volumes. The data comes from the VTOC, either using CVAF or the DASM Scan. The following lists the columns of information available on the VTOC FREESPACE on Volume Report:

C C H H	The address of the beginning of the free space extent
C C H H	The address of the end of the free space extent
TRKSFREE	The total number of free tracks in the extent

Following is a sample of the VTOC FREESPACE on Volume Report:

TSDAWN.USER.JCLLIB	M O D E L	D S C B					
SYS1.VVDS.VTSO001	00000002	0000000B	10	VS			
PDMAC.CUTLOG.DATA	0000000C	0000000C	1	PS	80	15440	FB
TSSJDA.RECEIVE.MAIL	0000000D	0000000D	1	PS	150	1500	FB
TSAYG.PARMLIB.CNTL	0000000E	0000000E	1	PO	80	3120	FB
SYS1.VTOCIX.TSO001	00010000	0001000E	15	PS	2048	2048	F
** V T O C **	00020000	0006000E	75				
SALESSUP.PRMVS.S31A.LOADLIB	00070000	0010000E	150	PO		23360	U
PDDAN.B512IA.IPROJDB.DATA	00110000	00110004	5	VS			
PDDAN.B512IA.IPROJDB.DATA	00110005	00120009	20	VS			
TSOTA.CRC.INPUT2	0012000A	0012000A	1	PS	80	80	FB
ICF.TSO.CAT3.CATINDEX	0012000B	0012000B	1	VS			
PDDAN.B512IA.IPROJDB.DATA	0012000C	0016000B	60	VS			
PDDAN.B512IA.IPROJDB.DATA	0016000C	00170006	10	VS			
PDDAN.B512IA.IPROJDB.DATA	00170007	00180006	15	VS			
PDDAN.B512IA.IPROJDB.DATA	00180007	0019000B	20	VS			
PDDAN.B512IA.IPROJDB.DATA	0019000C	001B0006	25	VS			
PDDAN.B512IA.IPROJDB.DATA	001B0007	001C0001	10	VS			
PDDAN.B512IA.IPROJDB.DATA	001C0002	001C0006	5	VS			
PDDAN.B512IA.IPROJDB.DATA	001C0007	001D0001	10	VS			
PDDAN.B512IA.IPROJDB.DATA	001D0002	001D0006	5	VS			
PDKGSA.ISPPROF	001D0007	001D000E	8	PO	80	6160	FB
PDJSC.PAR.CNTL2	001E0000	002F000E	270	PO	80	6320	FB
PDJHSA.DDIR.D	00300000	0032000E	45	VS			
PDRYAN.ISPPROF	00330000	0033000A	11	PO	80	3120	FB
DCPROD.MVSCICS.LOAD	0033000B	0033000B	1	PO		6144	U
PCFRN16.RECEIVE.MAIL	0033000C	0033000C	1	PS	150	1500	FB
EDENGI1.RECEIVE.MAIL	0033000D	0033000D	1	PS	150	1500	FB
DCBWH.RECEIVE.MAIL	0033000E	0033000E	1	PS	150	1500	FB
PDCJC.PDCJC.SPACEMAP.BYTEN	00340000	0034000E	15	PS	250	25000	FB
TSOSTWV.VOLKER.CLISTALT	00350000	00350009	10	PO	80	6160	FB
PDPANI.PPX.PID.T41C.PDPANI.JPTOA01.J4	0035000A	0035000A	1	PO	80	800	FB
SSPLTM.RECEIVE.MAIL	0035000B	0035000B	1	PS	150	1500	FB
PDPANI.PPX.PLQ.T41C.PDPANI.JPTOA01.J7.PRE	0035000C	0035000C	1	PS	518	10360	FB
TSCXRA.RECEIVE.MAIL	0035000D	0035000D	1	PS	150	1500	FB
TSMAIL.MAIL.D970212.T100926	0035000E	0035000E	1	PS	255	3120	VB
PDSAF.PDA.JCL	00360000	0036000E	15	PO	80	9040	FB
TSCALL.SUB.PROTERM	00370000	00370008	9	PO	80	8000	FB
SALESUP.PMSS.INSTALL.CLIST	00370009	00370009	1	PO	80	27920	FB
TSTWM.RECEIVE.MAIL	0037000A	0037000A	1	PS	150	1500	FB
TSOTA.CRC.INPUT3	0037000B	0037000B	1	PS	80	80	FB
TSSIL.ISPPROF	0037000C	0037000C	1	PO	80	27920	FB
TSTXZ.RECEIVE.MAIL	0037000D	0037000D	1	PS	150	1500	FB
TSIVYH.WRK01OS.ACCOUNT.INDEX	0037000E	0037000E	1	VS			
SSLEJA.QRF.DBRMLIB	00380000	0038000E	15	PO	80	6160	FB
PDCTH.GENERAL.EXAM	00390000	00390009	10	PO	133	3990	FB
PCFRNO2.RECEIVE.MAIL	0039000A	0039000A	1	PS	150	1500	FB
TSVIS.RECEIVE.MAIL	0039000B	0039000B	1	PS	150	1500	FB
TSCXR.SNAT.MAPCPY	0039000C	0039000E	3	PO	80	27920	FB
TSMAIL.MAIL.D970214.TO74508	003A0000	003A0000	1	PS	255	3120	VB
TSRNO.RECEIVE.MAIL	003A0001	003A0001	1	PS	150	1500	FB
PDHULM.DB2.PROCLIB	003A0002	003A0002	1	PO	80	6160	FB
PDMJC.XDC.CMDLIB	003A0003	003A0003	1	PO	80	9040	FB
PDTDBA.PDTV3O.DTR0003.D41B.DATA	003A0004	003A000D	10	VS			
PDHULM.DB2.MACLIB	003A000E	003B0000	2	PO	80	6160	FB
PDCELAA.RECEIVE.MAIL	003B0001	003B0002	2	PS	150	1500	FB
INFOHUB.R200X.CONTROL	003B0003	003B0003	1	PO	80	3120	FB
PDPEB.RECEIVE.MAIL	003B0004	003B0004	1	PS	150	1500	FB
PDPEBA.RECEIVE.MAIL	003B0005	003B0005	1	PS	150	1500	FB
PDPEBA.USR1MSL.INDEX	003B0006	003B0006	1	VS			
TSJVBA.RECEIVE.MAIL	003B0007	003B0007	1	PS	150	1500	FB
PDRWA.PDRWAB.QATBAC1A.LOADDATA.PART1	003B0008	003B0008	1	PS	87	27927	FB
TSPGR.RECEIVE.MAIL	003B0009	003B0009	1	PS	150	1500	FB

PDPANI.PPX.PLR.T41C.PDPANI.JPTOB01.J2	003B000A	003B000A	1	PS			
PDPANN.RECEIVE.MAIL	003B000B	003B000B	1	PS	150	1500	FB
PIP.COM0300.CNTL	003B000C	003C0001	5	PO	80	3120	FB
ADGFK.GFUT2E.CNTL	003C0002	00400002	61	PO	80	3600	FB
TSGEJA.GMF.PQCSOC4	00400003	0043000A	53	PS	133	6118	VBA
TSGEJA.GMF.PFC01	0043000B	0043000B	1	PS	133	6118	VBA
TSMAIL.MAIL.D970204.T060014	0043000C	0043000C	1	PS	255	3120	VB
TSFIEN.RECEIVE.MAIL	0043000D	0043000D	1	PS	150	1500	FB
SSLEWIB.DEMO.RESET.JCL	0043000E	0043000E	1	PO	80	3120	FB
SALESSUP.PRMVS.S31A.SAMPJCL	00440000	0046000E	45	PO	80	6160	FB
ANLQA.SQE.P512AA.SCRIPT	00470000	004C000E	90	PO	80	6160	FB
TSCALL.SUB.PROTERM	004D0000	00500006	52	PO	80	8000	FB
TSGTNB.RECEIVE.MAIL	00500007	00500007	1	PS	150	1500	FB
SSLBO.BBB.VBASE	00500008	00540000	53	PO	80	27920	FB
PDRYANB.ISPPROF	00540001	0054000D	13	PO	80	3120	FB
TSSJD.RECEIVE.MAIL	0054000E	0054000E	1	PS	150	1500	FB
PDTBJ.PDA.JCL	00550000	005C000E	120	PO	80	9040	FB
DCPROD.FS500.SQRINC	005D0000	0060000E	60	PO	256	15476	VB
PDWITA.ISR0001.BACKUP	00610000	00610000	1	PS		13680	U
PDRWA.PDRWAB.QATBAC1A.LOADDATA.PART2	00610001	00610001	1	PS	87	27927	FB
PDJMPA.LOG.MISC	00610002	00610004	3	PS	255	3120	VB
PDWKRA.STATUS	00610005	00610006	2	PO	80	3120	FB
PDDEISA.SALES.VSAM.DATA	00610007	00610007	1	VS			
PDRWA.PDRWAB.QATBAC1A.LOADDATA.PART1A	00610008	00610008	1	PS	87	27998	VB
PDDEISA.SALES.VSAM.INDEX	00610009	00610009	1	VS			
PDDEISA.SALESDET.VSAM.DATA	0061000A	0061000A	1	VS			
SSTRBC.RECEIVE.MAIL	0061000B	0061000B	1	PS	150	1500	FB
PDDVP.RECEIVE.MAIL	0061000C	0061000C	1	PS	150	1500	FB
PDRWA.PDRWAB.QATBAC1A.LOADDATA.PART2A	0061000D	0061000D	1	PS	87	27998	VB
PDDEISA.SALESDET.VSAM.INDEX	0061000E	0061000E	1	VS			
SSTRBC.ISPPROF	00620000	00620000	1	PO	80	6160	FB
TDMARW.RECEIVE.MAIL	00620001	00620002	2	PS	150	1500	FB
PDDEISA.STORES.VSAM.DATA	00620003	00620003	1	VS			
PDDEISA.STORES.VSAM.INDEX	00620004	00620004	1	VS			
PDKGS.IPCS.DEBUG.I	00620005	00620005	1	VS			
DCRSC.RECEIVE.MAIL	00620006	00620006	1	PS	150	1500	FB
SSCXK.RECEIVE.MAIL	00620007	00620007	1	PS	150	1500	FB
0* * F R E E S P A C E * *	00620008	00620008	1				
0INFOHUB.R220.PARMLIB	00620009	00620009	1	PO	80	6160	FB

DASM VTOC Detailed Volume Space Summary Report (SSA1DASM)

This report provides detailed volume summary information on specific Volumes. The data comes from the VTOC, either using CVAF or the DASM Scan. The following lists the columns of information available on the VTOC Detailed Volume Space Summary Report:

TRKS/VOL	The total number of tracks on the volume
TRK FREE	The total number of tracks on the volume that are unallocated
TRKALLOC	The total number of allocated tracks on the volume
TRK USED	The total number of allocated tracks that are used
TRK IDLE	The total number of tracks that, although allocated, are not in use

This report is also available online through the DASM section of the CIMS Capacity Planner ISPF/PDF interface.

Following is a sample of the VTOC Detailed Volume Summary Report:

```
TRK FREE TRKALLOC TRK USED TRK IDLE
 TOTALS FOR TSO007:  (TRKS/VOL   50,085)   4,328   45,757   41,638    4,119
 TOTALS FOR TSO010:  (TRKS/VOL   50,085)   3,624   46,461   30,209   16,252
 TOTALS FOR TSO510:  (TRKS/VOL   50,085)  48,452    1,633    1,188      445
 TOTALS FOR TSO004:  (TRKS/VOL   50,085)   4,326   45,759   39,554    6,205
 TOTALS FOR TSO005:  (TRKS/VOL   50,085)   4,082   46,003   39,800    6,203
 TOTALS FOR TSO003:  (TRKS/VOL   50,085)   3,130   46,955   33,432   13,523
 TOTALS FOR TSO001:  (TRKS/VOL   50,085)   4,235   45,850   37,377    8,473
 TOTALS FOR TSO006:  (TRKS/VOL   50,085)   4,202   45,883   40,365    5,518
 TOTALS FOR TSO002:  (TRKS/VOL   50,085)   4,377   45,708   38,797    6,911
 TOTALS FOR TSO450:  (TRKS/VOL   50,085)   5,330   44,755   39,542    5,213
 TOTALS FOR TSO008:  (TRKS/VOL   50,085)   3,920   46,165   39,340    6,825
 TOTALS FOR TSO009:  (TRKS/VOL   50,085)   4,309   45,776   38,948    6,828
 TOTALS FOR TSO011:  (TRKS/VOL   50,085)   1,895   48,190   45,784    2,406
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DASM VTOC Quick Volume Space Summary Report (SSA1DASM)

This report provides a quick volume space summary report on specific Volumes. The data comes from the VTOC, using the LSPACE command. The following lists the columns of information available on the VTOC Quick Volume Summary Report:

VOLUME SERIAL	The VOLSER of the volume
TOTAL TRACKS	The total number of tracks on the volume
TRACKS ALLOC	The total number of allocated tracks on the volume
TRACKS FREE	The total number of unallocated tracks on the volume
CONTIG FREE TRK	The largest number of contiguous free tracks
# FREE EXTENTS	The number of free space extents
# FREE DSCBS	The number of free data set control blocks in the VTOC
ADR: FREE ALT TRKS	The address of the volume (ccua) and the free alternate tracks remaining
FRAGMENT INDEX	An indicator of how fragmented the free space on the volume is: a value of 0 means no fragmentation (all free space in one contiguous extent)

This report is also available online through the DASM section of the CIMS Capacity Planner ISPF/PDF interface.

Following is a sample of the VTOC Quick Volume Space Summary report:

VOLUME SERIAL	TOTAL TRACKS	TRACKS ALLOC	TRACKS FREE	CONTIG FREE TRK	# FREE EXTENTS	# FREE DSCBS	ADR:FREE ALT TRKS	FRAGMENT INDEX
SPOOL1		14	14	14	1	2,995	09E4:	.00
SPOOL2		14	14	14	1	2,996	09F3:	.00
SPOOL3		14	14	14	1	2,996	09CB:	.00
SPOOL4		14	14	14	1	2,996	09DC:	.00
SPOOL5		30	30	30	1	2,246	09FD:	.00
SPOOL6		14	14	14	1	3,745	0929:	.00
TSO001		4,233	4,233	750	138	2,884	09EC:	5.22
TSO002		4,376	4,376	969	116	2,712	09F8:	4.16
TSO003		3,129	3,129	345	114	2,940	09E7:	5.47
TSO004		4,325	4,325	540	151	2,394	09D2:	4.95
TSO005		4,081	4,081	704	107	2,744	09D8:	4.74
TSO006		4,201	4,201	540	110	1,183	09F5:	4.17
TSO007		4,327	4,327	660	84	6,826	0904:	4.42
TSO008		3,919	3,919	810	115	2,989	1072:	4.57
TSO009		4,308	4,308	1,516	60	7,119	107C:	3.59
TSO010		3,623	3,623	615	109	6,733	0912:	4.85
TSO011	50,085	48,191	1,894	180	120	6,828	2037:15	5.82
TSO450		5,323	5,323	4,755	41	1,516	1026:	.89
TSO510		48,451	48,451	48,120	8	3,676	091D:	.04

DASM X37 Candidate List (SSA1DASM)

This report provides a listing of all data sets that are candidates for x37 Abends on specific Volumes. A data set is presumed to be a candidate for an x37 Abend if it meets the following criteria:

It has already gone into a specified number of secondary extents (See FILTER)

The data set allocation is larger than a specified minimum (See FILTER)

The number of secondary extents allocated exceeds a specified threshold (See FILTER)

The percentage of space used exceeds a specified threshold (See FILTER)

When two or more of the above conditions has been met, the data set is included in the x37 candidate list.

The FILTER key phrase in the SYSIN stream is used to specify thresholds used in determining whether the data set should be included on the list. The format of the FILTER key phrase is as follows:

FILTER=aaa,bbb,ccc,ddd,eee,fff,ggg where

aaa = the minimum data set allocation, in tracks, to consider for inclusion on any list

bbb = the minimum number of secondary extents, regardless of % used, for x37 list

ccc = the minimum number of secondary extents, combined with % used, for x37 list

ddd = % used in combination with (ccc) for x37 list

eee = minimum time un-referenced, in days, for archive list

fff = smallest block size, in K, to avoid being placed on the re-blocking list

ggg = lowest threshold, in % used, to avoid release list

The data comes from the VTOC. The following lists the columns of information available on the DASM X37 Candidate List:

DSNAME	The name of the data set
TRKALLOC	The total number of tracks allocated to that data set
TRK USED	The total number of tracks used by that data set
# EXTENT	The total number of extents allocated to that data set
LREF	The date the data set was last referenced

DSORG	The data set organization
LRECL	The logical record length
BLKSIZE	The block size
RECFM	The record format
VOLSER	The volume serial number of the volume on which the data set resides

Following is a sample of the X37 Candidate List:

DASM X37 CANDIDATE LIST CIMS LAB, INC. PAGE 001
SMFSID=SDI1 02/14/97

DSNAME	TRKALLOC	TRK USED	# EXTENT	L/REF	DSORG	LRECL	BLKSZ	RECFM	VOLSER
DCPROD.DWH.CNTL.JCL	19	19	10	97045	PO	80	6160	FB	TS0010
TSJOA.SDC.SRCLIB	345	345	16	97045	PO	80	27920	FB	TS0010
PDRWA.QATEST.JCL	167	165	8	97045	PO	80	8000	FB	TS0004
TSCALL.CLISTLIB.CLIST	99	98	15	97045	PO	80	3120	FB	TS0005
TSAYG.PAR.OUTPUT	481	481	11	97045	PO	80	6160	FB	TS0002
DCMIKE.RRSFLIST	50	50	16	97045	PS	80	27920	FB	TS0450
PDCROW.CHUBB.DOCUMENT	240	240	16	97010	PO	80	6000	FB	TS0450
PDCROW.SMFDATA	270	1	16	96285	PS	32767	4096	VBS	TS0450
PDCROW.X200A.LINKLIB	420	404	14	97045	PO		23476	U	TS0450
TSDTA.ALLTEL.TMSBINQ	1,830	1,830	12	97045	PS	133	1330	FB	TS0450
TSDTA.FORD.OPC.FOB.AD	945	931	7	97006	PS	133	32718	FBA	TS0450
TSDTA.ROGERS.CA7.INFO7	2,925	2,915	6	97016	PS	133	13300	FBA	TS0450
TSDTA.SEC.EPIC.REPORT2	2,220	2,210	14	97036	PS	133	32718	FBA	TS0450
TSDTA.USFG.TMSBINQ	9,615	9,609	10	97030	PS	133	27930	FBA	TS0450
TSDTA.USHC.CA72ZEKE	915	901	7	97016	PS	133	32718	FBA	TS0450
ZARA.DATABASE.BACKUP	1,005	990	13	96306	PS	23040	23044	VB	TS0450
PDMALL.MBNA.TARGET.LOAD	171	171	6	97044	PS	88	7396	VB	TS0008
PIP.MHUBER.JCL	48	48	15	97045	PO	80	3120	FB	TS0008
TSGEJA.PTI.DDL	6,519	6,353	13	97045	PO	80	3120	FB	TS0009
SALESSUP.CIMSLAB.S31B.LOADLIB.TOM	8,484	8,374	6	97041	PO		23200	U	TS0011
TSPXA.GENERAL.CLIST	94	93	16	97045	PO	80	6160	FB	TS0011

DASM Re-blocking Candidate List (SSA1DASM)

This report provides a listing of all data sets that are candidates for re-blocking on specific Volumes. A data set is presumed to be a candidate for re-blocking if it meets the following criteria:

It is larger than a specified allocation size (See FILTER)

The block size is less than a specified threshold (See FILTER)

When the above conditions have been met, the data set is included in the re-blocking candidate list.

The FILTER key phrase in the SYSIN stream is used to specify thresholds used in determining whether the data set should be included in the list. The format of the FILTER key phrase is as follows:

FILTER=aaa,bbb,ccc,ddd,eee,fff,ggg where

aaa = the minimum data set allocation, in tracks, to consider for inclusion on any list

bbb = the minimum number of secondary extents, regardless of % used, for x37 list

ccc = the minimum number of secondary extents, combined with % used, for x37 list

ddd = % used in combination with (ccc) for x37 list

eee = minimum time un-referenced, in days, for archive list

fff = smallest block size, in K, to avoid being placed on the re-blocking list

ggg = lowest threshold, in % used, to avoid release list

The data comes from the VTOC. The following lists the columns of information available on the DASM Re-blocking Candidate List:

DSNAME	The name of the data set
TRKALLOC	The total number of tracks allocated to that data set
TRK USED	The total number of tracks used by that data set
# EXTENT	The total number of extents allocated to that data set
LREF	The date the data set was last referenced
DSORG	The data set organization
LRECL	The logical record length
BLKSIZE	The block size
RECFM	The record format
VOLSER	The volume serial number of the volume on which the data set resides

Following is a sample of the DASM Re-blocking Candidate List:

DASM REBLOCKING CANDIDATE LIST — CIMS LAB, INC. — PAGE 001
SMFSID=SDI1 — 02/14/97

DSNAME	TRKALLOC	TRK USED	# EXTENT	L/REF	DSORG	LRECL	BLKSZ	RECFM	VOLSER
ADGFK.ADPAC800.LST	20	20	1	97020	PS	121	1210	FBA	TSO007
ADGFK.GFUT2.CNTL	58	58	1	97020	PO	80	3600	FB	TSO007
ADGFK.OXTH802.LST	18	18	1	97020	PS	121	1210	FBA	TSO007
ADJDS.PMSS.C305M0.SYSVIS.REPORT0	40	1	1	97045	PS	133	3990	FBA	TSO007
INFOHUB.R200X.M370.MACLIB	61	61	1	97039	PO	80	3120	FB	TSO007
INFOHUB.R200X.SOURCE	34	34	1	97039	PO	80	3120	FB	TSO007
PDBTK.WORK.SRCLIB	31	31	1	97044	PO	80	3120	FB	TSO007
PDCJC.PMMV41.PARS	30	23	1	97044	PO	80	3120	FB	TSO007
PDKJK.UTIL.JCL	180	1	1	97044	PO	80	3120	FB	TSO007
PDLJO.PFRV41.ZAPS1	210	204	1	97042	PO	80	3120	FB	TSO007
PDLJO.PMMV41.CHACCUM	30	22	1	97038	PO	80	3120	FB	TSO007
PDLJO.PMMV41.PARS	30	23	1	97037	PO	80	3120	FB	TSO007
PDLNR.TEMPCOPY.JCL1	35	1	2	97036	PO	80	3120	FB	TSO007
PDODBA.RECEIVE.MAIL	17	17	2	97045	PS	150	1500	FB	TSO007
PDPANI.PFRV41.OBID	120	120	2	97045	PO	80	3120	FB	TSO007
PDPANI.PFRV41.ZAPS1	705	242	3	97045	PO	80	3120	FB	TSO007
PDPANI.PMMV31.ZAPS1	450	437	1	97027	PO	80	3120	FB	TSO007
PDPANI.PPXV41.SMOOTH	45	35	1	97030	PO	80	3120	FB	TSO007
PDSAF.RP411AA.MODEL	32	32	1	97037	PO	80	3120	FB	TSO007
PDTAM.BATCH.REPORTS	375	371	1	97028	PO	133	1330	FBA	TSO007
PDTEB.SDSF.OUTPUT	495	484	1	97037	PO	130	3120	FB	TSO007
PDTMG.BATCHAD.ICA	1,095	488	3	97045	PO	133	1330	FBA	TSO007
PDTMG.BATCHAD.JCA	840	147	3	97045	PO	133	1330	FBA	TSO007
PDTMG.BATCHO11.SCA	465	454	1	97044	PO	133	1330	FBA	TSO007
PDTMG.EXAMPLE.JCL	45	42	1	97041	PO	80	3120	FB	TSO007
PDUTL01.PFC.UNCOMP.SCRIPTS	330	1	1	97020	PO	80	3120	FB	TSO007
PDUTL01.PFL.UNCOMP.SCRIPTS	450	322	3	97044	PO	80	3120	FB	TSO007
PDUTL01.PRR.PARSV4.SCRIPTS	480	474	2	97044	PO	80	3120	FB	TSO007
PDWIT.RP512AD.SPFSLIB	191	191	1	97041	PO	80	3120	FB	TSO007
PDWJB.DB2.D31A	137	137	1	97022	PO	80	3120	FB	TSO007
SALESSUP.CIMSLAB.S31B.B608PA.SPFHLIB	60	60	1	97036	PO	80	3120	FB	TSO007
SALESSUP.CIMSLAB.S31B.SRCLIB	296	296	2	97044	PO	80	3120	FB	TSO007
SALESSUP.ZACK.A320A054.AUDIT.LOG2	300	300	1	97040	PS	80	80	U	TSO007
SALESSUP.ZARA.T120A052.MASTER.DATABASE	375	375	1	97045	PS	512	512	F	TSO007
TDDEB.PSA.HELP	18	18	2	97041	PO	80	3120	FB	TSO007
TSAYG.PAR.OUTPUT1	2,100	2,096	2	97045	PO	133	1330	FB	TSO007
TSEDK.DUMP.P325405	2,175	2,174	2	97028	PS	131	135	VB	TSO007
TSEDK.EDWIN.UTIL	65	62	3	97045	PO	80	3120	FB	TSO007
TSEDK.PDA.JCL	450	439	2	97034	PO	80	3120	FB	TSO007
TSJMS.RECEIVE.MAIL	70	70	2	97044	PS	150	1500	FB	TSO007
TSMXT.RP512AB.CLIST	31	31	1	97038	PO	80	3120	FB	TSO007
TSNJLA.NORBERT.#PAR.CNTL	30	22	1	97037	PO	80	3120	FB	TSO007
TSOTA.ASAHI.JOBLOG	195	194	1	97023	PO	133	133	FB	TSO007
TSRICH.PT.CNTL	20	20	1	97036	PO	80	3120	FB	TSO007
ADGFK.ADPAC500.LST	26	26	1	97020	PS	121	1210	FBA	TSO010
ADGFK.ADPAC700.LST	23	23	1	97020	PS	121	1210	FBA	TSO010
ADGFK.ADPAD700.LST	17	17	1	97020	PS	121	1210	FBA	TSO010
ADGFK.GFASM.LISTS	130	130	1	97042	PO	121	1210	FBM	TSO010
ADGFK.GFUT1.CNTL	113	105	3	97043	PO	80	3600	FB	TSO010
EDFRAI1.PRF.MODEL	50	50	2	97037	PO	80	3120	FB	TSO010
EDSTPI1.DB2.SOURCE	22	22	1	97045	PO	80	3120	FB	TSO010
INFOHUB.R200X.MACLIB	62	62	1	97037	PO	80	3120	FB	TSO010
PDBJBB.DDL	31	1	1	97022	PO	80	3120	FB	TSO010

DASM Archival Candidate List (SSA1DASM)

This report provides a listing of all data sets that are candidates for Archival from specific Volumes. A data set is presumed to be a candidate for Archival if it meets the following criteria:

It is larger than a specified allocation size (See FILTER)

The number of days since it was last referenced exceeds a specified threshold (See FILTER)

When the above conditions have been met, the data set is included in the Archival candidate list.

The FILTER key phrase in the SYSIN stream is used to specify thresholds used in determining whether the data set should be included on the list. The format of the FILTER key phrase is as follows:

FILTER=aaa,bbb,ccc,ddd,eee,fff,ggg where

aaa = the minimum data set allocation, in tracks, to consider for inclusion on any list

bbb = the minimum number of secondary extents, regardless of % used, for x37 list

ccc = the minimum number of secondary extents, combined with % used, for x37 list

ddd = % used in combination with (ccc) for x37 list

eee = minimum time un-referenced, in days, for archive list

fff = smallest block size, in K, to avoid being placed on the re-blocking list

ggg = lowest threshold, in % used, to avoid release list

The data comes from the VTOC. The following lists the columns of information available on the DASM Archival Candidate List:

DSNAME	The name of the data set
TRKALLOC	The total number of tracks allocated to that data set
TRK USED	The total number of tracks used by that data set
# EXTENT	The total number of extents allocated to that data set
LREF	The date the data set was last referenced

DSORG	The data set organization
LRECL	The logical record length
BLKSIZE	The block size
RECFM	The record format
VOLSER	The volume serial number of the volume on which the data set resides

Following is a sample of the DASM Archival Candidate List:

DASM ARCHIVAL CANDIDATE LIST — CIMS LAB, INC. — PAGE 001
SMFSID=SDI1 — 02/14/97

DSNAME	TRKALLOC	TRK USED	# EXTENT	L/REF	DSORG	LRECL	BLKSZ	RECFM	VOLSER
SSTXT.JCL.CNTL	118	118	2	96257	PO	80	6160	FB	TS0007
DCECR.AUTH.LOADLIB	30	22	1	95067	PO		256	U	TS0004
PDERNE.SDSF.PRINT	240	227	1	96130	PO	133	27930	FB	TS0004
PDROW.TEST.LOADLIB	73	16	1	96143	PO		23200	U	TS0004
PIP.QA.COM0300.RMT.MAPLIB	45	36	1	96065	PO		23200	U	TS0004
PDBJS.STD.TXT.Y92	29	29	1	94353	PO	255	9040	VB	TS0005
PDHULM.CNTL	28	21	1	96143	PO	80	6160	U	TS0005
PIP.QA.COM0300.DB2.MAPLIB	45	45	1	96129	PO		23200	U	TS0005
PDERNE.EXEC	30	1	1	96136	PO	133	32718	FB	TS0003
SRA.PPDR105.R1050.LINKLIB	240	229	1	96192	PO		23200	U	TS0003
PDRYAN.TESTZAP.LOADLIB	29	23	1	96044	PO		23200	U	TS0001
PDERNE.RP512AB.SPFPLIB	668	668	1	96136	PO	80	3120	FB	TS0006
PDSXO.EXPORTS	515	515	1	96206	PS	719	14380	FB	TS0002
TSPENN.UTIL.JCL	16	16	1	96075	PO	80	6160	FB	TS0002
DCTOM.CLIST	75	55	1	96274	PO	80	27920	FB	TS0450
PDAFG.XDC.LOG	74	74	1	96211	PS	177	6233	VBA	TS0450
PDAFG.ZACK.AZAKMOD0	52	41	3	96236	PO		6144	U	TS0450
PDAFG.ZACK.AZAKPNL0	34	27	1	96236	PO	80	6160	FB	TS0450
PDAFG.ZACK.SZAKLMD0	52	42	3	96236	PO		6144	U	TS0450
PDAFG.ZACK.SZAKPNL0	34	27	1	96236	PO	80	6160	FB	TS0450
PDAFG.ZACK.X.AZAKMOD0	52	41	3	96236	PO		6144	U	TS0450
PDAFG.ZACK.X.AZAKPNL0	34	27	1	96236	PO	80	6160	FB	TS0450
PDAFG.ZACK.X.SZAKINS0	24	19	2	96236	PO	80	3120	FB	TS0450
PDAFG.ZACK.X.SZAKLMD0	52	42	3	96236	PO		6144	U	TS0450
PDAFG.ZACK.X.SZAKPNL0	34	27	1	96236	PO	80	6160	FB	TS0450
PDCROW.R420A.AD1	75	65	1	96215	PS	80	80	U	TS0450
PDCROW.R420A.AD2	75	65	1	96215	PS	80	80	U	TS0450
PDCROW.SMFDATA	270	1	16	96285	PS	32767	4096	VBS	TS0450
PDCROW.SYSMDUMP	270	268	1	96215	PS	4160	4160	FB	TS0450
PDCROW.XDC.LOG2	200	200	1	96215	PS	132	6072	FB	TS0450
PDCWH.ICONX.C	19	16	1	96283	PO	259	6160	VB	TS0450
PDJSM.OASIS.R200A.DB	135	135	1	96270	PS	27630	27630	F	TS0450
PDJSM.OASIS.R200A.DB.INDX	45	45	1	96270	PS	27630	27630	F	TS0450
PDJSM.ZEKE.R430A.CATALOG	60	60	1	96270	PS	512	512	F	TS0450
PDMULL.DBBACKUP.PRIME001	59	51	1	96235	PS	27630	27630	F	TS0450
PDMULL.SAG.LOAD	165	155	1	96289	PO		23476	U	TS0450
PDMULL.SAG.MACLIB	30	19	1	96207	PO	80	23040	FB	TS0450
PDMULL.Z430A.AD1	75	65	1	96207	PS	80	80	U	TS0450
PDMULL.Z430A.AD2	75	65	1	96207	PS	80	80	U	TS0450
PDMULL.Z430A.BACKUP	30	21	2	96219	PS	10000	10004	VB	TS0450
PDPETE.MACLIB	45	30	1	96267	PO	80	23440	FB	TS0450
TSDTA.CSAR.ISSC.DO.NOT.DELETE	150	138	1	96214	PS	133	13300	FB	TS0450
TSDTA.HLP.SCL	30	29	1	96150	PS	80	32720	FB	TS0450
TSDTA.TDCJ.EPIC.CONV	150	135	1	96229	PS	133	13300	FB	TS0450
TSDTA.TEACHERS.BACKUP	240	225	1	96240	PS	23040	23044	VB	TS0450
TSDTA.TEACHERS.EPIC.REPORT	60	56	1	96277	PS	133	31920	FBA	TS0450
TSROSE.KRAFT.DUMP1	945	934	1	96288	PS	4160	4160	F	TS0450
TSROSE.P86722.ALTCOMM.DUMP	165	155	1	96268	PS	250	27998	VBA	TS0450
TSROSE.P86722.OASIS.DUMP	90	82	1	96267	PS	133	23408	FBA	TS0450
TSROSE.P86722.SYSLOG.DUMP	465	451	1	96268	PS	250	23476	VBA	TS0450
ZEKE.TEMP.DBASE	60	23	1	96247	PS	10000	10004	VB	TS0450
PDTEB.PQCV31.SCRIPTS#	30	1	1	96257	PO	80	3120	FB	TS0008
SSKENF.CIMS.SOURCE	84	84	1	96256	PO	80	3120	FB	TS0008

DASM Release Candidate List (SSA1DASM)

This report provides a listing of all data sets that are candidates for Release processing on specific Volumes. A data set is presumed to be a candidate for Release processing if it meets the following criteria:

It is larger than a specified allocation size (See FILTER)

The percentage of space used is less than a specified threshold (See FILTER)

When the above conditions have been met, the data set is included in the Release candidate list.

The FILTER key phrase in the SYSIN stream is used to specify thresholds used in determining whether the data set should be included on the list. The format of the FILTER key phrase is as follows:

FILTER=aaa,bbb,ccc,ddd,eee,fff,ggg where

aaa = the minimum data set allocation, in tracks, to consider for inclusion on any list

bbb = the minimum number of secondary extents, regardless of % used, for x37 list

ccc = the minimum number of secondary extents, combined with % used, for x37 list

ddd = % used in combination with (ccc) for x37 list

eee = minimum time un-referenced, in days, for archive list

fff = smallest block size, in K, to avoid being placed on the re-blocking list

ggg = lowest threshold, in % used, to avoid release list

The data comes from the VTOC. The following lists the columns of information available on the DASM Release Candidate List:

DSNAME	The name of the data set
TRKALLOC	The total number of tracks allocated to that data set
TRK USED	The total number of tracks used by that data set
# EXTENT	The total number of extents allocated to that data set
LREF	The date the data set was last referenced

DSORG	The data set organization
LRECL	The logical record length
BLKSIZE	The block size
RECFM	The record format
VOLSER	The volume serial number of the volume on which the data set resides

Following is a sample of the DASM Release Candidate List:

DASM RELEASE CANDIDATE LIST — CIMS LAB, INC. — PAGE 001
SMFSID=SID1 — 02/14/97

DSNAME	TRKALLOC	TRK USED	# EXTENT	L/REF	DSORG	LRECL	BLKSZ	RECFM	VOLSER
ADGFK.J2TESTE.SOURCE	141	1	1	97020	PO	80	6320	FB	TSO007
ADGFK.J200PREV.LISTS	310	1	1	97020	PO	121	32670	FBM	TSO007
ADJDS.PMSS.C305MO.SYSVIS.REPORTO	40	1	1	97045	PS	133	3990	FBA	TSO007
PDKJK.UTIL.JCL	180	1	1	97044	PO	80	3120	FB	TSO007
PDLNR.TEMPCOPY.JCL1	35	1	2	97036	PO	80	3120	FB	TSO007
PDTMG.BATCHAD.JCA	840	147	3	97045	PO	133	1330	FBA	TSO007
PDUTL01.PFC.UNCOMP.SCRIPTS	330	1	1	97020	PO	80	3120	FB	TSO007
ADJJP.TEST.DATA	248	1	1	97044	PO	80	9440	FB	TSO010
IMV.V1R1MO.BIMVHFS	244	1	1	97044	PO			U	TSO010
OMVS.ROOT.OS110R	3,420	1	1	97041	PO			U	TSO010
PDBJBB.DDL	31	1	1	97022	PO	80	3120	FB	TSO010
PDDRIS.AUTH.LOADLIB	135	40	1	97045	PO	121	1210	U	TSO010
PDDVP.SRC.LOADLIB	165	3	2	97045	PO		23200	U	TSO010
PDLNR.TEMPCOPY.JCL	45	1	1	97036	PO	80	3120	FB	TSO010
PDPOMP.DISASTER.JCL.G0079V00	75	15	1	97045	PO	80	24000	FB	TSO010
PDTEB.PQCREG23.TEST	45	1	1	97022	PO	80	3120	FB	TSO010
PDTMG.BATCHAD.PA	990	300	2	97045	PO	133	1330	FBA	TSO010
PDTMG.BATCHO11.JCA	870	166	3	97045	PO	133	1330	FBA	TSO010
PDUTL01.PFCD.UNCOMPV4.SCRIPTS	240	1	2	97045	PO	80	3120	FB	TSO010
PDUTL01.PFCI.UNCOMPV4.SCRIPTS	75	1	1	97043	PO	80	3120	FB	TSO010
TSJOA.RDK.SRCLIB	120	17	1	97045	PO	80	27920	FB	TSO010
PDRKH.CPPRY2K.CPPRMLIB	40	3	1	97027	PO	80	27920	FB	TSO510
PDRKH.CPPRY2K.CPPRSLIB	40	7	1	97027	PO	80	27920	FB	TSO510
ADJNW.J7W.VBASE	35	1	1	97045	PO	80	23440	FB	TSO004
OMVS.ROOT.OS120R	1,065	1	2	97044	PO			U	TSO004
PDCJC.PFRV31.ZAPS2	150	1	1	97041	PO	80	3120	FB	TSO004
PDCJC.PFRV41.BIGLOAD	45	1	1	97045	PO	80	3120	FB	TSO004
PDDVP.SRC.C	40	3	1	97045	PO	364	7200	VB	TSO004
PDDVP.SRC.H	40	3	1	97045	PO	364	7200	VB	TSO004
PDKITTA.WARP.APFLOAD	20	6	2	97045	PO		6000	U	TSO004
PDLNR.REXX.EXEC	63	1	2	97044	PO	80	3120	FB	TSO004
PDMALL.MBNA.SOURCE.EXTRACT2	300	1	1	97045	PS	23200	23200	FS	TSO004
PDMALL.MBNA.SOURCE.EXTRACT3	300	1	1	97045	PS	23200	23200	FS	TSO004
PDMULL.FBA133.LIST	255	1	1	97042	PO	133	32718	FBA	TSO004
PDROW.TEST.LOADLIB	73	16	1	96143	PO		23200	U	TSO004
PDTEB.PQCPARS.CNTL	109	1	1	97030	PO	80	3120	FB	TSO004
PDUTL01.RES.UNCOMPV4.SCRIPTS	208	1	1	97031	PO	80	3120	FB	TSO004
TMRJC.INT.LOGFILE1	225	46	2	97045	PS	136	27998	VB	TSO004
IMW.V1R1MO.SIMWHFS	345	1	9	97044	PO			U	TSO005
PDCJC.PQC31.CNTL	263	1	1	97038	PO	80	3120	FB	TSO005
PDCJC.UTIL.CNTL2	75	1	1	97038	PO	80	3120	FB	TSO005
PDPARK.REXX.EXEC	23	1	1	97045	PO	80	27920	FB	TSO005
PDUTL01.PFU.UNCOMPV4.SCRIPTS	360	1	2	97036	PO	80	3120	FB	TSO005
OMVS.ROOT.SP522.SERVICE	2,700	1	2	97041	PO			U	TSO003
PCFQA.PROTERM.AJM.LOG	900	1	2	97045	PO	151	32616	FBA	TSO003
PCFRN13.DB2.CNTL	33	1	1	97045	PO	80	32720	FB	TSO003
PDCJC.PQCV41.ZAPS1	510	47	2	97045	PO	80	3120	FB	TSO003
PDERNE.EXEC	30	1	1	96136	PO	133	32718	FB	TSO003
PDTEB.PQCREG41.TEST	60	1	2	97045	PO	80	3120	FB	TSO003
PDUTL01.PFU.COMP.SCRIPTS	315	1	1	97038	PO	80	3120	FB	TSO003
ADGFK.GFUT2E.CNTL	61	1	1	97020	PO	80	3600	FB	TSO001
ADJJP.JIM.CLIST	32	1	1	97045	PO	80	3120	FB	TSO001
EDPROD.LOADLIB.STPR	45	1	2	97043	PO		6160	U	TSO001

CICS Workload and Performance Reports

The following discussion enumerates the various CIMS Capacity Planner CICS reports and describes the contents of each report.

CICS Summary Analysis Report

The Summary Analysis Report contains key summary information required to determine the magnitude of the CICS workload and how well the CICS system is performing. The report provides the following information for the time period specified in the report request:

- The period measured by date and time

  You can produce the Summary Report can be produced for a single day or portion of a day or it can encompass any number of days, thereby allowing an evaluation of the overall long term and short term performance of the CICS system.

- The average number of active terminals (high watermark)

  A terminal is considered active during each 15-minute period throughout the day only if at least one transaction is submitted. If a terminal is logged on throughout three shifts, but transactions are submitted only during two 15 minute periods, the terminal is considered active for only 30 minutes.

- The average number of CICS transactions processed per minute during the prime shift
- The average number of CICS-related EXCPs per second during the prime shift
- The average terminal response time (in seconds) during the prime shift
- The average ratio of transactions submitted during the early shift compared to the prime shift
- The average ratio of transactions submitted during the late shift compared to the prime shift
- The average ratio of terminals active during the early shift compared to the prime shift
- The average ratio of terminals active on the late shift compared to the prime shift
- The average percentage of the CPU time consumed by CICS and the CICS applications during each shift within the measured period.
- The average number of transactions processed by shift for the measured period.

The 25 most frequently executed transactions are listed individually. All remaining transactions are reported collectively under the title of "OTHER". The total number of transactions is reported by shift.

Following is a sample of the CICS Summary Report:

```
CICSID:CICS2                                SUMMARY REPORT                                SYSID:MVSA
  1. THE MEASURED PERIOD BEGINS AT 00:00 MONDAY, MAY 1, AND CONTINUES THROUGH 23:59 TUESDAY, MAY 23.
  2. DURING THE MEASURED PERIOD CICS USAGE PEAKED AT  133 TERMINALS ACTIVE CONCURRENTLY
  3. DURING PRIME SHIFT, THE NUMBER OF TRANSACTIONS PER MINUTE AVERAGED: 33.47
  4. DURING PRIME SHIFT, THE NUMBER OF EXCPS PER SECOND AVERAGED: 17.26
  5. DURING PRIME SHIFT, TRANSACTION ELAPSED  TIME FOR THIS CICS REGION AVERAGED: .72 SECONDS
  6. DURING PRIME SHIFT, TERMINAL RESPONSE TIME FOR THIS CICS REGION AVERAGED: .74 SECONDS
  7. DURING THE MEASURED PERIOD THE RATIO OF EARLY-TO-PRIME SHIFT TRANSACTIONS WAS: .05
  8. DURING THE MEASURED PERIOD THE RATIO OF LATE-TO-PRIME SHIFT TRANSACTIONS WAS: .00
  9. DURING THE MEASURED PERIOD THE RATIO OF EARLY-TO-PRIME SHIFT TERMINALS WAS: .08
 10. DURING THE MEASURED PERIOD THE RATIO OF LATE-TO-PRIME SHIFT TERMINALS WAS: .00
 11. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT PERCENTAGE CPU BUSY TIME WITHIN SHIFT AVERAGED:
                          00:00 - 07:00               07:00 - 19:00               19:00 - 24:00
     XACTN                          .17                        2.80                         .00
     CICS                           .00                         .00                         .00
     TOTALS                         .17                        2.80                         .00
```

```
 CICSID:CICS2                               SUMMARY REPORT                                SYSID:MVSA
 12. DURING THE MEASURED PERIOD A TOTAL OF 431,048 CICS TRANSACTIONS WERE PROCESSED.
                          00:00 - 07:00               07:00 - 19:00               19:00 - 24:00
     MSA2                       4,128                     122,420
     IEOL                         976                      60,668
     OC70                         964                      54,272
     OC72                         408                      24,520
     CSNE                       2,644                      13,752                          24
     OC53                         304                      14,036
     CATD                       1,696                       9,352                          24
     CBAR                       1,772                       8,820
     CSSC                       1,036                       5,788                          32
     AR                           516                       5,836
     ARAC                                                   5,408
     CULU                         224                       4,872
     OC64                         176                       4,548
     ARI                          312                       4,052
     AROI                          52                       3,940
     ORB                          176                       3,720
     CUBS                         344                       3,356
     CUBR                         324                       3,196
     OR                           240                       3,220
     ICIS                         368                       2,992
     ORLE                         204                       3,080
     OC02                         220                       2,908
     OC00                         448                       2,636
     CEMT                         352                       2,328                          16
     PRTF                         168                       2,316
     OTHER                      2,996                      37,692                         176
                          ============               ============               ============
     TOTALS                    21,048                     409,728                         272
```

CICS Response Performance Report

This report shows, by shift, for a single day or a range of days, how the CICS transactions flowed through the system for a specified CICS region. Each of the 25 most frequently executed CICS transactions are listed individually, by shift, with an indication of the percentage of the response times that fell within certain predefined time-frames. Transactions that are not among the 25 most frequently executed are grouped together and reported under "OTHER". A Totals line is accumulated and written to indicate how all transactions performed as a group.

This is a key report in measuring how well your performance goals are being met within the CPU by the CICS system and the application programs.

The six response time categories under which the transactions are classified are defined by the CPPR>PARMLIB member &sidCICR.

Following is a sample of the CICS Response Performance Report:

CIMS LAB, INC.

05/01/96-05/23/96

CICSID: CICS2 — CICS RESPONSE PERFORMANCE — SYSID:MVSA

SHIFT SHOWN: 07:00 - 19:00

	< .5 SEC	.5-1 SEC	1-2 SEC	2-4 SEC	4-6 SEC	> 6 SEC	
MSA2	.21%	24.37%	63.58%	11.82%			122,420
IEOL	67.05%	30.93%	2.01%				60,668
OC70	95.27%	4.72%					54,272
OC72	78.97%	21.02%					24,520
OC53	100.00%						14,036
CSNE	100.00%						13,752
CATD	38.92%	42.38%	12.36%	6.33%			9,352
CBAR	100.00%						8,820
AR	48.11%	50.23%	1.37%	.27%			5,836
CSSC	99.58%	.41%					5,788
ARAC	94.30%	5.32%	.36%				5,408
CULU	70.36%	27.75%	1.88%				4,872
OC64	38.61%	54.00%	7.38%				4,548
ARI	89.83%	9.87%	.29%				4,052
AROI	70.65%	27.51%	1.82%				3,940
ORB	87.52%	11.39%	1.07%				3,720
CUBS	98.68%	1.31%					3,356
OR	.49%	20.86%	78.63%				3,220
CUBR	98.74%	1.25%					3,196
ORLE	1.94%	46.88%	51.03%	.12%			3,080
ICIS	66.71%	30.74%	2.54%				2,992
OC02	90.78%	8.80%	.41%				2,908
OC00	19.87%	10.92%	63.58%	5.61%			2,636
CEMT	99.14%	.68%			.17%		2,328
PRTF	100.00%						2,316
OTHER	70.04%	20.74%	5.06%	3.76%	.09%	.27%	37,672
SUBTOTALS	54.55%	19.70%	21.63%	4.06%		.02%	409,708
TOTALS	54.55%	19.70%	21.63%	4.06%		.02%	409,708

CICS Transaction Statistics Report

This report shows, for a specified CICS region, which transactions were among the top 40 in the following categories:

- Most frequently executed

  The transaction codes and the transaction counts of the 40 most frequently executed transactions along with their respective percentages of the total CICS transaction workload. The transactions are listed in descending order by frequency of execution.

- Most cumulative elapsed time

  The transaction codes and the total amount of elapsed (residence) time for each of 40 transactions experiencing the highest residency time along with their respective percentages of the total CICS transaction residence time. The transactions are listed in descending order by residency time.

- Most cumulative CPU time

  The transaction codes and the total amount of CPU time consumed for each of the 40 transactions that consumed the most CPU time along with their respective percentages of the total CICS CPU time. The transactions are listed in descending order by CPU time.

- Most File Accesses

  The transaction codes and the number of File Access Calls for each of the 40 transactions issuing the most File Access calls along with their respective percentages of all CICS file access activity. The transactions are listed in descending order by file access activity.

- Most Journal Accesses

  The transaction codes and the number of Journal Program calls for each of the 40 transactions issuing the most calls to the Journal Control Program along with their respective percentages of all the journal access activity. The transactions are listed in descending order by the number of journal issued.

- Most Frequent Requests for Temporary Storage

  The transaction codes and the number of Temporary Storage requests for each of the 40 transactions most frequently requesting Temporary Storage along with their respective percentages of the total Temporary Storage calls for all the CICS transactions. The listing is produced in descending order by the number of Temporary Storage requests.

- Most Requests for Transient Data

  The transaction codes and the number of requests for Transient Data for each of the 40 transactions issuing the most Transient Data requests along with their respective percentages of the total Transient Data requests for all CICS transactions. The listing is produced in descending order by the number of Transient Data requests.

- Most Paging Activity

  The transaction codes and the amount of paging activity for the 40 transactions experiencing the highest number of page faults along with their respective percentage of all paging activity related to CICS transaction processing. The listing is produced in descending order by the amount of paging required.

- Most Storage Used

  The transaction codes and the high watermark (in bytes) for the 40 CICS transactions requiring the most storage. The listing is produced in descending order by the amount of storage used for each transaction.

You can exclude transactions from the Transaction Statistics Report using the EXCLUDE facility (see JCL). Similarly, you can include transactions that would not normally be included using the INCLUDE facility (JCL).

Any counts that exceed 6 digits are expressed in thousands by suffixing the number with the character "K".

Following is a sample of the CICS Transaction Statistics Report:

CICSID: CICS2 TRANSACTION STATISTICS REPORT SYSID:MVSA
CIMS LAB, INC.
05/01/96-05/23/96

TRANSACTION COUNT	MSA2	IEOL	OC70	OC72	CSNE	OC53	CATD	CBAR	CSSC	AR
	126,548	61,644	55,236	24,928	16,420	14,340	11,072	10,592	6,856	6,352
	29.35%	14.30%	12.81%	5.78%	3.80%	3.32%	2.56%	2.45%	1.59%	1.47%
	ARAC	CULU	OC64	ARI	AROI	ORB	CUBS	CUBR	OR	ICIS
	5,408	5,096	4,724	4,364	3,992	3,896	3,700	3,520	3,460	3,360
	1.25%	1.18%	1.09%	1.01%	.92%	.90%	.85%	.81%	.80%	.77%
	ORLE	OC02	OC00	CEMT	PRTF	ACFM	ORR	ARCA	CSGM	IC
	3,284	3,128	3,084	2,696	2,484	2,388	2,164	2,084	2,080	1,852
	.76%	.72%	.71%	.62%	.57%	.55%	.50%	.48%	.48%	.42%
	ARRS	ICPT	ICR	ICDD	ORHR	CSAC	ORBO	ORHE	ORO	ORE
	1,780	1,632	1,524	1,516	1,412	1,396	1,348	1,332	1,320	1,248
	.41%	.37%	.35%	.35%	.32%	.32%	.31%	.30%	.30%	.28%

ELAPSED TIME	CSSY	MSA2	PRTR	IEOL	OC70	OC72	CATD	OR	OC00	AR
	140:22:53	48:40:48	20:10:50	7:51:29	5:55:14	2:57:17	2:18:19	1:09:27	1:01:12	0:57:56
	57.51%	19.94%	8.26%	3.21%	2.42%	1.21%	.94%	.47%	.41%	.39%
	ORLE	ORF	OC64	CULU	OC53	ARAC	AROI	ARI	IC	ORB
	0:54:25	0:53:09	0:48:44	0:37:51	0:36:56	0:30:51	0:28:56	0:26:48	0:26:35	0:26:11
	.37%	.36%	.33%	.25%	.25%	.21%	.19%	.18%	.18%	.17%
	ICIS	ICDD	ORHE	ACFM	OC02	CBAR	ICR	ARCA	ORR	CSFU
	0:25:50	0:24:41	0:24:22	0:22:31	0:20:41	0:19:31	0:18:15	0:17:08	0:14:45	0:14:16
	.17%	.16%	.16%	.15%	.14%	.13%	.12%	.11%	.10%	.09%
	CSGM	CUBS	ICPE	CUBR	ORHR	CEMT	ORBL	OC28	ORE	ORBO
	0:14:15	0:13:29	0:12:52	0:09:34	0:08:13	0:07:48	0:07:39	0:07:07	0:06:48	0:06:45
	.09%	.09%	.08%	.06%	.05%	.05%	.05%	.04%	.04%	.04%

CPU TIME	MSA2	IEOL	OC70	OC72	OC53	CATD	OC00	OC64	CULU	AR
	4:17:36	0:33:03	0:24:23	0:07:17	0:04:30	0:01:39	0:01:35	0:01:21	0:01:18	0:01:11
	72.26%	9.27%	6.84%	2.04%	1.26%	.46%	.44%	.37%	.36%	.33%
	ORLE	CEMT	ARAC	CSSC	OC02	OR	CBAR	ORB	ICIS	ORF
	0:01:09	0:01:09	0:01:05	0:01:01	0:00:59	0:00:58	0:00:50	0:00:47	0:00:47	0:00:47
	.32%	.32%	.30%	.28%	.27%	.27%	.23%	.22%	.22%	.22%
	AROI	ARI	CSGM	ARCA	ICDD	ACFM	CSSY	ORHE	IC	ICR
	0:00:44	0:00:43	0:00:43	0:00:39	0:00:37	0:00:33	0:00:32	0:00:30	0:00:30	0:00:29
	.20%	.20%	.20%	.18%	.17%	.15%	.15%	.14%	.14%	.13%
	ORR	CUBS	CSFU	CSNE	CUBR	ARRS	ICPE	ORBL	PRTR	CSSF
	0:00:26	0:00:26	0:00:26	0:00:25	0:00:24	0:00:21	0:00:18	0:00:18	0:00:16	0:00:15
	.12%	.12%	.12%	.11%	.11%	.09%	.08%	.08%	.07%	.07%

CICSID: CICS2 TRANSACTION STATISTICS REPORT SYSID:MVSA
CIMS LAB, INC.
05/01/96-05/23/96

FILE ACCESS COUNT	MSA2	OC70	IEOL	OC72	OC53	OC00	OC64	OC02	PRTR	CULU
	7,932K	2,122K	1,417K	467,276	306,928	191,724	91,896	85,580	78,652	68,448
	60.69%	16.23%	10.84%	3.57%	2.34%	1.46%	.70%	.65%	.60%	.52%
	ARCA	ARAC	AROI	OC79	AR	OR	ARI	ORHR	MSAS	ORE
	50,548	35,364	28,100	18,224	15,692	14,120	11,236	10,060	9,136	9,112
	.38%	.27%	.21%	.13%	.12%	.10%	.08%	.07%	.06%	.06%
	OC28	ORF	OC63	ARPI	ORB	ARRS	ORLE	IC	CATD	CBAR
	9,104	8,160	8,144	7,860	7,192	6,960	6,772	5,900	5,520	4,348
	.06%	.06%	.06%	.06%	.05%	.05%	.05%	.04%	.04%	.03%
	OC75	ICPT	ORR	OC71	ICIS	ORHE	OC31	ICDE	ACFM	ORBO
	3,932	3,428	3,316	2,820	2,576	2,224	1,824	1,796	1,296	1,292
	.03%	.02%	.02%	.02%	.01%	.01%	.01%	.01%	.00%	.00%
JCT ACCESS COUNT	ORLE	CATD	ORHE	ARAC	ORB	ACFM	CUBS	ORBL	ORF	CUBR
	32,920	24,664	19,076	15,296	15,116	14,232	9,468	8,288	8,244	7,620
	17.18%	12.87%	9.95%	7.98%	7.88%	7.42%	4.94%	4.32%	4.30%	3.97%
	ORBO	AR	ORR	ARRS	OR	CSSY	ORC	ORCL	ICR	CSKP
	6,676	3,348	3,160	2,876	2,816	2,788	1,968	1,808	1,676	1,412
	3.48%	1.74%	1.64%	1.50%	1.46%	1.45%	1.02%	.94%	.87%	.73%
	ORCM	CULU	ICMB	ORO	ORCR	PRTR	RRP	EMSA	EMMI	IC
	1,320	1,096	844	740	660	552	552	456	448	376
	.68%	.57%	.44%	.38%	.34%	.28%	.28%	.23%	.23%	.19%
	LAZH	ICMI	LAZV	ICIS	ICLO	ARI	ICPT	SYMS	SSVT	ORHR
	188	152	120	108	96	88	80	64	40	36
	.09%	.07%	.06%	.05%	.05%	.04%	.04%	.03%	.02%	.01%
TEMPORARY STG CALLS	ARAC	ORLE	ORBL	ORB	ICDD	ICR	ORE	ORHE	ARRS	ICPE
	8,936	5,188	4,492	2,540	2,376	2,356	1,944	1,716	1,672	1,140
	24.78%	14.38%	12.45%	7.04%	6.58%	6.53%	5.39%	4.75%	4.63%	3.16%
	OR	ORR	ORCM	RRP	PRTR	TMON	CULU	ORHR	CMSG	ICIS
	948	380	360	340	320	296	212	132	108	104
	2.62%	1.05%	.99%	.94%	.88%	.82%	.58%	.36%	.29%	.28%
	CSPG	ICLO	IC	CSPS	AR	ORCL	SYMS	SYTE	ORO	ICMB
	100	68	60	48	44	40	40	32	24	16
	.27%	.18%	.16%	.13%	.12%	.11%	.11%	.08%	.06%	.04%
	MSA2	ORC	ICPT							
	16	8	4							
	.04%	.02%	.01%							

CICSID: CICS2 TRANSACTION STATISTICS REPORT SYSID:MVSA
CIMS LAB, INC.
05/01/96-05/23/96

TRANSIENT DATA CALLS	CSNE	ORF	PRTF	CATD	CSSF	CSSY	CEMT	CSFU	ORBO	ORB
	60,948	28,372	25,856	22,484	13,792	6,716	5,144	1,656	1,292	1,120
	36.08%	16.79%	15.30%	13.31%	8.16%	3.97%	3.04%	.98%	.76%	.66%

	CSSN	ORLE	CSGM	ORR	OR	ORCR	OC40	OC64
	528	472	344	116	52	20	4	4
	.31%	.27%	.20%	.06%	.03%	.01%	.00%	.00%

PAGING ACTIVITY	MSA2	IEOL	PRTR	CATD	CSNE	OC70	CEMT	IC	AR	ORLE
	66,692	14,380	6,736	5,700	3,216	2,932	2,068	1,892	1,800	1,784
	52.74%	11.37%	5.32%	4.50%	2.54%	2.31%	1.63%	1.49%	1.42%	1.41%

	OC72	AROI	OR	CSGM	CSKP	ORF	ACFM	CSSF	CULU	ORHE
	1,676	1,160	1,036	888	780	764	748	748	744	608
	1.32%	.91%	.81%	.70%	.61%	.60%	.59%	.59%	.58%	.48%

	ARI	ICR	ORB	ICIS	ARAC	CBAR	CSAC	OC00	OC02	ORR
	576	560	512	496	488	484	480	448	416	396
	.45%	.44%	.40%	.39%	.38%	.38%	.37%	.35%	.32%	.31%

	CUBS	OC64	TMON	ICDD	OC53	MSAS	OC28	ARCA	ORE	ICDE
	380	344	332	312	304	288	240	232	232	228
	.30%	.27%	.26%	.24%	.24%	.22%	.18%	.18%	.18%	.18%

HIGH WATER MARK (BYTES)	MSA2	IEOL	CEMT	OC70	ARAC	CATD	OC72	CSNE	ARCA	ARRS
	6,148,230	3,071,382	605,362	487,293	406,707	402,350	311,147	192,468	154,157	134,836

	ARI	ORB	OC28	ICIS	OC53	CULU	ICPT	ORBO	AROI	ICDD
	130,133	130,106	103,356	92,091	89,068	86,089	76,336	71,478	70,196	66,435

	CSAC	PRTR	ORR	ORBL	AR	ORHR	ORF	ICR	ORC	ICDE
	65,405	55,601	53,689	48,592	48,323	48,313	46,687	46,593	44,132	44,094

	OC63	ICPE	OC75	OC64	ORLE	ICMB	ORE	CUBR	ACFM	OC00
	43,400	41,513	37,404	36,009	34,097	33,258	31,849	31,823	29,861	28,899

CICS Terminal Statistics Report

This report shows which terminals, for a specified CICS Region, were among the top 40 in the following categories:

- Most Active

  The Terminal ID and the amount of time active (hours:minutes) are reported along with the percentage of the combined active time for all active terminals for the 40 most active terminals. A terminal is considered active within any given 15 minute period only if transactions are received from the terminal. A terminal that is signed-on, but does not submit any transactions is not considered active.

- Most Transactions Executed

  The Terminal ID and the number of transactions submitted are reported for the 40 terminals submitting the most transactions along with their respective percentages of the total number of transactions submitted during the measured period. The listing is produced in descending order by the number of transactions submitted.

Any counts that exceed 6 digits are expressed in thousands by suffixing the number with the character "K".

You can exclude selected terminals from the report using the EXCLUDE facility (see JCL). Similarly, you can include terminals that do not qualify as among the top forty in the report using the INCLUDE facility (see JCL).

Following is a sample of the CICS Terminal Statistics Report:

CICSID: CICS2 TERMINAL STATISTICS REPORT SYSID:MVSA
CIMS LAB, INC.
05/01/96-05/23/96

ACTIVE TIME	L209	HQLV	L203	L218	PH32	ACHO	ACJJ	ACKC	BL00	ACKB
	136:00:00	131:00:00	125:00:00	125:00:00	123:00:00	122:00:00	120:00:00	115:00:00	112:00:00	108:00:00
	33.33%	32.10%	30.63%	30.63%	30.14%	29.90%	29.41%	28.18%	27.45%	26.47%
	MN36	SE04	ACJA	DV38	ACJR	OM05	ACKW	SD61	PH55	ACLC
	108:00:00	107:00:00	104:00:00	103:00:00	101:00:00	101:00:00	100:00:00	98:00:00	97:00:00	96:00:00
	26.47%	26.22%	25.49%	25.24%	24.75%	24.75%	24.50%	24.01%	23.77%	23.52%
	SD74	DV23	HQJN	SD62	SD73	DV39	L211	PH34	ACLK	HQIT
	96:00:00	95:00:00	94:00:00	90:00:00	87:00:00	85:00:00	85:00:00	84:00:00	83:00:00	82:00:00
	23.52%	23.28%	23.03%	22.05%	21.32%	20.83%	20.83%	20.58%	20.34%	20.09%
	ACDF	HQJO	PH26	DV58	MN37	HQHN	DM62	HQIP	HQET	SE05
	81:00:00	81:00:00	81:00:00	78:00:00	78:00:00	77:00:00	74:00:00	74:00:00	73:00:00	73:00:00
	19.85%	19.85%	19.85%	19.11%	19.11%	18.87%	18.13%	18.13%	17.89%	17.89%

TRANSACTION COUNT	ACJA	ACKC	ACKW	L209	ACJJ	ACLL	ACHO	L218	ACKB	ACIS
	29,480	13,892	13,504	13,308	8,864	8,260	6,872	6,800	6,500	6,180
	7.48%	3.52%	3.42%	3.38%	2.25%	2.09%	1.74%	1.72%	1.65%	1.56%
	ACJR	ACLC	ACKX	HQID	HQEP	L203	BL00	PH32	HQQV	L211
	5,908	5,736	5,108	4,980	4,816	4,684	4,516	4,020	3,720	3,616
	1.50%	1.45%	1.29%	1.26%	1.22%	1.18%	1.14%	1.02%	.94%	.91%
	AC00	AC5K	HQFB	HQQB	ACVC	HQGL	ACV8	HQQN	AC2Z	HQKU
	3,448	3,352	3,332	3,252	3,232	3,180	3,172	3,132	3,120	3,020
	.87%	.85%	.84%	.82%	.82%	.80%	.80%	.79%	.79%	.76%
	HQJJ	DV91	HQIT	HQFR	HQIP	HQMX	PH55	ACLG	AC5L	DV23
	2,980	2,856	2,848	2,804	2,744	2,660	2,652	2,648	2,616	2,432
	.75%	.72%	.72%	.71%	.69%	.67%	.67%	.67%	.66%	.61%

CICS Exception Analysis

The CICS Exception Analysis Report shows, for each fifteen minute period for a specified CICS region, all transactions and terminals whose response times exceeded the pre-defined thresholds specified in the CIMS Capacity Planner Parmlib member &sidXCPT. The Parmlib member &sidXCPT contains a number of threshold values for the installation. This member identifies the performance thresholds for the various components of the overall environment.

You can find additional information related to the &sidXCPT Parmlib member in Chapter 1, CIMS Capacity Planner PARMLIB.

Following is a sample of the CICS Exception Analysis Report:

```
CICSID: CICS2                                CICS EXCEPTION ANALYSIS                                SYSID:MVSA
                                                   CIMS LAB, INC.
                                                 05/01/96-05/23/96
05/01 04.00 - 04.15 : XACTN  CSSY    (24.88)
05/01 04.15 - 04.30 : XACTN  CSSY    (24.88)
05/01 04.30 - 04.45 : XACTN  CSSY    (24.88)
05/01 04.45 - 05.00 : XACTN  CSSY    (24.88)
05/01 07.00 - 07.15 : XACTN  PRTR    (15.52)
                      TERM   SEP1    (15.53)
05/01 07.15 - 07.30 : XACTN  PRTR    (15.52)
                      TERM   SEP1    (15.53)
05/01 07.30 - 07.45 : XACTN  PRTR    (15.52)
                      TERM   SEP1    (15.53)
05/01 07.45 - 08.00 : XACTN  PRTR    (15.52)
                      TERM   SEP1    (15.53)
05/02 02.00 - 02.15 : XACTN  CSSY    (12.64)
05/02 02.15 - 02.30 : XACTN  CSSY    (12.64)
05/02 02.30 - 02.45 : XACTN  CSSY    (12.64)
05/02 02.45 - 03.00 : XACTN  CSSY    (12.64)
05/02 06.00 - 06.15 : XACTN  PRTR    (76.53)
                      TERM   DVP4    (55.46) MNP1    (37.88)
05/02 06.15 - 06.30 : XACTN  PRTR    (76.53)
                      TERM   DVP4    (55.46) MNP1    (37.88)
05/02 06.30 - 06.45 : XACTN  PRTR    (76.53)
                      TERM   DVP4    (55.46) MNP1    (37.88)
05/02 06.45 - 07.00 : XACTN  PRTR    (76.53)
                      TERM   DVP4    (55.46) MNP1    (37.88)
05/02 07.00 - 07.15 : XACTN  PRTR    (242.38)
                      TERM   SEP1    (33.56)
05/02 07.15 - 07.30 : XACTN  PRTR    (242.38)
                      TERM   SEP1    (33.56)
05/02 07.30 - 07.45 : XACTN  PRTR    (242.38)
                      TERM   SEP1    (33.56)
05/02 07.45 - 08.00 : XACTN  PRTR    (242.38)
                      TERM   SEP1    (33.56)
05/03 04.00 - 04.15 : XACTN  CSSY    (11.08)
05/03 04.15 - 04.30 : XACTN  CSSY    (11.08)
05/03 04.30 - 04.45 : XACTN  CSSY    (11.08)
05/03 04.45 - 05.00 : XACTN  CSSY    (11.08)
05/03 06.00 - 06.15 : XACTN  PRTR    (78.42)
                      TERM   DVP4    (78.42)
05/03 06.15 - 06.30 : XACTN  PRTR    (78.42)
                      TERM   DVP4    (78.42)
05/03 06.30 - 06.45 : XACTN  PRTR    (78.42)
                      TERM   DVP4    (78.42)
05/03 06.45 - 07.00 : XACTN  PRTR    (78.42)
                      TERM   DVP4    (78.42)
05/03 07.00 - 07.15 : XACTN  PRTR    (34.32)
                      TERM   DVP4    (86.87) MNP1    (11.56) SEP1    (18.58)
05/03 07.15 - 07.30 : XACTN  PRTR    (34.32)
                      TERM   DVP4    (86.87) MNP1    (11.56) SEP1    (18.58)
05/03 07.30 - 07.45 : XACTN  PRTR    (34.32)
   XACTN=AVERAGE ELAPSED TIME FOR A GIVEN TRANSACTION
   TERM=AVERAGE RESPONSE TIME FOR A GIVEN TERMINAL
```

CICS Ad Hoc Report

The CIMS Capacity Planner CICS Subsystem supports the production of an Ad Hoc report from the original data before portions of the detail data are summarized or discarded. The Ad Hoc report is produced by the Data Reduction program—SSA1CICW.

To produce the CICS Ad Hoc report, specify the report request parameters in the CICS Data Reduction Job stream as part of the SYSIN data set. The parameters that apply to the Ad Hoc report are:

CICS TRANSACTION NAME=

CICS TERMINAL NAME=

The CICS Ad Hoc report contains the following information for each record selected for inclusion in the report:

- The CICS Region Name
- The time that the transaction began execution
- The time that the transaction completed execution
- The transaction ID
- The terminal ID
- The CICS Transaction processing program name
- The elapsed time for the transaction
- The CPU time used
- The Wait time
- The Suspend time
- The number of File Access Calls
- The number of Temporary Storage Calls
- The number of Transient Data Requests
- The number of Paging Operations
- The High Watermark in storage required

In addition to selecting records for inclusion into the Ad Hoc report by specific transaction and terminal names, you can select groups of both transactions and terminals using the wildcard character "*".

For example, you can select all transactions beginning with the characters "TR" by specifying CICS TRANSACTION NAME=TR*. Similarly, you can select all terminals beginning with "L422" by specifying CICS TERMINAL NAME=L422*. This convention can be extended to include all transactions by specifying CICS TRANSACTION NAME=*. CICS TERMINAL NAME=* would result in the selection of all terminals. If both the transaction and terminal names are specified as "*", all records would be selected.

The selection of records for inclusion into the Ad Hoc report can be further restricted by specifying date and/or time ranges by using the BEGIN DATE=, END DATE=, BEGIN TIME=, and END TIME= parameters.

Following is a sample of the CICS Ad Hoc Report:

CICSNAME	TIME IN	TIME OUT	XACTN-ID	TERM-ID	PROGRAM	ELAPSED	CPU	WAIT	SUSPEND	EXCPS	TEMPS	TRANS	PAGING STORAGE
CICSTT01	15:29:52	15:29:53	CATA		DFHZATA	1.28	.02	.09	1.17		3		.00K
CICSTT01	18:11:17	18:11:19	CATA		DFHZATA	1.60	.02	.04	1.54		3		.00K
CICSTT01	07:38:10	07:38:10	CATA		DFHZATA	.11	.02	.02	.07		3		.00K
CICSTT01	07:51:32	07:51:32	CATA		DFHZATA	.10	.01	.02	.07		3		.00K
CICSTT01	07:58:46	07:58:46	CATA		DFHZATA	.19	.02	.03	.14		3		.00K
CICSTT01	10:09:34	10:09:38	CATA		DFHZATA	3.76	.02	.05	3.69		3		.00K
CICSTT01	10:11:10	10:11:11	CATA		DFHZATA	.24	.01	.10	.13		3		.00K
CICSTT01	10:22:42	10:22:42	CATA		DFHZATA	.23	.02	.02	.19		3		.00K
CICSTT01	10:23:34	10:23:34	CATA		DFHZATA	.09	.01	.02	.06		3		.00K
CICSTT01	10:26:47	10:26:48	CATA		DFHZATA	.13	.01	.04	.08		3		.00K
CICSTT01	10:58:46	10:58:46	CATA		DFHZATA	.24	.02	.10	.12		3		.00K
CICSTT01	11:19:01	11:19:01	CATA		DFHZATA	.14	.02	.03	.09		3		.00K
CICSTT01	11:24:08	11:24:08	CATA		DFHZATA	.11	.01	.04	.06		3		.00K
CICSTT01	12:01:12	12:01:12	CATA		DFHZATA	.13	.02	.03	.08		3		.00K
CICSTT01	13:02:19	13:02:19	CATA		DFHZATA	.08	.01	.02	.05		3		.00K
CICSTT01	13:09:13	13:09:13	CATA		DFHZATA	.09	.02	.02	.05		3		.00K
CICSTA01	13:22:05	13:22:06	CATA		DFHZATA	1.00	.03	.02	.95		3		.00K
CICSTT01	13:22:33	13:22:33	CATA		DFHZATA	.53	.02	.08	.43		3		.00K
CICSTT01	13:29:25	13:29:25	CATA		DFHZATA	.30	.02	.05	.23		3		.00K
CICSTT01	13:38:00	13:38:00	CATA		DFHZATA	.24	.02	.07	.15		3		.00K
CICSTT01	13:40:18	13:40:19	CATA		DFHZATA	.65	.01	.22	.42		3		.00K
CICSTT01	13:41:21	13:41:21	CATA		DFHZATA	.27	.01	.13	.13		3		.00K
CICSTT01	13:42:54	13:43:00	CATA		DFHZATA	5.93	.01	1.50	4.42		3		.00K
CICSTA02	10:31:29	10:31:32	CATA		DFHZATA	3.10	.02	.08	3.00		3		.00K
CICSTT01	13:51:54	13:51:55	CATA		DFHZATA	1.50	.02	.12	1.36		3		.00K
CICSTT01	13:55:54	13:55:55	CATA		DFHZATA	.54	.02	.04	.48		3		.00K
CICSTT01	13:58:23	13:58:23	CATA		DFHZATA	.25	.02	.06	.17		3		.00K
CICSTT01	14:17:43	14:17:43	CATA		DFHZATA	.34	.02	.10	.22		3		.00K
CICSTT01	14:37:22	14:37:23	CATA		DFHZATA	.37	.02	.13	.22		3		.00K
CICSTT01	14:58:33	14:58:34	CATA		DFHZATA	.69	.02	.26	.41		3		.00K
R CICSTEST		74(T)					74(P)						
R CICSTT01		101(T)					27(P)				74(S)		
R CICSTA03		55(T)					1(P)				54(S)		
R CICSTA02		49(T)					1(P)				48(S)		
R CICSTA01		70(T)		1(D)			50(P)				19(S)		

CICS Transaction Activity List

The CICS Transaction Activity List summarizes the system resources, both physical and logical, consumed in processing each type of transaction included in the report. The period for which the transaction data is summarized is defined by the BEGIN DATE/ BEGIN TIME and the END DATE/END TIME parameters of their default values.

The following summary data is reported for each transaction type:

- Transaction Code

  The transaction code is a field consisting of up to 8 characters that represents a standard CICS transaction code or a synonym substituted by the Generic Element Mask feature (see Additional Report Options, paragraph 5.4 of this section for an explanation of the Generic Element Mask).

- Transaction Count

  This is the average frequency (daily) that the transaction was executed during the measured period.

- Average Response Time

  The average daily response time (in seconds and hundredths of seconds) is reported for each type of transaction included in the report.

- Average CPU Time

  The average daily CPU time consumed (in seconds and hundredths of seconds) is reported for each type of transaction included in the report.

- Transaction Paging Activity

  The report includes the average number of paging operations (daily) required to service each type of transaction.

- I/O Activity

  The daily average number of calls to the file manager required to support the processing of each type of transaction is reported.

- Temporary Storage Activity

  The daily average number of requests for temporary storage required to support the processing of each type of transaction is reported.

- Transient Data Requests

  The daily average number of requests for transient data required to support the processing of each type of transaction is reported.

- High Watermark

  The high watermark in storage required to process each type of transaction is reported for each type of transaction included in the report.

- Dispatch

  The daily average amount of time the transaction was dispatched, in hundredths of a second (response-wait=dispatch)

You can apply the EXCLUDE/INCLUDE DD screens Transaction Activity List Report generation to exclude selected transaction types or specify the specific transaction types that are to be included in the report.

You can use the generic element mask to summarize a group of transaction types into a single transaction or group name (such as department) for summarization purposes.

You can use the EXCLUDE/INCLUDE filter in conjunction with the generic element mask. In this case, the EXCLUDE/INCLUDE filter is applied prior to the generic element mask.

Following is a sample of the CICS Transaction Activity List:

CICS TRANSACTION ACTIVITY LIST SYSID:MVSA

CIMS LAB, INC.
05/01/96-05/23/96

XACTN ID DISPATCH	XACTN COUNT	AVG RESPONSE	CPU TIME	XACTN PAGING I/O ACTIVITY	TEMP STORAGE	TRANS DATA	STORAGE HWM
ACFM	136	.58	1.92	40	72	43.57K	31.29
ACHD	4	.09	.02		16	7.28K	.03
AR	369	.55	4.16	103	920	94.00K	77.14
ARAC	314	.34	3.81	24	2,075	523	968.50K	28.34
ARBI	4	.10	.01			6.69K	.21
ARCA	120	.50	2.27	10	2,970	333.90K	21.97
ARI	252	.37	2.53	30	657	370.89K	38.51
AROI	230	.44	2.55	65	1,650	153.86K	40.00
ARPI	45	.30	.47		458	84.48K	4.84
ARRS	100	.17	1.21		406	96	303.92K	5.14
BP	14	.62	.12		60	30.97K	2.76
CATD	649	.75	5.81	331	320	1,318	611.44K	74.09
CBAR	619	.11	2.94	24	252	36.37K	28.32
CEDA	40	.61	.75	24	540	350.03K	10.48
CEMT	153	.18	4.02	118	299	5,662.14K	10.26
CMSG	22	.08	.05	24	36	80.50K	1.27
COPM	6	.13	.04	20		18.52K	.63
CQRY	54	.03	.02			5.42K	1.22
CSAC	77	.01	.16	24		149.69K	1.11
CSGM	119	.42	2.51	49	17	31.32K	15.26
CSNE	961	.01	1.46	185	3,581	592.83K	9.37
CSPG	21	.06	.03		33	27.48K	.82
CSPS	21	.05			16	25.60K	.68
CSSC	400	.05	3.58	2		.71K	14.41
CSSF	56	.24	.90	41	808	35.62K	8.14
CSSN	26	.03	.06		26	26.98K	.73
CSSY	11	2,702.53	1.86		391	18.26K	46.53
CUBR	205	.16	1.40	4	13	70.70K	14.23
CUBS	214	.22	1.50	18	17	40.57K	19.37
CULU	295	.45	4.60	40	4,022	8	211.00K	61.44
DS	4	.10	.02		4	9.90K	.16
EM	4	1.44	.07	17	6	10.68K	3.83
EMMI	19	.24	.23			82.83K	2.20
EMSA	14	.15	.13		5	61.20K	.54
IC	104	.90	1.72	108	342	48.56K	41.07
ICDD	86	1.01	2.19	15	64	137	260.11K	42.42
ICDE	44	.34	.37	11	102	297.41K	4.48
ICI	3	.20		3		6.64K	.36
ICIS	194	.47	2.74	26	148	214.49K	40.64
ICLO	10	.38	.12		16	47.56K	2.04
ICMB	24	.54	.28		9	125.55K	5.59
ICMI	4	.53	.10		1	15.37K	1.21
ICPE	41	1.10	1.05		6	63	108.14K	23.52
ICPT	92	.15	.81	7	197	267.17K	6.31
ICR	85	.75	1.73	29	36	135	158.08K	31.83
ICSH	3	.79	.03		3	19.91K	.98
ICWL	8	.12	.04			5.08K	.46
IEDU	4	.14	.01			7.36K	.45
IEOL	3,622	.45	116.62	842	83,393	5,721.28K	640.48
MSAS	12	1.39	.54	14	533	36.02K	4.27
MSA2	7,441	1.38	909.18	3,919	466,599	11,110.01K	3,566.47

CICS Terminal Activity List

The CICS Terminal Activity List provides a summary of the activity of the terminals associated with a specified CICS region during a specified period designated by a set of BEGIN DATE and END DATE parameters. You can further refine the measured period on a daily basis using the BEGIN TIME and END TIME parameters. If you use the BEGIN TIME and END TIME parameters, the measured period is restricted to the specified time period for each day within the specified date range. If you do not specify the BEGIN TIME and END TIME parameters, the time values default to 00:00.00 to 24:00.00.

The values reported might consist of daily averages or the totals for the specified time period. To report the totals rather than the daily average values, include the AVERAGES=NONE parameter in the //SYSIN data.

The following information is reported for all active terminals associated with the specified CICS region during the specified time period:

- Terminal

  The Terminal ID of each active terminal

- Transactions

  The number of transactions submitted by the terminal. This value can be either a daily average or a total value, depending on whether the AVERAGES=NONE parameter is specified.

- Percent of Total

  The percentage of the total number of transactions represented by the transaction count.

- Time Active

  This value contains either the total time each terminal is active on a daily average basis or a total across multiple days, depending upon whether the AVERAGES=NONE parameter is specified.

- Percent of Up-time

  This value contains the percentage of the CICS region up-time represented by the time the terminal is active. You can calculate this value based upon the daily average up-time or total up-time, depending upon the presence or absence of the AVERAGES=NONE parameter.

- Average Response

  The average response contains the transaction response time computed on a daily average basis or an overall total value, depending on whether the AVERAGES=NONE parameter is specified.

- Totals

  The totals line contains the total values for the Transactions and the Time Active.

Following is a sample of the CICS Terminal Activity List:

```
CICS TERMINAL ACTIVITY LIST                                    SYSID:MVSA
                                          CIMS LAB, INC.
                                        05/01/96-05/23/96

TERMINAL TRANSACTIONS   % OF TOTAL  TIME ACTIVE  % OF UPTIME AVG RESPONSE
ACCA
ACCS
ACCT
ACC5
ACC6
ACDE
ACDF
ACDH
ACDK
ACDL
ACD5
ACD6
ACD7
ACHB
ACHD
ACHG
ACHH
ACHO
ACH6
ACH7
ACIH
ACIS
ACIT
ACIU
ACIX
ACI8
ACI9
ACJA
ACJB
ACJE
ACJF
ACJJ
ACJK
ACJL
ACJR
ACKB
ACKC
ACKJ
ACKW
ACKX
ACKY
ACLC
ACLD
ACLG
ACLH
ACLI
ACLJ
ACLK
ACLL
ACLM
ACLO
```

CICS System Overview

The CICS System Overview shows the hourly average values for all included CICS transactions (INCLUDE/EXCLUDE applies) for each day in the measured period (BEGIN DATE:END DATE) for the following items of information:

- Transaction Count
- Average Response per Transaction
- Cumulative CPU Time in hundredths of a second
- Total Dispatch Time in hundredths of a second (Dispatch Time is defined as elapsed time-wait time)
- Pages per Dispatch Second

The hours included in the report are determined by BEGIN TIME:END TIME. The default times are 00.00-24.00. In addition to the hourly values for each day, a totals line is provided for each of the values.

Following is a sample of the CICS System Overview:

CICSID:CICS2 CICS SYSTEM OVERVIEW SYSID:MVSA
CIMS LAB, INC.
05/01/96-05/23/96

DAY	HOUR	XACTN COUNT	AVG RESPONSE	CPU TIME	TOT_DISPATCH	PAG/DISP_SEC
05/01	4	72	6.98	5.00	121.44	
	5	264	.56	3.31	76.72	
	6	1,176	3.63	32.08	199.68	1.52
	7	4,608	.45	132.93	894.58	1.38
	8	6,040	1.81	223.03	1,698.42	1.12
	9	6,736	1.48	274.40	2,344.80	.90
	10	6,220	2.18	240.81	1,970.96	.63
	11	4,484	.73	174.41	1,110.55	.60
	12	5,712	.62	221.38	1,693.90	.30
	13	7,196	.48	203.90	1,787.96	.57
	14	4,660	3.28	152.29	1,202.06	1.76
	15	6,892	.47	223.06	1,562.08	.04
	16	1,680	.37	40.51	281.24	.31
	17	464	.36	11.15	70.99	.11
	18	116	.10	.79	2.65	3.01
	19	8	1,829.13		.32	
TOTALS		56,328	1.52	1,939.05	15,018.35	.75

CICS Graphs

The CICS Subsystem produces a number of graphs on the mainframe that depict the workload and performance of a specified CICS Region.

CICS Transaction Response Graph

The Transaction Response Graph shows, by day of the week, the peak and average transaction response times for each 15-minute period throughout the day. The report page is broken into four sections—each covering a period of 6 hours. Within each section of the page, the time-of-day is represented by the vertical axis while the horizontal axis represents the response time (both peak and average). Both the average and peak average values are printed in the middle of each line. The lines, in bar graph format, form the graphic representation of the values. The peak average values are represented by dashes while the average values are represented by asterisks. In those cases where no dashes are present, they have been overlaid by asterisks because the peak average values and the average values are either equal or very nearly so.

You can produce the Transaction Response Graph for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced-- one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

Following is a sample of the CICS Transaction Response Graph:

```
CICSID=CICS2                                        DAY SHOWN: MONDAY                                        SYSID:MVSA
                                                    05/01/96-05/23/96
                                  CICS TRANSACTION RESPONSE GRAPH: .01 SECONDS

 00.00 - 00.15 |                        0000:0000                 12.00 - 12.15 |*******-                 0067:0075
 00.15 - 00.30 |                        0000:0000                 12.15 - 12.30 |*******-                 0067:0075
 00.30 - 00.45 |                        0000:0000                 12.30 - 12.45 |*******-                 0067:0075
 00.45 - 01.00 |                        0000:0000                 12.45 - 13.00 |*******-                 0067:0075
 01.00 - 01.15 |                        0000:0000                 13.00 - 13.15 |********--               0075:0094
 01.15 - 01.30 |                        0000:0000                 13.15 - 13.30 |********--               0075:0094
 01.30 - 01.45 |                        0000:0000                 13.30 - 13.45 |********--               0075:0094
 01.45 - 02.00 |                        0000:0000                 13.45 - 14.00 |********--               0075:0094
 02.00 - 02.15 |                        0000:0000                 14.00 - 14.15 |*******----              0067:0110
 02.15 - 02.30 |                        0000:0000                 14.15 - 14.30 |*******----              0067:0110
 02.30 - 02.45 |                        0000:0000                 14.30 - 14.45 |*******----              0067:0110
 02.45 - 03.00 |                        0000:0000                 14.45 - 15.00 |*******----              0067:0110
 03.00 - 03.15 |************************0586:0586****************** 15.00 - 15.15 |******-                  0060:0069
 03.15 - 03.30 |************************0586:0586****************** 15.15 - 15.30 |******-                  0060:0069
 03.30 - 03.45 |************************0586:0586****************** 15.30 - 15.45 |******-                  0060:0069
 03.45 - 04.00 |************************0586:0586****************** 15.45 - 16.00 |******-                  0060:0069
 04.00 - 04.15 |************************0360:0586***-------------- 16.00 - 16.15 |***-                     0026:0036
 04.15 - 04.30 |************************0360:0586***-------------- 16.15 - 16.30 |***-                     0026:0036
 04.30 - 04.45 |************************0360:0586***-------------- 16.30 - 16.45 |***-                     0026:0036
 04.45 - 05.00 |************************0360:0586***-------------- 16.45 - 17.00 |***-                     0026:0036
 05.00 - 05.15 |***--                   0029:0045                 17.00 - 17.15 |**--                     0020:0035
 05.15 - 05.30 |***--                   0029:0045                 17.15 - 17.30 |**--                     0020:0035
 05.30 - 05.45 |***--                   0029:0045                 17.30 - 17.45 |**--                     0020:0035
 05.45 - 06.00 |***--                   0029:0045                 17.45 - 18.00 |**--                     0020:0035
               +----+----+----+----+----+----+----+----+----+----+           +----+----+----+----+----+----+----+----+----+----+
               0...50..100..150..200..250..300..350..400..450..500           0...50..100..150..200..250..300..350..400..450..500


 06.00 - 06.15 |*****-                  0046:0059                 18.00 - 18.15 |*                        0003:0004
 06.15 - 06.30 |*****-                  0046:0059                 18.15 - 18.30 |*                        0003:0004
 06.30 - 06.45 |*****-                  0046:0059                 18.30 - 18.45 |*                        0003:0004
 06.45 - 07.00 |*****-                  0046:0059                 18.45 - 19.00 |*                        0003:0004
 07.00 - 07.15 |*******---              0064:0096                 19.00 - 19.15 |*                        0002:0002
 07.15 - 07.30 |*******---              0064:0096                 19.15 - 19.30 |*                        0002:0002
 07.30 - 07.45 |*******---              0064:0096                 19.30 - 19.45 |*                        0002:0002
 07.45 - 08.00 |*******---              0064:0096                 19.45 - 20.00 |*                        0002:0002
 08.00 - 08.15 |*******----             0070:0107                 20.00 - 20.15 |                         0000:0000
 08.15 - 08.30 |*******----             0070:0107                 20.15 - 20.30 |                         0000:0000
 08.30 - 08.45 |*******----             0070:0107                 20.30 - 20.45 |                         0000:0000
 08.45 - 09.00 |*******----             0070:0107                 20.45 - 21.00 |                         0000:0000
 09.00 - 09.15 |********---             0078:0101                 21.00 - 21.15 |                         0000:0000
 09.15 - 09.30 |********---             0078:0101                 21.15 - 21.30 |                         0000:0000
 09.30 - 09.45 |********---             0078:0101                 21.30 - 21.45 |                         0000:0000
 09.45 - 10.00 |********---             0078:0101                 21.45 - 22.00 |                         0000:0000
 10.00 - 10.15 |*******--               0070:0087                 22.00 - 22.15 |                         0000:0000
 10.15 - 10.30 |*******--               0070:0087                 22.15 - 22.30 |                         0000:0000
 10.30 - 10.45 |*******--               0070:0087                 22.30 - 22.45 |                         0000:0000
 10.45 - 11.00 |*******--               0070:0087                 22.45 - 23.00 |                         0000:0000
 11.00 - 11.15 |*******----             0066:0106                 23.00 - 23.15 |                         0000:0000
 11.15 - 11.30 |*******----             0066:0106                 23.15 - 23.30 |                         0000:0000
 11.30 - 11.45 |*******----             0066:0106                 23.30 - 23.45 |                         0000:0000
 11.45 - 12.00 |*******----             0066:0106                 23.45 - 24.00 |                         0000:0000
               +----+----+----+----+----+----+----+----+----+----+           +----+----+----+----+----+----+----+----+----+----+
               0...50..100..150..200..250..300..350..400..450..500           0...50..100..150..200..250..300..350..400..450..500

 LEGEND: (*) = AVERAGE  (-) = PEAK
```

CICS Terminal Response Graph

The Terminal Response Graph shows, by day of the week, the peak average and average terminal response times for each 15-minute period through the day. The report page is broken into four sections—each covering a period of 6 hours. Within each section of the page, the time-of-day is represented by the vertical axis while the horizontal axis represents the response time (both peak and average). Both the average and peak average values are printed in the middle of each line. The lines, in bar graph format, form the graphic representation of the values. The peak values are represented by dashes while the average values are represented by asterisks. In those cases where no dashes are present, they have been overlaid by asterisks because the peak and average values are either equal or very nearly so.

You can produce the Terminal Response Graph for a single day's activity or for several days. When more than one day's activity is graphed, separate graphs are produced-- one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

The Terminal Response Graph differs from the Transaction Response Graph in two ways:

- Not all transaction responses are directed at terminals
- Through the judicious use of the EXCLUDE facility, it is possible to exclude all printers, monitors, and responses to long running transactions from the graph.

Following is a sample of the CICS Terminal Response Graph:

```
CICSID=CICS2                                    DAY SHOWN: MONDAY                                    SYSID:MVSA
                                                05/01/96-05/23/96
                                    CICS TERMINAL RESPONSE GRAPH: .01 SECONDS

 00.00 - 00.15 |                        0000:0000    12.00 - 12.15 |*******-                0070:0080
 00.15 - 00.30 |                        0000:0000    12.15 - 12.30 |*******-                0070:0080
 00.30 - 00.45 |                        0000:0000    12.30 - 12.45 |*******-                0070:0080
 00.45 - 01.00 |                        0000:0000    12.45 - 13.00 |*******-                0070:0080
 01.00 - 01.15 |                        0000:0000    13.00 - 13.15 |********--              0078:0097
 01.15 - 01.30 |                        0000:0000    13.15 - 13.30 |********--              0078:0097
 01.30 - 01.45 |                        0000:0000    13.30 - 13.45 |********--              0078:0097
 01.45 - 02.00 |                        0000:0000    13.45 - 14.00 |********--              0078:0097
 02.00 - 02.15 |                        0000:0000    14.00 - 14.15 |*******-----            0069:0116
 02.15 - 02.30 |                        0000:0000    14.15 - 14.30 |*******-----            0069:0116
 02.30 - 02.45 |                        0000:0000    14.30 - 14.45 |*******-----            0069:0116
 02.45 - 03.00 |                        0000:0000    14.45 - 15.00 |*******-----            0069:0116
 03.00 - 03.15 |                        0000:0000    15.00 - 15.15 |*******--               0066:0084
 03.15 - 03.30 |                        0000:0000    15.15 - 15.30 |*******--               0066:0084
 03.30 - 03.45 |                        0000:0000    15.30 - 15.45 |*******--               0066:0084
 03.45 - 04.00 |                        0000:0000    15.45 - 16.00 |*******--               0066:0084
 04.00 - 04.15 |**                      0019:0019    16.00 - 16.15 |****-                   0031:0043
 04.15 - 04.30 |**                      0019:0019    16.15 - 16.30 |****-                   0031:0043
 04.30 - 04.45 |**                      0019:0019    16.30 - 16.45 |****-                   0031:0043
 04.45 - 05.00 |**                      0019:0019    16.45 - 17.00 |****-                   0031:0043
 05.00 - 05.15 |*****--                 0046:0069    17.00 - 17.15 |*****                   0044:0044
 05.15 - 05.30 |*****--                 0046:0069    17.15 - 17.30 |*****                   0044:0044
 05.30 - 05.45 |*****--                 0046:0069    17.30 - 17.45 |*****                   0044:0044
 05.45 - 06.00 |*****--                 0046:0069    17.45 - 18.00 |*****                   0044:0044
            +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
            0...50..100..150..200..250..300..350..400..450..500          0...50..100..150..200..250..300..350..400..450..500


 06.00 - 06.15 |*****-                  0047:0057    18.00 - 18.15 |*                       0004:0004
 06.15 - 06.30 |*****-                  0047:0057    18.15 - 18.30 |*                       0004:0004
 06.30 - 06.45 |*****-                  0047:0057    18.30 - 18.45 |*                       0004:0004
 06.45 - 07.00 |*****-                  0047:0057    18.45 - 19.00 |*                       0004:0004
 07.00 - 07.15 |******---               0060:0083    19.00 - 19.15 |*                       0004:0004
 07.15 - 07.30 |******---               0060:0083    19.15 - 19.30 |*                       0004:0004
 07.30 - 07.45 |******---               0060:0083    19.30 - 19.45 |*                       0004:0004
 07.45 - 08.00 |******---               0060:0083    19.45 - 20.00 |*                       0004:0004
 08.00 - 08.15 |********---             0072:0107    20.00 - 20.15 |                        0000:0000
 08.15 - 08.30 |********---             0072:0107    20.15 - 20.30 |                        0000:0000
 08.30 - 08.45 |********---             0072:0107    20.30 - 20.45 |                        0000:0000
 08.45 - 09.00 |********---             0072:0107    20.45 - 21.00 |                        0000:0000
 09.00 - 09.15 |********--              0078:0096    21.00 - 21.15 |                        0000:0000
 09.15 - 09.30 |********--              0078:0096    21.15 - 21.30 |                        0000:0000
 09.30 - 09.45 |********--              0078:0096    21.30 - 21.45 |                        0000:0000
 09.45 - 10.00 |********--              0078:0096    21.45 - 22.00 |                        0000:0000
 10.00 - 10.15 |********--              0074:0100    22.00 - 22.15 |                        0000:0000
 10.15 - 10.30 |********--              0074:0100    22.15 - 22.30 |                        0000:0000
 10.30 - 10.45 |********--              0074:0100    22.30 - 22.45 |                        0000:0000
 10.45 - 11.00 |********--              0074:0100    22.45 - 23.00 |                        0000:0000
 11.00 - 11.15 |*******----             0069:0110    23.00 - 23.15 |                        0000:0000
 11.15 - 11.30 |*******----             0069:0110    23.15 - 23.30 |                        0000:0000
 11.30 - 11.45 |*******----             0069:0110    23.30 - 23.45 |                        0000:0000
 11.45 - 12.00 |*******----             0069:0110    23.45 - 24.00 |                        0000:0000
            +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
            0...50..100..150..200..250..300..350..400..450..500          0...50..100..150..200..250..300..350..400..450..500

 LEGEND: (*) = AVERAGE  (-) = PEAK
```

CICS Transaction Activity Graph

The Transaction Activity Graph is organized in the same format as the Transaction and Terminal Response Graphs described above. It shows, by day of the week, the average and peak number of transactions submitted from all the CICS terminals during each 15-minute period throughout the day. The horizontal value represents the number of transactions submitted per minute.

Following is a sample of the CICS Transaction Activity Graph:

```
CICSID=CICS2                                    DAY SHOWN: TUESDAY                                    SYSID:MVSA
                                                05/01/96-05/23/96
                                  CICS TRANSACTION ACTIVITY GRAPH: AVERAGE/MINUTE

 00.00 - 00.15 |                        0000:0000          12.00 - 12.15 |**********-------------0041:0106
 00.15 - 00.30 |                        0000:0000          12.15 - 12.30 |**********-------------0041:0106
 00.30 - 00.45 |                        0000:0000          12.30 - 12.45 |**********-------------0041:0106
 00.45 - 01.00 |                        0000:0000          12.45 - 13.00 |**********-------------0041:0106
 01.00 - 01.15 |                        0000:0000          13.00 - 13.15 |***********------------0048:0123
 01.15 - 01.30 |                        0000:0000          13.15 - 13.30 |***********------------0048:0123
 01.30 - 01.45 |                        0000:0000          13.30 - 13.45 |***********------------0048:0123
 01.45 - 02.00 |                        0000:0000          13.45 - 14.00 |***********------------0048:0123
 02.00 - 02.15 |*                       0001:0001          14.00 - 14.15 |***********------------0045:0113
 02.15 - 02.30 |*                       0001:0001          14.15 - 14.30 |***********------------0045:0113
 02.30 - 02.45 |*                       0001:0001          14.30 - 14.45 |***********------------0045:0113
 02.45 - 03.00 |*                       0001:0001          14.45 - 15.00 |***********------------0045:0113
 03.00 - 03.15 |                        0000:0000          15.00 - 15.15 |******-                 0022:0027
 03.15 - 03.30 |                        0000:0000          15.15 - 15.30 |******-                 0022:0027
 03.30 - 03.45 |                        0000:0000          15.30 - 15.45 |******-                 0022:0027
 03.45 - 04.00 |                        0000:0000          15.45 - 16.00 |******-                 0022:0027
 04.00 - 04.15 |                        0000:0000          16.00 - 16.15 |**-                     0007:0011
 04.15 - 04.30 |                        0000:0000          16.15 - 16.30 |**-                     0007:0011
 04.30 - 04.45 |                        0000:0000          16.30 - 16.45 |**-                     0007:0011
 04.45 - 05.00 |                        0000:0000          16.45 - 17.00 |**-                     0007:0011
 05.00 - 05.15 |*-                      0004:0008          17.00 - 17.15 |*-                      0003:0006
 05.15 - 05.30 |*-                      0004:0008          17.15 - 17.30 |*-                      0003:0006
 05.30 - 05.45 |*-                      0004:0008          17.30 - 17.45 |*-                      0003:0006
 05.45 - 06.00 |*-                      0004:0008          17.45 - 18.00 |*-                      0003:0006
           +----+----+----+----+----+----+----+----+----+----+               +----+----+----+----+----+----+----+----+----+----+
           0...20...40...60...80..100..120..140..160..180..200               0...20...40...60...80..100..120..140..160..180..200


 06.00 - 06.15 |*****------             0019:0042          18.00 - 18.15 |                        0000:0000
 06.15 - 06.30 |*****------             0019:0042          18.15 - 18.30 |                        0000:0000
 06.30 - 06.45 |*****------             0019:0042          18.30 - 18.45 |                        0000:0000
 06.45 - 07.00 |*****------             0019:0042          18.45 - 19.00 |                        0000:0000
 07.00 - 07.15 |***********------------0048:0131          19.00 - 19.15 |                        0000:0000
 07.15 - 07.30 |***********------------0048:0131          19.15 - 19.30 |                        0000:0000
 07.30 - 07.45 |***********------------0048:0131          19.30 - 19.45 |                        0000:0000
 07.45 - 08.00 |***********------------0048:0131          19.45 - 20.00 |                        0000:0000
 08.00 - 08.15 |************-----------0050:0128          20.00 - 20.15 |                        0000:0000
 08.15 - 08.30 |************-----------0050:0128          20.15 - 20.30 |                        0000:0000
 08.30 - 08.45 |************-----------0050:0128          20.30 - 20.45 |                        0000:0000
 08.45 - 09.00 |************-----------0050:0128          20.45 - 21.00 |                        0000:0000
 09.00 - 09.15 |**********-------------0044:0101          21.00 - 21.15 |                        0000:0000
 09.15 - 09.30 |**********-------------0044:0101          21.15 - 21.30 |                        0000:0000
 09.30 - 09.45 |**********-------------0044:0101          21.30 - 21.45 |                        0000:0000
 09.45 - 10.00 |**********-------------0044:0101          21.45 - 22.00 |                        0000:0000
 10.00 - 10.15 |**********-------------0041:0116          22.00 - 22.15 |                        0000:0000
 10.15 - 10.30 |**********-------------0041:0116          22.15 - 22.30 |                        0000:0000
 10.30 - 10.45 |**********-------------0041:0116          22.30 - 22.45 |                        0000:0000
 10.45 - 11.00 |**********-------------0041:0116          22.45 - 23.00 |                        0000:0000
 11.00 - 11.15 |********---------------0032:0098          23.00 - 23.15 |                        0000:0000
 11.15 - 11.30 |********---------------0032:0098          23.15 - 23.30 |                        0000:0000
 11.30 - 11.45 |********---------------0032:0098          23.30 - 23.45 |                        0000:0000
 11.45 - 12.00 |********---------------0032:0098          23.45 - 24.00 |                        0000:0000
           +----+----+----+----+----+----+----+----+----+----+               +----+----+----+----+----+----+----+----+----+----+
           0...20...40...60...80..100..120..140..160..180..200               0...20...40...60...80..100..120..140..160..180..200

 LEGEND: (*) = AVERAGE  (-) = PEAK
```

CICS Terminal Activity Graph

The Terminal Activity Graph shows, by day of the week, the number of terminals active during each 15-minute period throughout the day. Both the peak and the average values are reported. The values along the horizontal axis represent the number of active terminals.

Following is a sample of the CICS Terminal Activity Graph:

```
CICSID=CICS2                                    DAY SHOWN: MONDAY                                    SYSID:MVSA
                                                  05/01/96-05/23/96
                                              CICS TERMINAL ACTIVITY GRAPH

  00.00 - 00.15 |                        0000:0000              12.00 - 12.15 |**************----------0053:0097
  00.15 - 00.30 |                        0000:0000              12.15 - 12.30 |**************----------0053:0097
  00.30 - 00.45 |                        0000:0000              12.30 - 12.45 |**************----------0053:0097
  00.45 - 01.00 |                        0000:0000              12.45 - 13.00 |**************----------0053:0097
  01.00 - 01.15 |                        0000:0000              13.00 - 13.15 |**************----------0054:0103
  01.15 - 01.30 |                        0000:0000              13.15 - 13.30 |**************----------0054:0103
  01.30 - 01.45 |                        0000:0000              13.30 - 13.45 |**************----------0054:0103
  01.45 - 02.00 |                        0000:0000              13.45 - 14.00 |**************----------0054:0103
  02.00 - 02.15 |                        0000:0000              14.00 - 14.15 |*************-----------0052:0099
  02.15 - 02.30 |                        0000:0000              14.15 - 14.30 |*************-----------0052:0099
  02.30 - 02.45 |                        0000:0000              14.30 - 14.45 |*************-----------0052:0099
  02.45 - 03.00 |                        0000:0000              14.45 - 15.00 |*************-----------0052:0099
  03.00 - 03.15 |                        0000:0000              15.00 - 15.15 |**********------------  0039:0085
  03.15 - 03.30 |                        0000:0000              15.15 - 15.30 |**********------------  0039:0085
  03.30 - 03.45 |                        0000:0000              15.30 - 15.45 |**********------------  0039:0085
  03.45 - 04.00 |                        0000:0000              15.45 - 16.00 |**********------------  0039:0085
  04.00 - 04.15 |*                       0001:0001              16.00 - 16.15 |****---                 0016:0028
  04.15 - 04.30 |*                       0001:0001              16.15 - 16.30 |****---                 0016:0028
  04.30 - 04.45 |*                       0001:0001              16.30 - 16.45 |****---                 0016:0028
  04.45 - 05.00 |*                       0001:0001              16.45 - 17.00 |****---                 0016:0028
  05.00 - 05.15 |**-                     0008:0010              17.00 - 17.15 |**                      0007:0007
  05.15 - 05.30 |**-                     0008:0010              17.15 - 17.30 |**                      0007:0007
  05.30 - 05.45 |**-                     0008:0010              17.30 - 17.45 |**                      0007:0007
  05.45 - 06.00 |**-                     0008:0010              17.45 - 18.00 |**                      0007:0007
            +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
            0...20...40...60...80..100..120..140..160..180..200          0...20...40...60...80..100..120..140..160..180..200


  06.00 - 06.15 |*******--               0026:0034              18.00 - 18.15 |*                       0003:0003
  06.15 - 06.30 |*******--               0026:0034              18.15 - 18.30 |*                       0003:0003
  06.30 - 06.45 |*******--               0026:0034              18.30 - 18.45 |*                       0003:0003
  06.45 - 07.00 |*******--               0026:0034              18.45 - 19.00 |*                       0003:0003
  07.00 - 07.15 |***********----------- 0048:0092              19.00 - 19.15 |*                       0001:0001
  07.15 - 07.30 |***********----------- 0048:0092              19.15 - 19.30 |*                       0001:0001
  07.30 - 07.45 |***********----------- 0048:0092              19.30 - 19.45 |*                       0001:0001
  07.45 - 08.00 |***********----------- 0048:0092              19.45 - 20.00 |*                       0001:0001
  08.00 - 08.15 |**************----------0056:0105              20.00 - 20.15 |                        0000:0000
  08.15 - 08.30 |**************----------0056:0105              20.15 - 20.30 |                        0000:0000
  08.30 - 08.45 |**************----------0056:0105              20.30 - 20.45 |                        0000:0000
  08.45 - 09.00 |**************----------0056:0105              20.45 - 21.00 |                        0000:0000
  09.00 - 09.15 |**************----------0054:0105              21.00 - 21.15 |                        0000:0000
  09.15 - 09.30 |**************----------0054:0105              21.15 - 21.30 |                        0000:0000
  09.30 - 09.45 |**************----------0054:0105              21.30 - 21.45 |                        0000:0000
  09.45 - 10.00 |**************----------0054:0105              21.45 - 22.00 |                        0000:0000
  10.00 - 10.15 |**************----------0054:0093              22.00 - 22.15 |                        0000:0000
  10.15 - 10.30 |**************----------0054:0093              22.15 - 22.30 |                        0000:0000
  10.30 - 10.45 |**************----------0054:0093              22.30 - 22.45 |                        0000:0000
  10.45 - 11.00 |**************----------0054:0093              22.45 - 23.00 |                        0000:0000
  11.00 - 11.15 |**********--------      0037:0069              23.00 - 23.15 |                        0000:0000
  11.15 - 11.30 |**********--------      0037:0069              23.15 - 23.30 |                        0000:0000
  11.30 - 11.45 |**********--------      0037:0069              23.30 - 23.45 |                        0000:0000
  11.45 - 12.00 |**********--------      0037:0069              23.45 - 24.00 |                        0000:0000
            +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
            0...20...40...60...80..100..120..140..160..180..200          0...20...40...60...80..100..120..140..160..180..200

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

CICS CPU Activity Graph

The CPU Activity Graph shows, by day of the week, the percentage of the CPU processing capacity that was expended in processing CICS transactions for a specified CICS region. The average and peak percentage values are reported in 15-minute intervals throughout the day. As is the case with the other graphs, you can specify the measured period to include anywhere from a day to several months.

Following is a sample of the CICS CPU Activity Graph:

```
CICSID=CICS2                                DAY SHOWN: MONDAY                                SYSID:MVSA
                                            05/01/96-05/23/96
                                  CICS CPU ACTIVITY GRAPH: PERCENT BUSY

 00.00 - 00.15 |                    0000:0000    12.00 - 12.15 |**-                 0003:0006
 00.15 - 00.30 |                    0000:0000    12.15 - 12.30 |**-                 0003:0006
 00.30 - 00.45 |                    0000:0000    12.30 - 12.45 |**-                 0003:0006
 00.45 - 01.00 |                    0000:0000    12.45 - 13.00 |**-                 0003:0006
 01.00 - 01.15 |                    0000:0000    13.00 - 13.15 |**-                 0003:0005
 01.15 - 01.30 |                    0000:0000    13.15 - 13.30 |**-                 0003:0005
 01.30 - 01.45 |                    0000:0000    13.30 - 13.45 |**-                 0003:0005
 01.45 - 02.00 |                    0000:0000    13.45 - 14.00 |**-                 0003:0005
 02.00 - 02.15 |                    0000:0000    14.00 - 14.15 |**                  0003:0004
 02.15 - 02.30 |                    0000:0000    14.15 - 14.30 |**                  0003:0004
 02.30 - 02.45 |                    0000:0000    14.30 - 14.45 |**                  0003:0004
 02.45 - 03.00 |                    0000:0000    14.45 - 15.00 |**                  0003:0004
 03.00 - 03.15 |                    0000:0000    15.00 - 15.15 |*--                 0002:0006
 03.15 - 03.30 |                    0000:0000    15.15 - 15.30 |*--                 0002:0006
 03.30 - 03.45 |                    0000:0000    15.30 - 15.45 |*--                 0002:0006
 03.45 - 04.00 |                    0000:0000    15.45 - 16.00 |*--                 0002:0006
 04.00 - 04.15 |                    0000:0000    16.00 - 16.15 |*                   0001:0001
 04.15 - 04.30 |                    0000:0000    16.15 - 16.30 |*                   0001:0001
 04.30 - 04.45 |                    0000:0000    16.30 - 16.45 |*                   0001:0001
 04.45 - 05.00 |                    0000:0000    16.45 - 17.00 |*                   0001:0001
 05.00 - 05.15 |                    0000:0000    17.00 - 17.15 |                    0000:0000
 05.15 - 05.30 |                    0000:0000    17.15 - 17.30 |                    0000:0000
 05.30 - 05.45 |                    0000:0000    17.30 - 17.45 |                    0000:0000
 05.45 - 06.00 |                    0000:0000    17.45 - 18.00 |                    0000:0000
           +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
           0...10...20...30...40...50...60...70...80...90..100         0...10...20...30...40...50...60...70...80...90..100

 06.00 - 06.15 |*                   0001:0001    18.00 - 18.15 |                    0000:0000
 06.15 - 06.30 |*                   0001:0001    18.15 - 18.30 |                    0000:0000
 06.30 - 06.45 |*                   0001:0001    18.30 - 18.45 |                    0000:0000
 06.45 - 07.00 |*                   0001:0001    18.45 - 19.00 |                    0000:0000
 07.00 - 07.15 |*-                  0002:0003    19.00 - 19.15 |                    0000:0000
 07.15 - 07.30 |*-                  0002:0003    19.15 - 19.30 |                    0000:0000
 07.30 - 07.45 |*-                  0002:0003    19.30 - 19.45 |                    0000:0000
 07.45 - 08.00 |*-                  0002:0003    19.45 - 20.00 |                    0000:0000
 08.00 - 08.15 |**-                 0003:0006    20.00 - 20.15 |                    0000:0000
 08.15 - 08.30 |**-                 0003:0006    20.15 - 20.30 |                    0000:0000
 08.30 - 08.45 |**-                 0003:0006    20.30 - 20.45 |                    0000:0000
 08.45 - 09.00 |**-                 0003:0006    20.45 - 21.00 |                    0000:0000
 09.00 - 09.15 |**--                0004:0007    21.00 - 21.15 |                    0000:0000
 09.15 - 09.30 |**--                0004:0007    21.15 - 21.30 |                    0000:0000
 09.30 - 09.45 |**--                0004:0007    21.30 - 21.45 |                    0000:0000
 09.45 - 10.00 |**--                0004:0007    21.45 - 22.00 |                    0000:0000
 10.00 - 10.15 |**-                 0003:0006    22.00 - 22.15 |                    0000:0000
 10.15 - 10.30 |**-                 0003:0006    22.15 - 22.30 |                    0000:0000
 10.30 - 10.45 |**-                 0003:0006    22.30 - 22.45 |                    0000:0000
 10.45 - 11.00 |**-                 0003:0006    22.45 - 23.00 |                    0000:0000
 11.00 - 11.15 |*-                  0002:0004    23.00 - 23.15 |                    0000:0000
 11.15 - 11.30 |*-                  0002:0004    23.15 - 23.30 |                    0000:0000
 11.30 - 11.45 |*-                  0002:0004    23.30 - 23.45 |                    0000:0000
 11.45 - 12.00 |*-                  0002:0004    23.45 - 24.00 |                    0000:0000
           +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
           0...10...20...30...40...50...60...70...80...90..100         0...10...20...30...40...50...60...70...80...90..100

 LEGEND: (*) = AVERAGE  (-) = PEAK
```

CICS I/O Activity Graph

This graph shows, for a specified CICS region, the amount of EXCP activity related to processing CICS transactions. Both the peak and the average I/O rates are reported. The format of the I/O Activity Graph is identical to the graphs described above, except that the values along the horizontal axis represent the number of I/Os per second related to processing the CICS workload.

Following is a sample of the CICS I/O Activity Graph:

```
CICSID=CICS2                                    DAY SHOWN: MONDAY                                    SYSID:MVSA
                                                05/01/96-05/23/96
                                        CICS I/O ACTIVITY GRAPH: EXCP/SECOND

 00.00 - 00.15 |                        0000:0000          12.00 - 12.15 |**********---------     0020:0037
 00.15 - 00.30 |                        0000:0000          12.15 - 12.30 |**********---------     0020:0037
 00.30 - 00.45 |                        0000:0000          12.30 - 12.45 |**********---------     0020:0037
 00.45 - 01.00 |                        0000:0000          12.45 - 13.00 |**********---------     0020:0037
 01.00 - 01.15 |                        0000:0000          13.00 - 13.15 |***********----------   0022:0042
 01.15 - 01.30 |                        0000:0000          13.15 - 13.30 |***********----------   0022:0042
 01.30 - 01.45 |                        0000:0000          13.30 - 13.45 |***********----------   0022:0042
 01.45 - 02.00 |                        0000:0000          13.45 - 14.00 |***********----------   0022:0042
 02.00 - 02.15 |                        0000:0000          14.00 - 14.15 |*********------         0018:0030
 02.15 - 02.30 |                        0000:0000          14.15 - 14.30 |*********------         0018:0030
 02.30 - 02.45 |                        0000:0000          14.30 - 14.45 |*********------         0018:0030
 02.45 - 03.00 |                        0000:0000          14.45 - 15.00 |*********------         0018:0030
 03.00 - 03.15 |                        0000:0000          15.00 - 15.15 |*********--------------0018:0050
 03.15 - 03.30 |                        0000:0000          15.15 - 15.30 |*********--------------0018:0050
 03.30 - 03.45 |                        0000:0000          15.30 - 15.45 |*********--------------0018:0050
 03.45 - 04.00 |                        0000:0000          15.45 - 16.00 |*********--------------0018:0050
 04.00 - 04.15 |                        0000:0000          16.00 - 16.15 |**--                    0004:0008
 04.15 - 04.30 |                        0000:0000          16.15 - 16.30 |**--                    0004:0008
 04.30 - 04.45 |                        0000:0000          16.30 - 16.45 |**--                    0004:0008
 04.45 - 05.00 |                        0000:0000          16.45 - 17.00 |**--                    0004:0008
 05.00 - 05.15 |                        0000:0000          17.00 - 17.15 |*                       0002:0002
 05.15 - 05.30 |                        0000:0000          17.15 - 17.30 |*                       0002:0002
 05.30 - 05.45 |                        0000:0000          17.30 - 17.45 |*                       0002:0002
 05.45 - 06.00 |                        0000:0000          17.45 - 18.00 |*                       0002:0002
               +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
               0...10...20...30...40...50...60...70...80...90..100              0...10...20...30...40...50...60...70...80...90..100

 06.00 - 06.15 |***-                    0006:0007          18.00 - 18.15 |                        0000:0000
 06.15 - 06.30 |***-                    0006:0007          18.15 - 18.30 |                        0000:0000
 06.30 - 06.45 |***-                    0006:0007          18.30 - 18.45 |                        0000:0000
 06.45 - 07.00 |***-                    0006:0007          18.45 - 19.00 |                        0000:0000
 07.00 - 07.15 |*******------           0013:0025          19.00 - 19.15 |                        0000:0000
 07.15 - 07.30 |*******------           0013:0025          19.15 - 19.30 |                        0000:0000
 07.30 - 07.45 |*******------           0013:0025          19.30 - 19.45 |                        0000:0000
 07.45 - 08.00 |*******------           0013:0025          19.45 - 20.00 |                        0000:0000
 08.00 - 08.15 |*********-------------  0018:0043          20.00 - 20.15 |                        0000:0000
 08.15 - 08.30 |*********-------------  0018:0043          20.15 - 20.30 |                        0000:0000
 08.30 - 08.45 |*********-------------  0018:0043          20.30 - 20.45 |                        0000:0000
 08.45 - 09.00 |*********-------------  0018:0043          20.45 - 21.00 |                        0000:0000
 09.00 - 09.15 |************------------0023:0058          21.00 - 21.15 |                        0000:0000
 09.15 - 09.30 |************------------0023:0058          21.15 - 21.30 |                        0000:0000
 09.30 - 09.45 |************------------0023:0058          21.30 - 21.45 |                        0000:0000
 09.45 - 10.00 |************------------0023:0058          21.45 - 22.00 |                        0000:0000
 10.00 - 10.15 |************------------0024:0048          22.00 - 22.15 |                        0000:0000
 10.15 - 10.30 |************------------0024:0048          22.15 - 22.30 |                        0000:0000
 10.30 - 10.45 |************------------0024:0048          22.30 - 22.45 |                        0000:0000
 10.45 - 11.00 |************------------0024:0048          22.45 - 23.00 |                        0000:0000
 11.00 - 11.15 |********---------       0016:0034          23.00 - 23.15 |                        0000:0000
 11.15 - 11.30 |********---------       0016:0034          23.15 - 23.30 |                        0000:0000
 11.30 - 11.45 |********---------       0016:0034          23.30 - 23.45 |                        0000:0000
 11.45 - 12.00 |********---------       0016:0034          23.45 - 24.00 |                        0000:0000
               +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
               0...10...20...30...40...50...60...70...80...90..100              0...10...20...30...40...50...60...70...80...90..100

 LEGEND: (*) = AVERAGE  (-) = PEAK
```

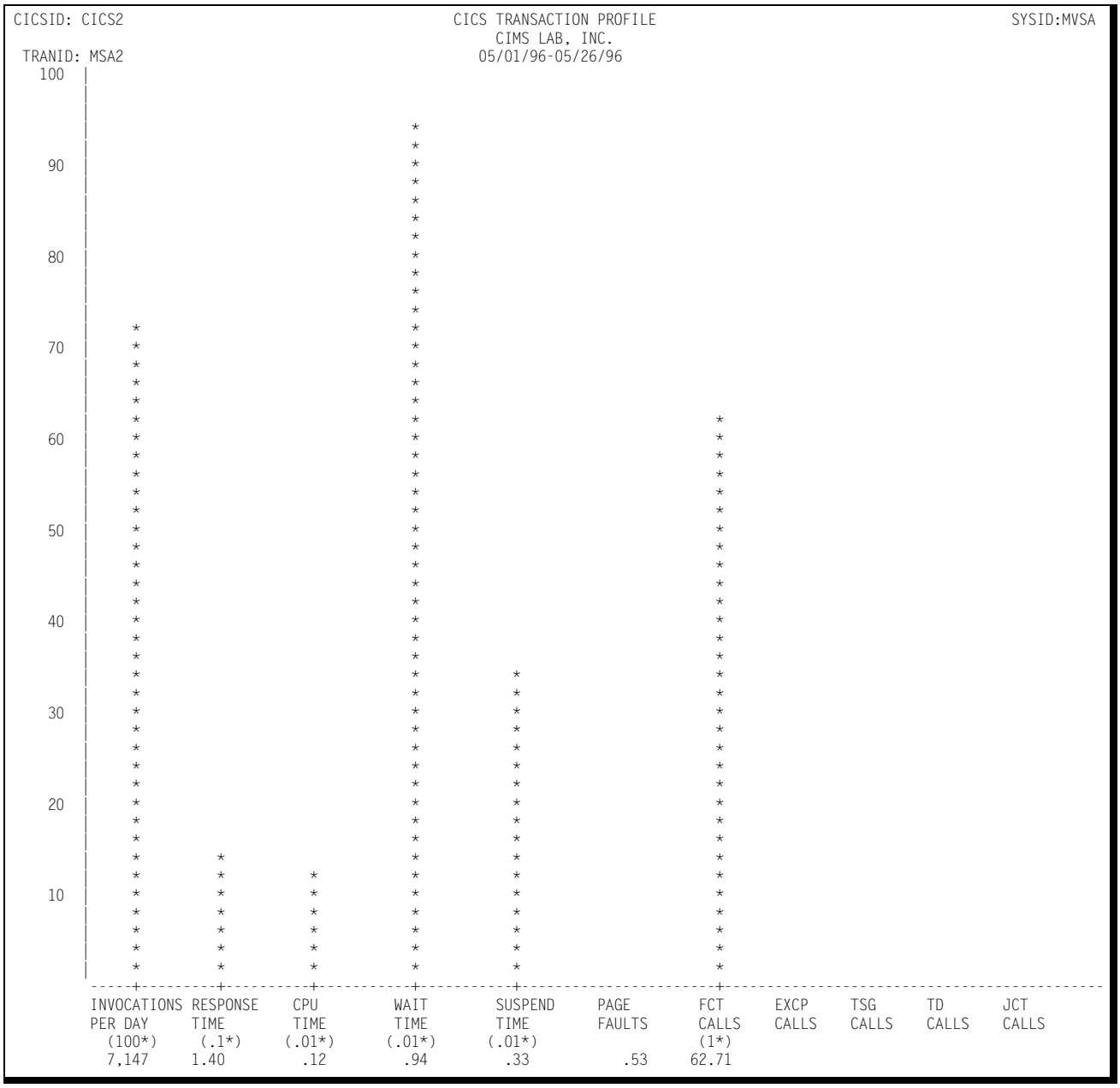
CICS Transaction Profile

The Transaction Profile report shows, for a specified CICS region type, how a specified CICS transaction behaved for the following categories:

- How many times per day, on average, it was invoked
- The average response time per invocation of the transaction
- The average CPU time per invocation used to process the transaction

- The average time per invocation that the transaction was on the SUSPEND queue
- The average number of page faults experienced by the transaction per invocation
- The average number of calls to the File Control Program per invocation
- The average number of FCT calls that resulted in physical I/O activity.
- The average number of requests for Temporary Storage per invocation
- The average number of requests for Transient Data per invocation
- The average number of calls to the Journal Control Program per invocation

Following is a sample of the CICS Transaction Profile:



CICS Trends Analysis Reports

The CIMS Capacity Planner approach to Trends Analysis centers on isolating a number of capacity- and performance-related elements and providing either a summary or graphic comparison of the values of those elements over time. The CICS elements that are selected for comparison are:

- CPU Utilization Statistics, including a breakdown in terms of CICS overhead and Task related CPU usage
- The number of transactions executed per minute computed as an average during Prime shift
- The average number of EXCPs per second during Prime shift
- The average response time during Prime shift
- The ratio of Early shift to Prime shift transactions
- The ratio of Late shift to Prime shift transactions
- The ratio of Early shift to Prime shift terminals
- The ratio of Late shift to Prime shift terminals

This information is gathered and presented to you in one of two ways:

- In summary report format, showing the values of each of the elements listed above during a baseline period and comparing them to a secondary period, with the slope of each comparison indicated at the right-hand side of the report
- In data suitable for graphing with the Harvard Graphics Program once it has been down loaded to a Personal Computer. The manner in which the data is down loaded is left to you. It is stored at the mainframe, however, in a PDS with the DDNAME of HGDLIB.

Following is a sample of the CICS Trends Analysis Report:

```
CICSID=********                          T R E N D S  A N A L Y S I S                          SYSID:FHBB
   1. THIS ANALYSIS COMPARED THE PERIODS 05/11/93 AND 05/12/93 FOR THE SYSTEM NAMED FHBB
   2. THE VALUES INCLUDED IN THIS REPORT REPRESENT A PRIME SHIFT WHICH RUNS FROM 07:00 TO 19:00
   3. THE LUNCH BREAK RUNNING FROM 11:00 TO 13:00 WAS ELIMINATED FROM THE REPORT.
   4. A COMPARISON OF CPU BUSY PERCENTAGES SHOWS:
                                 05/11                          05/12                        TREND
      XACTN                       .00                            .10                         .00%+
      CICS                        .00                            .08                         .00%+
      TOTALS                      .00                            .18                         .00%+
   5. THE AVERAGE NUMBER OF CICS USERS ACTIVE DURING PRIME SHIFT WAS:
                                                                                             TREND
                                   1                              7                        600.00%+
   6. THE AVERAGE RESPONSE TIME FOR CICS TRANSACTIONS DURING PRIME SHIFT WAS:
                                                                                             TREND

      SUSPEND                    1.16                            .85                        26.72%-
      WAIT                        .50                           1.38                       176.00%+
      CPU                         .00                            .00                         .00%+
      TOTALS                     1.66                           2.23                        34.33%+
   7. THE AVERAGE NUMBER OF CICS TRANSACTIONS PROCESSED DURING PRIME SHIFT WAS:
                                                                                             TREND
                                  70                          2,629                     3,655.71%+
   8. THE AVERAGE NUMBER OF EXCPS PER SECOND DURING PRIME SHIFT WAS:
                                                                                             TREND
                                 .00                            .04                         .00%+
   9. FOR EACH OF THE TWO PERIODS THE RATIO OF EARLY-TO-PRIME SHIFT TRANSACTIONS WAS:
                                                                                             TREND
                                 .01                            .00                       100.00%-
  10. FOR EACH OF THE TWO PERIODS THE RATIO OF LATE-TO-PRIME SHIFT TRANSACTIONS WAS:
                                                                                             TREND
                                 .04                            .00                       100.00%-
  11. FOR EACH OF THE TWO PERIODS THE RATIO OF EARLY-TO-PRIME SHIFT TERMINALS WAS:
                                                                                             TREND
                                 .00                            .14                         .00%+
  12. FOR EACH OF THE TWO PERIODS THE RATIO OF LATE-TO-PRIME SHIFT TERMINALS WAS:
                                                                                             TREND
                                 .00                            .00                         .00%+
```

IDMS Workload and Performance Reports

The following discussion enumerates the various CIMS Capacity Planner IDMS reports and describes the contents of each report.

IDMS Summary Analysis Report

The Summary Analysis Report contains key summary information required to determine the magnitude of the IDMS workload and how well the IDMS system is performing. The report provides the following information for the time period specified in the report request:

- The period measured by date and time

  The Summary Report can be produced for a single day or portion of a day or it can encompass any number of days, thereby allowing an evaluation of the overall long term and short term performance of the IDMS system.

- The average number of active terminals (high watermark)

A terminal is considered active during each 15-minute period throughout the day only if at least one transaction is submitted. If a terminal is logged on throughout three shifts, but transactions are submitted only during two 15 minute periods, the terminal is considered to be active for only 30 minutes.

- The average number of IDMS transactions processed per minute during the prime shift
- The average elapsed time for all IDMS transactions submitted during the prime shift
- The average number of IDMS data base calls made per second during the prime shift
- The average number of IDMS-related EXCPs per second during the prime shift
- The average IDMS terminal response time (in seconds) during the prime shift
- The average ratio of IDMS transactions submitted during the early shift compared to the prime shift
- The average ratio of IDMS transactions submitted during the late shift compared to the prime shift
- The average ratio of IDMS terminals active during the early shift compared to the prime shift
- The average ratio of IDMS terminals active on the late shift compared to the prime shift
- The average percentage of the CPU time consumed by IDMS and the IDMS applications during each shift within the measured period
- The average number of transactions processed by shift for the measured period

The 25 most frequently executed IDMS transactions are listed individually. All remaining transactions are reported collectively under the title of "OTHER". The total number of transactions are reported by shift.

Following is a sample of the IDMS Summary Analysis Report:

```
IDMSID:IDMS1                                SUMMARY REPORT                                SYSID:CAGE
  1. THE MEASURED PERIOD BEGINS AT 00:00 MONDAY, JUNE 12, AND CONTINUES THROUGH 23:59 SATURDAY, JUNE 17.
  2. DURING THE MEASURED PERIOD IDMS USAGE PEAKED AT  10 TERMINALS ACTIVE CONCURRENTLY
  3. DURING PRIME SHIFT, THE NUMBER OF TRANSACTIONS PER MINUTE AVERAGED: 71.06
  4. DURING PRIME SHIFT, THE NUMBER OF RECORD REQUESTS PER SECOND AVERAGED: 78.05
  5. DURING PRIME SHIFT, THE NUMBER OF DATABASE CALLS PER SECOND AVERAGED: 65.63
  6. DURING PRIME SHIFT, THE NUMBER OF EXCPS PER SECOND AVERAGED: 11.75
  7. DURING PRIME SHIFT, RESPONSE TIME FOR ONLINE TRANSACTIONS IN THIS IDMS REGION AVERAGED: 1.89 SECONDS
  8. DURING PRIME SHIFT, ELAPSED TIME FOR ALL TRANSACTIONS IN THIS IDMS REGION AVERAGED: .49 SECONDS
  9. DURING THE MEASURED PERIOD THE RATIO OF EARLY-TO-PRIME SHIFT TRANSACTIONS WAS: .04
 10. DURING THE MEASURED PERIOD THE RATIO OF LATE-TO-PRIME SHIFT TRANSACTIONS WAS: .14
 11. DURING THE MEASURED PERIOD THE RATIO OF EARLY-TO-PRIME SHIFT TERMINALS WAS: .05
 12. DURING THE MEASURED PERIOD THE RATIO OF LATE-TO-PRIME SHIFT TERMINALS WAS: .02
 13. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT PERCENTAGE CPU BUSY TIME WITHIN SHIFT AVERAGED:
                         00:00 - 07:00                07:00 - 19:00                19:00 - 24:00
     TASK MODE                     .00                          .14                          .00
     SYS MODE                     1.50                         5.56                          .58
     TOTALS                       1.50                         5.70                          .58
```

IDMSID:IDMS1 SUMMARY REPORT SYSID:CAGE
14. DURING THE MEASURED PERIOD A TOTAL OF 303,398 IDMS TRANSACTIONS WERE PROCESSED.

	00:00 - 07:00	07:00 - 19:00	19:00 - 24:00
	649		
CI033	840	14,277	7,612
SZ073T15	252	12,231	4,653
SZ073T46	646	6,599	3,938
SZ073T08	425	5,412	2,936
DCMT	3,452	668	4,020
ARMS		7,798	
CP254P07		7,307	
CP254P11		4,664	
CB085T22		4,489	
SZ073T07	170	3,772	457
CI006V43		3,772	2
ERUS	19	3,503	7
CZ166P07		3,470	
CI006	52	2,342	942
ADS2		3,178	
CB085T30		3,161	
*UNKNOWN	1,557	221	1,327
CB085V18		3,079	
OLQ		2,736	
CB085T77	22	2,578	
CI006T15	4	1,811	720
CI006V03	26	1,713	782
CI006V10	1	1,942	362
CB121T78		2,169	
OTHER	2,632	101,631	8,304
TOTALS	10,866	255,821	36,711

IDMS Response Performance Report

This report shows, by shift, for a single day or a range of days, how the IDMS transactions flowed through the system for a specified IDMS region. Each of the 25 most frequently executed IDMS transactions are listed individually, by shift, with an indication of what percentage of the response times fell within certain predefined time-frames.
Transactions that are not among the 25 most frequently executed are grouped together and reported under "OTHER". A totals line is accumulated and written to indicate how all transactions performed as a group.

This is a key report in measuring how well your performance goals are being met within the CPU by the IDMS system and the application programs.

Following is a sample of the IDMS Response Performance Report:

CIMS LAB, INC.

06/12/96-06/17/96
IDMSID: IDMS1 IDMS RESPONSE PERFORMANCE SYSID:CAGE
SHIFT SHOWN: 07:00 - 19:00

	< .5 SEC	.5-1 SEC	1-2 SEC	2-4 SEC	4-6 SEC	> 6 SEC	
3.36%		51,297					
CI033	100.00%						14,277
SZ073T15	99.83%	.16%					12,231
ARMS	.02%	10.83%	78.94%	8.68%		1.51%	7,798
CP254P07	97.03%	.90%				2.06%	7,307
SZ073T46	100.00%						6,599
SZ073T08	100.00%						5,412
CP254P11	100.00%						4,664
CB085T22	94.80%	5.19%					4,489
SZ073T07	100.00%						3,772
CI006V43	100.00%						3,772
ERUS	99.77%			.14%		.08%	3,503
CZ166P07	100.00%						3,470
ADS2	93.17%	6.82%					3,178
CB085T30	100.00%						3,161
CB085V18	100.00%						3,079
OLQ	.58%	6.91%	33.46%	27.83%	9.54%	21.65%	2,734
CB085T77	100.00%						2,578
CI006	99.65%	.29%	.04%				2,342
CB121T78	100.00%						2,169
CZ166P11	100.00%						2,117
CB085T37	100.00%						2,046
CI006V10	100.00%						1,942
CB085T36	100.00%						1,880
CI006T15	100.00%						1,811
OTHER	93.80%	3.80%	1.37%	.57%	.30%	.13%	98,186
SUBTOTALS	84.43%	6.95%	5.15%	1.74%	.63%	1.06%	255,814
TOTALS	84.43%	6.95%	5.15%	1.74%	.63%	1.06%	255,814

IDMS Transaction Statistics Report

This report shows, for a specified IDMS region, which transactions were among the top 40 in the following categories:

- Most frequently executed

  The transaction codes and the transaction counts of the 40 most frequently executed transactions are listed along with their respective percentages of the total IDMS transaction workload. The transactions are listed in descending frequency of execution order.

- Most cumulative elapsed time

  The transaction codes and the total amount of elapsed (residence) time for each of 40 transactions experiencing the highest residency time are listed along with their respective percentages of the total IDMS transaction residence time. The transactions are listed in descending residency time order.

- Most cumulative CPU time

  The transaction codes and the total amount of CPU time consumed for each of the 40 transactions that consumed the most CPU time along with their respective percentages of the total IDMS CPU time. The transactions are listed in descending CPU time order.

- Most Record Requests

  The transaction codes and the number of record request calls are listed for each of the 40 transactions issuing the most record request calls along with their respective percentages of all the record request activity. The transactions are listed in descending order by the number of record request calls.

- Most Data Base Calls

  The transaction codes and the number of Data Base Calls are listed for each of the 40 transactions issuing the most Data Base calls along with their respective percentages of all IDMS Data Base activity. The transactions are listed in descending order by Data Base activity.

- Highest Average Record Current of Run Unit

  The value "Record Current of Run Unit" indicates the depth within the database that a transaction must go in order to resolve a request. This statistic shows the top 40 transactions in terms of average record current of run unit.

- Most EXCPs

  The transaction codes and the number of EXCPs are listed for each of the 40 transactions requesting the most physical I/O activity along with their respective percentages of the total EXCPs issued for all IDMS transactions. The listing is produced in descending order by the number of EXCPs issued.

- Most Terminal Activity

  The transaction codes and the amount of terminal activity is listed for the 40 transactions experiencing the highest number of terminal messages along with their respective percentage of all terminal activity related to IDMS transaction processing. The listing is produced in descending order by the amount of terminal activity.

- Most Scratch Requests

  This statistic shows the average number of requests for scratch space for the top 40 tasks.

- Most Storage Used

  The transaction code and the high watermark (in bytes) is listed for the 40 IDMS transactions requiring the most storage. The listing is produced in descending order by the amount of storage required by each transaction.

Selected transactions can be excluded from the Transaction Statistics Report through the use of the EXCLUDE facility (see JCL). Similarly, you can include transactions that would not normally be included using the INCLUDE facility (JCL).

Whenever any of the reported statistics for a transaction exceed six digits (1 million or more), the numbers are expressed in thousands and suffixed with the character "K".

Following is a sample of the IDMS Transaction Statistics Report:

```
IDMSID: IDMS1                          TRANSACTION STATISTICS REPORT                          SYSID:CAGE
                                              CIMS LAB, INC.
                                            06/12/96-06/17/96
 TRANSACTION COUNT          ARMS  CP254P07  CP254P11  CB085T22
                          52,715    22,729    17,136    11,183     8,773     8,140     7,798     7,307     4,664     4,489
                          17.37%     7.49%     5.64%     3.68%     2.89%     2.68%     2.57%     2.40%     1.53%     1.47%

                        SZ073T07  CI006V43      ERUS  CZ166P07     CI006      ADS2  CB085T30  *UNKNOWN  CB085V18       OLQ
                           4,399     3,774     3,529     3,470     3,336     3,178     3,161     3,105     3,079     2,736
                           1.44%     1.24%     1.16%     1.14%     1.09%     1.04%     1.04%     1.02%     1.01%      .90%

                       CB085T77  CI006T15  CI006V03  CI006V10  CB121T78  CI006T07  CZ166P11  CI006T10  CB085T37  CB085T36
                          2,600     2,535     2,521     2,305     2,169     2,133     2,117     2,065     2,046     1,880
                           .85%      .83%      .83%      .75%      .71%      .70%      .69%      .68%      .67%      .61%

                       CI006T08  CB085T78  CI006T09  CI006T46  CB120T37  CZ083V14  CB120V26  CB120T23  CB085V26  CB085T35
                          1,776     1,748     1,701     1,667     1,529     1,479     1,468     1,422     1,368     1,286
                           .58%      .57%      .56%      .54%      .50%      .48%      .48%      .46%      .45%      .42%

 ELAPSED TIME                ERUS  CP254P11  CB120T34  CP197P05
                          22:56:34   4:19:07   3:21:35   1:19:23   1:04:42   0:59:41   0:56:42   0:25:05   0:24:18   0:23:04
                            51.75%     9.74%     7.57%     2.98%     2.43%     2.24%     2.13%      .94%      .91%      .86%

                                 S  CB072T78     CI033      ADS2      DCMT  CZ166P07  CB085T22  SZ073T15  CB121T78     CM003
                           0:22:53   0:20:29   0:18:25   0:13:40   0:12:34   0:10:59   0:10:48   0:10:46   0:10:38   0:08:55
                              .86%      .77%      .69%      .51%      .47%      .41%      .40%      .40%      .39%      .33%

                       CP076P01       IDD  CB085V18  CB085T77  CZ166P11  CB120T37     CB124  SZ073T46  CB120V26  CB120T23
                           0:08:51   0:08:46   0:06:58   0:06:52   0:06:35   0:06:34   0:06:28   0:06:21   0:06:18   0:06:12
                              .33%      .33%      .26%      .25%      .24%      .24%      .24%      .23%      .23%      .23%

                       CB121T47  CB085T30  CB098T78  CB121T36  CB121T37  CB120T36  CB085T37  SZ073T08  CB085T36  CB085T78
                           0:05:55   0:05:53   0:05:48   0:05:40   0:05:39   0:05:35   0:05:20   0:05:14   0:04:52   0:04:25
                              .22%      .22%      .21%      .21%      .21%      .21%      .20%      .19%      .18%      .16%

 CPU TIME                 SZ073T15  CP254P11  SZ073T46       IDD
                           1:38:21   0:42:28   0:12:42   0:06:42   0:04:22   0:04:12   0:04:02   0:02:46   0:02:38   0:02:14
                             40.54%    17.51%     5.24%     2.76%     1.80%     1.73%     1.66%     1.14%     1.09%      .92%

                       SZ073T08  CZ166P07      ERUS  CB085T22  CB072T78  CULPDRES  CB085T30  CB121T78  CB085V18  SZ073T07
                           0:02:05   0:01:41   0:01:35   0:01:35   0:01:23   0:01:19   0:01:07   0:01:06   0:01:04   0:01:02
                              .85%      .69%      .65%      .65%      .57%      .54%      .46%      .45%      .44%      .43%

                       CZ166P11  CB085T77  CP197P05     CI006  CI006V43  CP076P01  *UNKNOWN  CB085T37  CB085T36  CB085T78
                           0:01:00   0:00:59   0:00:58   0:00:58   0:00:54   0:00:52   0:00:50   0:00:47   0:00:44   0:00:41
                              .41%      .40%      .40%      .40%      .37%      .35%      .34%      .32%      .30%      .28%

                       CB120T37  CB120V26  CB120T23  CI006T15  CB098T78  CI006V03     CM003  CB121T36  CI006V10  CB120T36
                           0:00:38   0:00:37   0:00:37   0:00:37   0:00:36   0:00:36   0:00:35   0:00:34   0:00:33   0:00:32
                              .26%      .26%      .25%      .25%      .25%      .24%      .24%      .23%      .23%      .22%
```

```
IDMSID: IDMS1                          TRANSACTION STATISTICS REPORT                          SYSID:CAGE
                                              CIMS LAB, INC.
                                            06/12/96-06/17/96
RECORD REQUESTS              ADS2  SZ073T46  CP254P11  SZ073T08
                          8,698K    4,488K    1,452K    779,505   406,061   394,597   285,717   274,687   261,050   214,602
                          40.00%    20.64%     6.67%      3.58%     1.86%     1.81%     1.31%     1.26%     1.20%      .98%

                             IDD  CZ166P07      ERUS  CULPDRES  CB085T22  SZ073T07     CI006  CI006V43  CP076P01  CB085V18
                         173,579   124,687   124,575   120,376   105,636   101,970    89,598    85,876    82,740    74,283
                            .79%      .57%      .57%      .55%      .48%      .46%      .41%      .39%      .38%      .34%

                        CB085T30  CB121T78  CZ166P11  CB072T78  CI006V03  CB085T77  CI006T15  CI006V10  CP197P05  CI006T07
                          73,892    73,404    72,571    68,925    65,295    62,289    59,160    58,063    55,162    51,492
                            .33%      .33%      .33%      .31%      .30%      .28%      .27%      .26%      .25%      .23%

                        CB085T37  CI006T10  CB085T36  CB120T37  CB120V26  CI006T08  CB120T23  CB085T78  CI006T46  CB121T36
                          48,409    47,167    45,829    44,156    43,415    43,402    43,001    42,033    40,898    39,087
                            .22%      .21%      .21%      .20%      .19%      .19%      .19%      .19%      .18%      .17%

DATABASE CALLS            CP254P07  SZ073T08      ADS2  CP254P11
                          5,661K    3,983K    546,327   379,337   343,654   224,057   220,491   175,890   153,692   139,841
                          35.29%    24.83%     3.40%      2.36%     2.14%     1.39%     1.37%     1.09%      .95%      .87%

                        CZ166P07  CB085T22      ERUS       IDD  SZ073T07  CB085T30     CI006  CB085V18  CI006V43  CB085T77
                         123,351   118,291   103,116   100,391    88,375    84,542    80,314    78,909    76,003    75,533
                            .76%      .73%      .64%      .62%      .55%      .52%      .50%      .49%      .47%      .47%

                        CZ166P11  CB121T78  CULPDRES  CB085T37  CB072T78  CB085T36  CP197P05  CB085T78  CI006T15  CI006V03
                          74,215    64,084    61,721    58,129    57,860    55,844    52,989    51,745    50,850    50,553
                            .46%      .39%      .38%      .36%      .36%      .34%      .33%      .32%      .31%      .31%

                        CP076P01  CI006V10  CI006T07  CI006T10  CB085T35  CB120T37  CB085V26  CB120V26    CP076F  CB120T23
                          50,272    46,274    42,775    41,484    40,256    39,527    38,650    38,202    37,160    36,983
                            .31%      .28%      .26%      .25%      .25%      .24%      .24%      .23%      .23%      .23%

REC CUR W/IN RU       CB098T22  CB072T78  CB098T78  CB098T36     CM003             B  CB140T32  CULPDRES  CB095V26
                          3.81      3.80      3.56      3.53      3.33      3.08      2.50      2.32      2.26      2.25

                        CP197P05  CB085V26  CB081T17       OLQ  CB150AT3  CB150AT7  CP058P00         S  CB054T78  CB085T27
                          1.94      1.85      1.84      1.84      1.81      1.80      1.72      1.71      1.67      1.65

                        CB085T36  CB085T78      DCUF  CP212P02  CB085T35  CB085T77  CB085V23  CB143AT7  CB087T36  CP212P10
                          1.65      1.65      1.65      1.64      1.63      1.62      1.62      1.60      1.59      1.59

                        CB063AW  CB087T21  CB143AT3  CB085T37  CP265P03  CB085T23  CI045V42  CB081T32  CB085T50  CI045V03
                          1.57      1.54      1.52      1.51      1.51      1.49      1.48      1.47      1.47      1.47
```

```
IDMSID: IDMS1                              TRANSACTION STATISTICS REPORT                              SYSID:CAGE
                                                  CIMS LAB, INC.
                                                06/12/96-06/17/96
EXCPS                  CULPDRES  CP197P05      ERUS      ADS2
                      1,573K   492,453   223,582    51,918    38,675    33,099    32,482    19,395    17,446    16,655
                      53.31%    16.68%     7.57%     1.75%     1.31%     1.12%     1.10%      .65%      .59%      .56%

                    CB121T78     CM003  CZ166P07  CP076P01     CB124  CB121T47       IDD  CB098T78  CB121T37  CB120T34
                      15,473    14,940    13,619    12,307    11,569    11,269    10,223    10,150    10,061     8,057
                        .52%      .50%      .46%      .41%      .39%      .38%      .34%      .34%      .34%      .27%

                    CZ166P11  CB121T36  CB120T23  CB120V26  CB120T37     CI033  CB085T22  CB098T36  CB120T36  *UNKNOWN
                       8,052     8,016     7,791     7,517     7,450     7,172     6,924     6,211     6,073     5,772
                        .27%      .27%      .26%      .25%      .25%      .24%      .23%      .21%      .20%      .19%

                    CB085T30  CB120T68  CB085T37  CB098T22  CB087V12  CB085V18  CB085T36  CB085T77  SZ073T15  CB085T78
                       5,553     5,208     5,184     4,856     4,688     4,682     4,622     4,389     4,205     3,945
                        .18%      .17%      .17%      .16%      .15%      .15%      .15%      .14%      .14%      .13%

TERMINAL I/O             DCMT      ARMS      ADS2       OLQ           IDD
                        8,103     7,779     3,071     2,661     1,169     1,138       885
                       32.66%    31.35%    12.38%    10.72%     4.71%     4.58%     3.56%

SCRATCH REQUESTS      SZ073T46  SZ073T08  CP254P07      ADS2
                     438,554   316,434   182,687   172,144   138,038   114,492    89,865    70,618    63,132    55,188
                      14.70%    10.60%     6.12%     5.77%     4.62%     3.83%     3.01%     2.36%     2.11%     1.85%

                    CP254P11  CB085T22  SZ073T07  CI006V43      ERUS  CZ166P07     CI006  CB085T30  CB085V18  CB085T77
                      40,324    37,180    35,595    30,731    28,591    28,283    26,937    26,072    25,654    21,529
                       1.35%     1.24%     1.19%     1.03%      .95%      .94%      .90%      .87%      .85%      .72%

                         IDD  CI006T15  CI006V03  CI006V10  CB121T78  CZ166P11  CI006T07  CB085T37  CI006T10  CB085T36
                      21,097    20,442    20,305    18,626    18,345    17,196    17,172    16,895    16,703    15,504
                        .70%      .68%      .68%      .62%      .61%      .57%      .57%      .56%      .55%      .51%

                           S  CB085T78  CI006T08  CI006T09  CI006T46  CB120T37  CB120V26  *UNKNOWN  CZ083V14  CB120T23
                      14,905    14,457    14,288    13,680    13,420    12,909    12,470    12,389    12,388    12,002
                        .49%      .48%      .47%      .45%      .44%      .43%      .41%      .41%      .41%      .40%
```

```
IDMSID: IDMS1                              TRANSACTION STATISTICS REPORT                              SYSID:CAGE
                                                  CIMS LAB, INC.
                                                06/12/96-06/17/96
STORAGE REQUESTS         OLQ       IDD      DCMT      ADS2      ARMS         B
                     145,049    14,632     8,786     1,643     1,442     1,167       336       189
                      83.72%     8.44%     5.07%      .94%      .83%      .67%      .19%      .10%

HIGH WATER MARK (BYTES)  OLQ         S  CB072T78  CB081T17  CB085T23
                     139,573    66,410    59,733    56,416    28,938    25,984    15,637    14,613    14,613    14,613


                    CB085T35  CB085T36  CB085T37  CB085T77  CB085T78  CB085V23  CB085V26  CB120T36  CB120T37  CB120T77
                      14,613    14,613    14,613    14,613    14,613    14,613    14,613    14,613    14,613    14,613


                    CB120T78  CB120V26  CB121T36  CB121T77  CB121T78  CB085T27  CULPDRES  CI006T07  CI006T08  SZ073T07
                      14,613    14,613    14,613    14,613    14,613    14,432    13,973    13,301    13,301    13,290


                    SZ073T08  SZ073T46     CI006     CI033  CP197P05  CP254P07    CB054E    CB085A    CB087A  CB087T36
                      13,290    13,290    13,237    13,237    12,693    12,512    12,106    12,106    12,106    12,106
```

IDMS Terminal Statistics Report

This report shows which terminals, for a specified IDMS Region, were among the top 40 in the following categories:

- Most Active

  The Terminal ID and the amount of time active (hours:minutes) are reported along with the percentage of the combined active time for all active terminals for the 40 most active terminals. A terminal is considered active within any given 15 minute period only if transactions are received from the terminal. A terminal that is signed-on, but does not submit any transactions is not considered to be active.

- Most Transactions Executed

  The Terminal ID and the number of transactions submitted are reported for the 40 terminals submitting the most transactions along with their respective percentages of the total number of transactions submitted during the measured period. The listing is produced in descending order by the number of transactions submitted.

Any counts that exceed 6 digits is expressed in thousands by suffixing the number with the character "K".

You can exclude selected terminals from the report using the EXCLUDE facility (see JCL). Similarly, you can include terminals that might not qualify among the top forty in the report using the INCLUDE facility (see JCL).

Following is a sample of the IDMS Terminal Statistics Report:

```
IDMSID: IDMS1                          TERMINAL STATISTICS REPORT                          SYSID:CAGE
                                              CIMS LAB, INC.
                                            06/12/96-06/17/96
 ACTIVE TIME          LTERM00   LTERM01   LTERM02   LTERM06   LTERM04   LTERM07   LTERM03   LTERM05   LTERM14   LTERM10
                     46:30:00  23:00:00  22:45:00  16:45:00  16:30:00  16:15:00  13:45:00  12:30:00   9:30:00   9:15:00
                       32.29%    15.97%    15.79%    11.63%    11.45%    11.28%     9.54%     8.68%     6.59%     6.42%

                      LTERM11   LTERM08   LTERM12   LTERM13   LTERM09
                      9:00:00   8:30:00   8:15:00   8:15:00   5:30:00
                        6.25%     5.90%     5.72%     5.72%     3.81%

 TRANSACTION COUNT    LTERM00   LTERM02   LTERM01   LTERM04   LTERM06   LTERM10   LTERM07   LTERM05   LTERM11   LTERM03
                       10,545     2,625     1,919     1,334     1,303       942       904       785       604       551
                       44.85%    11.16%     8.16%     5.67%     5.54%     4.00%     3.84%     3.33%     2.56%     2.34%

                      LTERM08   LTERM14   LTERM12   LTERM13   LTERM09
                          539       439       428       396       194
                        2.29%     1.86%     1.82%     1.68%      .82%
```

IDMS Exception Analysis Report

The IDMS Exception Analysis Report shows, for each fifteen minute period, for a specified IDMS region, all transactions and terminals whose response times exceeded the pre-defined thresholds specified in the CIMS Capacity Planner Parmlib member &sidXCPT. The Parmlib member &sidXCPT contains a number of threshold values for the installation. This member is used to identify the exception reporting thresholds for the various components of the overall environment.

Following is a sample of the IDMS Exception Analysis Report:

```
IDMSID: IDMS1                                IDMS EXCEPTION ANALYSIS                                SYSID:CAGE
                                                  CIMS LAB, INC.
                                                06/12/96-06/13/96
 06/12 09.45 - 10.00 : TERM   LTERM12  (6.50)
 06/12 10.00 - 10.15 : XACTN  CULPDRES (172.07)
 06/12 10.15 - 10.30 : XACTN  CULPDRES (7.94)
 06/12 11.00 - 11.15 : XACTN  CULPDRES (19.23)
 06/12 11.45 - 12.00 : XACTN  OLQ      (6.97)
                       TERM   LTERM10  (7.28)
 06/12 13.00 - 13.15 : XACTN  CULPDRES (7.30)
 06/12 13.15 - 13.30 : XACTN  CULPDRES (11.03)
 06/12 13.30 - 13.45 : XACTN  CULPDRES (29.96)
 06/12 13.45 - 14.00 : XACTN  CBO72T78 (37.71)
 06/12 14.00 - 14.15 : TERM   LTERM01  (78.00)
 06/12 14.30 - 14.45 : XACTN  CBO72T78 (7.80)
 06/12 17.15 - 17.30 : XACTN  CULPDRES (8.91)
 06/12 17.30 - 17.45 : XACTN  CULPDRES (9.34)
 06/12 18.15 - 18.30 : XACTN
 06/13 00.30 - 00.45 : XACTN  CULPDRES (7.39)
 06/13 00.45 - 01.00 : XACTN
 06/13 01.00 - 01.15 : XACTN
 06/13 01.30 - 01.45 : XACTN
 06/13 03.00 - 03.15 : XACTN
 06/13 03.30 - 03.45 : XACTN  *UNKNOWN (58.85)
 06/13 04.00 - 04.15 : XACTN
 06/13 04.15 - 04.30 : XACTN  *UNKNOWN (38.93)
 06/13 05.30 - 05.45 : XACTN
 06/13 05.45 - 06.00 : XACTN
 06/13 06.00 - 06.15 : XACTN
 06/13 06.15 - 06.30 : XACTN  *UNKNOWN (25.23)
 06/13 07.00 - 07.15 : XACTN
 06/13 09.30 - 09.45 : XACTN  CULPDRES (12.64)
 06/13 10.45 - 11.00 : XACTN  CULPDRES (11.58)
 06/13 11.00 - 11.15 : XACTN  CBO72T78 (9.45)
 06/13 11.15 - 11.30 : XACTN  CMO03    (6.56)
 06/13 11.30 - 11.45 : XACTN  CBO72T78 (11.93)  CP254PO7 (8.29)
 06/13 11.45 - 12.00 : XACTN  OLQ      (6.07)
 06/13 12.45 - 13.00 : XACTN  OLQ      (33.38)
                       TERM   LTERMOO  (33.38)
 06/13 13.15 - 13.30 : XACTN  CBO72T78 (6.37)   CULPDRES (12.57)
 06/13 13.30 - 13.45 : XACTN  CULPDRES (6.38)
 06/13 14.00 - 14.15 : XACTN  CULPDRES (7.51)
 06/13 14.15 - 14.30 : XACTN  CULPDRES (12.29)
 06/13 14.30 - 14.45 : XACTN  CULPDRES (17.16)
 06/13 14.45 - 15.00 : XACTN  ERUS     (10.80)
 06/13 15.15 - 15.30 : XACTN
 06/13 15.30 - 15.45 : XACTN
 06/13 15.45 - 16.00 : XACTN
 06/13 16.15 - 16.30 : XACTN
 06/13 17.15 - 17.30 : XACTN  CULPDRES (8.31)
 06/13 18.00 - 18.15 : XACTN

   XACTN=AVERAGE ELAPSED TIME FOR A GIVEN TRANSACTION
    TERM=AVERAGE RESPONSE TIME FOR A GIVEN TERMINAL
```

IDMS Ad Hoc Report

The CIMS Capacity Planner IDMS Subsystem supports the production of an Ad Hoc Report from the original data before portions of the detail data are summarized or discarded. The Ad Hoc Report is produced by the Data Reduction program—SSA1IDMW.

To specify that the report is to be produced, you merely specify the report parameters in the Data Reduction Job stream as part of the SYSIN data set. The parameters that apply to the Ad Hoc report are:

IDMS TRANSACTION NAME=

IDMS TERMINAL NAME=

The IDMS Ad Hoc report contains the following information for each record selected for inclusion in the report.

- The IDMS Region Name
- The time that the transaction began execution
- The User ID
- The transaction ID
- The terminal ID
- The IDMS Transaction processing program name
- The elapsed time for the transaction
- The CPU time used
- The Wait time
- The Number of Records Within the Current Run Unit
- The number of Data Base Calls
- The number of Get Storage Calls
- The number of Scratch Requests
- The number of EXCPs
- The High Watermark in storage required

In addition to selecting records for inclusion into the Ad Hoc report by specific transaction and terminal names, you can select groups of both transactions and terminals using the wildcard character "*".

For example, you can select all transactions beginning with the characters "TR" by specifying IDMS TRANSACTION NAME=TR*. Similarly, you can select all terminals beginning with "L422" by specifying IDMS TERMINAL NAME=L422*. This convention can be extended to include all transactions by specifying IDMS TRANSACTION NAME=*. IDMS TERMINAL NAME=* would result in the selection of all terminals. If both the transaction and terminal names of "*" were specified, all records would be selected.

The selection of records for inclusion into the Ad Hoc Report can be further restricted by specifying date and/or time ranges by using the BEGIN DATE=, END DATE=, BEGIN TIME=, and END TIME= parameters.

Following is a sample of the IDMS Ad Hoc Report:

IDMSNAME	TIME IN	USER ID	XACTN-ID	TERM-ID	PROGRAM	ELAPSED	CPU	WAIT W/IN RU	DB REQS	GET STG	SCRATCH	EXCPS	STORAGE
IDMSCV1	14:51:17	USESPRI	USESPRI	UCFLT63	USESPRI	.22	.02	.19	11	66	38	4	46.72K
IDMSCV1	14:51:19	USESPRI	USESPRI	UCFLT63	USESPRI	.15	.02	.13	20	61	23	3	6.27K
IDMSCV1	14:52:18	USESPRI	USESPRI	UCFLT52	USESPRI	1.04	.16	.87	325	486	122	38	19	87.93K
IDMSCV1	14:53:01	USESPRI	USESPRI	UCFLT52	USESPRI	1.01	.27	.74	742	902	122	80	19	87.93K
IDMSCV1	14:53:04	USESPRI	USESPRI	UCFLT63	USESPRI	1.23	.28	.94	755	916	123	81	17	87.93K
IDMSCV1	14:53:18	USESPRI	USESPRI	UCFLT52	USESPRI	.13	.02	.10	20	61	23	3	6.27K
IDMSCV1	14:54:18	USESPRI	USESPRI	UCFLT63	USESPRI	.35	.02	.32	20	64	26	6	16.57K
IDMSCV1	15:00:46	USESPRI	USESPRI	UCFLT63	USESPRI	.73	.11	.62	93	257	124	15	21	87.93K
IDMSCV1	15:01:21	USESPRI	USESPRI	UCFLT63	USESPRI	.37	.02	.34	20	64	26	6	16.57K
IDMSCV1	15:01:42	USESPRI	USESPRI	UCFLT34	USESPRI	1.74	.42	1.31	1,304	1,468	128	136	34	87.93K
IDMSCV1	15:01:27	USESPRI	USESPRI	UCFLT63	USESPRI	1.61	.27	1.33	755	919	126	81	32	87.93K
IDMSCV1	15:01:55	USESPRI	USESPRI	UCFLT63	USESPRI	.14	.02	.11	20	64	26	3	16.57K
IDMSCV1	15:03:58	USESPRI	USESPRI	UCFLT34	USESPRI	.15	.02	.13	20	61	23	3	6.27K
IDMSCV1	15:04:41	USESPRI	USESPRI	UCFLT63	USESPRI	.70	.10	.59	93	254	121	15	16	87.93K
IDMSCV1	15:04:56	USESPRI	USESPRI	UCFLT63	USESPRI	2.13	.27	1.85	755	918	125	81	13	87.93K
IDMSCV1	15:05:22	USESPRI	USESPRI	UCFLT63	USESPRI	.14	.02	.11	20	64	26	3	16.57K
IDMSCV1	15:08:07	USESPRI	USESPRI	UCFLT63	USESPRI	1.50	.23	1.26	615	779	126	67	25	87.93K
IDMSCV1	15:09:56	USESPRI	USESPRI	UCFLT63	USESPRI	.13	.02	.10	20	64	26	3	16.57K
IDMSCV1	15:10:40	USESPRI	USESPRI	UCFLT34	USESPRI	3.15	.44	2.71	1,314	1,478	128	137	27	87.93K
IDMSCV1	15:14:26	USESPRI	USESPRI	UCFLT63	USESPRI	1.78	.24	1.53	610	777	129	66	25	87.93K
IDMSCV1	15:15:27	USESPRI	USESPRI	UCFLT63	USESPRI	1.12	.17	.95	371	534	124	42	13	87.93K
IDMSCV1	15:15:28	USESPRI	USESPRI	UCFLT34	USESPRI	.11	.02	.08	20	64	26	3	16.57K
IDMSCV1	15:18:34	USESPRI	USESPRI	UCFLT63	USESPRI	.10	.02	.08	9	50	30	3	46.72K
IDMSCV1	15:18:40	USESPRI	USESPRI	UCFLT63	USESPRI	.07	.02	.04	9	50	30	2	46.72K
IDMSCV1	15:18:49	USESPRI	USESPRI	UCFLT63	USESPRI	.05	.02	.03	9	50	30	1	46.72K
IDMSCV1	15:19:10	USESPRI	USESPRI	UCFLT63	USESPRI	.15	.02	.12	9	50	30	6	46.72K
IDMSCV1	15:19:14	USESPRI	USESPRI	UCFLT63	USESPRI	.49	.10	.38	77	240	123	13	16	87.93K
IDMSCV1	15:19:30	USESPRI	USESPRI	UCFLT63	USESPRI	.39	.16	.22	371	534	124	42	8	87.93K
IDMSCV1	15:21:00	USESPRI	USESPRI	UCFLT34	USESPRI	1.79	.44	1.34	1,328	1,492	128	138	25	87.93K
IDMSCV1	15:21:37	USESPRI	USESPRI	UCFLT07	USESPRI	.34	.03	.31	20	64	26	9	16.57K
IDMSCV1	15:21:46	USESPRI	USESPRI	UCFLT34	USESPRI	.13	.02	.10	20	64	26	3	16.57K
IDMSCV1	15:21:53	USESPRI	USESPRI	UCFLT63	USESPRI	.45	.10	.35	85	248	123	14	9	87.93K
IDMSCV1	15:22:17	USESPRI	USESPRI	UCFLT63	USESPRI	.19	.02	.16	20	64	26	4	16.57K
IDMSCV1	15:22:24	USESPRI	USESPRI	UCFLT63	USESPRI	.76	.17	.59	371	535	125	42	15	87.93K
IDMSCV1	15:23:22	USESPRI	USESPRI	UCFLT63	USESPRI	.33	.09	.23	93	256	123	15	9	87.93K
IDMSCV1	15:23:42	USESPRI	USESPRI	UCFLT63	USESPRI	.19	.02	.17	20	64	26	3	16.57K
IDMSCV1	15:36:15	USESPRI	USESPRI	UCFLT63	USESPRI	3.02	.58	2.43	1,871	2,035	130	192	44	87.93K
IDMSCV1	15:39:57	USESPRI	USESPRI	UCFLT52	USESPRI	3.22	.30	2.92	837	1,001	127	89	25	87.93K
IDMSCV1	15:42:07	USESPRI	USESPRI	UCFLT52	USESPRI	.46	.02	.43	20	64	26	4	16.57K
IDMSCV1	15:44:10	USESPRI	USESPRI	UCFLT63	USESPRI	.72	.02	.69	20	64	26	8	16.57K
IDMSCV1	15:57:31	USESPRI	USESPRI	UCFLT07	USESPRI	.37	.02	.34	20	64	26	5	16.57K
IDMSCV1	16:31:42	USESPRI	USESPRI	UCFLT52	USESPRI	2.62	.28	2.33	742	903	123	80	27	87.93K
IDMSCV1	16:33:54	USESPRI	USESPRI	UCFLT52	USESPRI	1.61	.27	1.34	742	905	125	80	17	87.93K
IDMSCV1	16:36:46	USESPRI	USESPRI	UCFLT07	USESPRI	.39	.03	.36	9	50	30	4	46.72K
IDMSCV1	16:36:58	USESPRI	USESPRI	UCFLT07	USESPRI	.25	.02	.23	8	40	24	5	8.96K
IDMSCV1	16:37:00	USESPRI	USESPRI	UCFLT07	USESPRI	.34	.02	.31	20	61	23	5	6.27K
IDMSCV1	16:36:52	USESPRI	USESPRI	UCFLT07	USESPRI	.12	.02	.10	9	50	30	5	46.72K
IDMSCV1	16:39:24	USESPRI	USESPRI	UCFLT07	USESPRI	.20	.02	.18	20	61	23	5	6.27K
IDMSCV1	16:40:26	USESPRI	USESPRI	UCFLT07	USESPRI	1.14	.21	.93	466	627	123	52	19	87.93K
IDMSCV1	16:43:05	USESPRI	USESPRI	UCFLT52	USESPRI	.30	.02	.28	20	61	23	4	6.27K
IDMSCV1	16:47:54	USESPRI	USESPRI	UCFLT52	USESPRI	3.90	.45	3.44	1,290	1,454	128	134	43	87.93K
IDMSCV1	16:49:31	USESPRI	USESPRI	UCFLT52	USESPRI	2.25	.36	1.88	1,113	1,273	124	117	19	87.93K
IDMSCV1	16:49:48	USESPRI	USESPRI	UCFLT52	USESPRI	.22	.02	.20	20	61	23	4	6.27K
IDMSCV1	16:58:33	USESPRI	USESPRI	UCFLT10	USESPRI	2.38	.37	2.00	1,100	1,261	125	117	38	87.93K
IDMSCV1	16:58:41	USESPRI	USESPRI	UCFLT10	USESPRI	.79	.15	.63	329	489	121	40	10	87.93K
IDMSCV1	17:05:43	USESPRI	USESPRI	UCFLT10	USESPRI	2.53	.37	2.16	1,100	1,260	124	117	40	87.93K
IDMSNAME	TIME IN	USER ID	XACTN-ID	TERM-ID	PROGRAM	ELAPSED	CPU	WAIT W/IN RU	DB REQS	GET STG	SCRATCH	EXCPS	STORAGE
IDMSCV1	17:06:59	USESPRI	USESPRI	UCFLT10	USESPRI	.25	.02	.22	20	61	23	6	6.27K
CV#00006	1,608												

IDMS Graphs

The IDMS Subsystem produces a number of graphs on the mainframe that depict the magnitude of the workload and the level of performance of a specified IDMS Region.

IDMS Transaction Response Graph

The Transaction Response Graph shows, by day of the week, the peak and average transaction response times for each 15-minute period throughout the day. The report page is broken into four sections—each covering a period of 6 hours. Within each section of the page, the time-of-day is represented by the vertical axis while the horizontal axis represents the response time (both peak and average). In the middle of each line, both the average and peak values are printed. The lines, in bar graph format, form the graphic representation of the values. The peak values are represented by dashes while the average values are represented by asterisks. In those cases where no dashes are present, they have been overlaid by asterisks because the peak values and the average values are either equal or very nearly so.

You can produce the Transaction Response Graph for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced - one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

Following is a sample of the IDMS Transaction Response Graph:

```
IDMSID=IDMS1                                    DAY SHOWN: MONDAY                                    SYSID:CAGE
                                                  06/12/96-06/17/96
                                        IDMS TRANSACTION RESPONSE GRAPH: .01 SECONDS

  00.00 - 00.15 |                        0000:0000                 12.00 - 12.15 |*****************       0169:0169
  00.15 - 00.30 |                        0000:0000                 12.15 - 12.30 |********              0080:0080
  00.30 - 00.45 |                        0000:0000                 12.30 - 12.45 |*****************       0163:0163
  00.45 - 01.00 |                        0000:0000                 12.45 - 13.00 |*********************   0202:0202
  01.00 - 01.15 |                        0000:0000                 13.00 - 13.15 |***************         0145:0145
  01.15 - 01.30 |                       0000:0000                13.15 - 13.30 |************************2484:2484*****************
  01.30 - 01.45 |                        0000:0000                 13.30 - 13.45 |*************           0130:0130
  01.45 - 02.00 |                        0000:0000                 13.45 - 14.00 |************************0389:0389******
  02.00 - 02.15 |                        0000:0000                 14.00 - 14.15 |************************0255:0255
  02.15 - 02.30 |                        0000:0000                 14.15 - 14.30 |************************0365:0365****
  02.30 - 02.45 |                        0000:0000                 14.30 - 14.45 |************************0283:0283
  02.45 - 03.00 |                        0000:0000                 14.45 - 15.00 |*********               0084:0084
  03.00 - 03.15 |                       0000:0000                 15.00 - 15.15 |************************0479:0479***************
  03.15 - 03.30 |                        0000:0000                 15.15 - 15.30 |************************0306:0306
  03.30 - 03.45 |                        0000:0000                 15.30 - 15.45 |************************0341:0341**
  03.45 - 04.00 |                        0000:0000                 15.45 - 16.00 |*************           0113:0113
  04.00 - 04.15 |                       0000:0000                16.00 - 16.15 |************************0501:0501*****************
  04.15 - 04.30 |                        0000:0000                 16.15 - 16.30 |*************           0114:0114
  04.30 - 04.45 |                       0000:0000                16.30 - 16.45 |************************2502:2502*****************
  04.45 - 05.00 |                        0000:0000                 16.45 - 17.00 |********              0075:0075
  05.00 - 05.15 |                        0000:0000                 17.00 - 17.15 |                      0000:0000
  05.15 - 05.30 |                        0000:0000                 17.15 - 17.30 |                      0000:0000
  05.30 - 05.45 |                        0000:0000                 17.30 - 17.45 |                      0000:0000
  05.45 - 06.00 |                        0000:0000                 17.45 - 18.00 |                      0000:0000
              +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
              0...50..100..150..200..250..300..350..400..450..500                0...50..100..150..200..250..300..350..400..450..500


  06.00 - 06.15 |                        0000:0000                 18.00 - 18.15 |                      0000:0000
  06.15 - 06.30 |                        0000:0000                 18.15 - 18.30 |                      0000:0000
  06.30 - 06.45 |                        0000:0000                 18.30 - 18.45 |                      0000:0000
  06.45 - 07.00 |                        0000:0000                 18.45 - 19.00 |                      0000:0000
  07.00 - 07.15 |                        0000:0000                 19.00 - 19.15 |                      0000:0000
  07.15 - 07.30 |                        0000:0000                 19.15 - 19.30 |*                     0009:0009
  07.30 - 07.45 |                        0000:0000                 19.30 - 19.45 |*                     0008:0008
  07.45 - 08.00 |************************0295:0295                 19.45 - 20.00 |*                     0009:0009
  08.00 - 08.15 |************************1422:1422***************** 20.00 - 20.15 |*                     0007:0007
  08.15 - 08.30 |************************0250:0250                 20.15 - 20.30 |                      0000:0000
  08.30 - 08.45 |************************0801:0801***************** 20.30 - 20.45 |                      0000:0000
  08.45 - 09.00 |************************0278:0278                 20.45 - 21.00 |                      0000:0000
  09.00 - 09.15 |************************0290:0290                 21.00 - 21.15 |                      0000:0000
  09.15 - 09.30 |********************    0198:0198                 21.15 - 21.30 |                      0000:0000
  09.30 - 09.45 |*****************       0161:0161                 21.30 - 21.45 |                      0000:0000
  09.45 - 10.00 |************************0315:0315                 21.45 - 22.00 |                      0000:0000
  10.00 - 10.15 |************************0582:0582***************** 22.00 - 22.15 |                      0000:0000
  10.15 - 10.30 |************            0116:0116                 22.15 - 22.30 |                      0000:0000
  10.30 - 10.45 |**********************  0215:0215                 22.30 - 22.45 |                      0000:0000
  10.45 - 11.00 |*********************** 0226:0226                 22.45 - 23.00 |                      0000:0000
  11.00 - 11.15 |************************0245:0245                 23.00 - 23.15 |                      0000:0000
  11.15 - 11.30 |************************0240:0240                 23.15 - 23.30 |                      0000:0000
  11.30 - 11.45 |************************0303:0303                 23.30 - 23.45 |                      0000:0000
  11.45 - 12.00 |************************0288:0288                 23.45 - 24.00 |                      0000:0000
              +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
              0...50..100..150..200..250..300..350..400..450..500                0...50..100..150..200..250..300..350..400..450..500

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

IDMS Transaction Activity Graph

The Transaction Activity Graph is organized in the same format as the Transaction and Terminal Response Graphs described above. It shows, by day of the week, the average and peak average number of transactions submitted from all the IDMS terminals during each 15-minute period throughout the day. The values along the horizontal axis represent the number of transactions submitted per minute.

Following is a sample of the IDMS Transaction Activity Graph:

```
IDMSID=IDMS1                                    DAY SHOWN: MONDAY                                    SYSID:CAGE
                                                  06/12/96-06/17/96
                                      IDMS TRANSACTION ACTIVITY GRAPH: AVERAGE/MINUTE

 00.00 - 00.15 |                        0000:0000          12.00 - 12.15 |*********              0033:0033
 00.15 - 00.30 |                        0000:0000          12.15 - 12.30 |*********              0034:0034
 00.30 - 00.45 |                        0000:0000          12.30 - 12.45 |************           0046:0046
 00.45 - 01.00 |                        0000:0000          12.45 - 13.00 |************           0045:0045
 01.00 - 01.15 |                        0000:0000          13.00 - 13.15 |******************     0067:0067
 01.15 - 01.30 |                        0000:0000          13.15 - 13.30 |**********************  0088:0088
 01.30 - 01.45 |                        0000:0000          13.30 - 13.45 |************************0101:0101
 01.45 - 02.00 |                        0000:0000          13.45 - 14.00 |************************0094:0094
 02.00 - 02.15 |                        0000:0000          14.00 - 14.15 |*********************** 0089:0089
 02.15 - 02.30 |                        0000:0000          14.15 - 14.30 |*********************** 0090:0090
 02.30 - 02.45 |                        0000:0000          14.30 - 14.45 |************************0143:0143***
 02.45 - 03.00 |                        0000:0000          14.45 - 15.00 |************************0148:0148****
 03.00 - 03.15 |                        0000:0000          15.00 - 15.15 |************************0107:0107
 03.15 - 03.30 |                        0000:0000          15.15 - 15.30 |************************0097:0097
 03.30 - 03.45 |***                     0010:0010          15.30 - 15.45 |*************            0049:0049
 03.45 - 04.00 |                        0000:0000          15.45 - 16.00 |*********************** 0091:0091
 04.00 - 04.15 |                        0000:0000          16.00 - 16.15 |************************0103:0103
 04.15 - 04.30 |                        0000:0000          16.15 - 16.30 |************************0138:0138**
 04.30 - 04.45 |                        0000:0000          16.30 - 16.45 |************************0114:0114
 04.45 - 05.00 |                        0000:0000          16.45 - 17.00 |************************0093:0093
 05.00 - 05.15 |                        0000:0000          17.00 - 17.15 |************             0046:0046
 05.15 - 05.30 |                        0000:0000          17.15 - 17.30 |***************          0055:0055
 05.30 - 05.45 |                        0000:0000          17.30 - 17.45 |*********              0035:0035
 05.45 - 06.00 |                        0000:0000          17.45 - 18.00 |*****                   0018:0018
               +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
               0...20...40...60...80..100..120..140..160..180..200               0...20...40...60...80..100..120..140..160..180..200


 06.00 - 06.15 |                        0000:0000          18.00 - 18.15 |***                     0009:0009
 06.15 - 06.30 |                        0000:0000          18.15 - 18.30 |*****                   0018:0018
 06.30 - 06.45 |                        0000:0000          18.30 - 18.45 |*********               0035:0035
 06.45 - 07.00 |*                       0003:0003          18.45 - 19.00 |********                0031:0031
 07.00 - 07.15 |******                  0021:0021          19.00 - 19.15 |*******                 0025:0025
 07.15 - 07.30 |****                    0016:0016          19.15 - 19.30 |***********             0042:0042
 07.30 - 07.45 |*********               0034:0034          19.30 - 19.45 |**********              0040:0040
 07.45 - 08.00 |****************        0061:0061          19.45 - 20.00 |*****                   0020:0020
 08.00 - 08.15 |***************         0059:0059          20.00 - 20.15 |***                     0012:0012
 08.15 - 08.30 |******************      0076:0076          20.15 - 20.30 |**                      0007:0007
 08.30 - 08.45 |*********************   0083:0083          20.30 - 20.45 |****                    0013:0013
 08.45 - 09.00 |*********************** 0092:0092          20.45 - 21.00 |*******                 0027:0027
 09.00 - 09.15 |***************         0059:0059          21.00 - 21.15 |**                      0008:0008
 09.15 - 09.30 |************************0113:0113          21.15 - 21.30 |*                       0004:0004
 09.30 - 09.45 |************************0098:0098          21.30 - 21.45 |*****                   0020:0020
 09.45 - 10.00 |************************0116:0116          21.45 - 22.00 |***                     0011:0011
 10.00 - 10.15 |************************0102:0102          22.00 - 22.15 |****                    0013:0013
 10.15 - 10.30 |************************0107:0107          22.15 - 22.30 |*                       0004:0004
 10.30 - 10.45 |*****************       0065:0065          22.30 - 22.45 |**********              0037:0037
 10.45 - 11.00 |************************0100:0100          22.45 - 23.00 |**                      0007:0007
 11.00 - 11.15 |************************0111:0111          23.00 - 23.15 |******                  0022:0022
 11.15 - 11.30 |**********************  0087:0087          23.15 - 23.30 |***                     0009:0009
 11.30 - 11.45 |*********************** 0091:0091          23.30 - 23.45 |***********             0042:0042
 11.45 - 12.00 |************************0110:0110          23.45 - 24.00 |*****                   0019:0019
               +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
               0...20...40...60...80..100..120..140..160..180..200               0...20...40...60...80..100..120..140..160..180..200

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

IDMS Terminal Activity Graph

The Terminal Activity Graph shows, by day of the week, the number of terminals during each 15-minute period throughout the day. Both the peak average and the average values are reported. The values along the horizontal axis represent the number of active terminals.

Following is a sample of the IDMS Terminal Activity Graph:

```
IDMSID=IDMS1                                DAY SHOWN: MONDAY                                SYSID:CAGE
                                             06/12/96-06/17/96
                                        IDMS TERMINAL ACTIVITY GRAPH

  00.00 - 00.15 |                    0000:0000          12.00 - 12.15 |*                   0002:0002
  00.15 - 00.30 |                    0000:0000          12.15 - 12.30 |*                   0001:0001
  00.30 - 00.45 |                    0000:0000          12.30 - 12.45 |*                   0001:0001
  00.45 - 01.00 |                    0000:0000          12.45 - 13.00 |**                  0003:0003
  01.00 - 01.15 |                    0000:0000          13.00 - 13.15 |***                 0006:0006
  01.15 - 01.30 |                    0000:0000          13.15 - 13.30 |***                 0005:0005
  01.30 - 01.45 |                    0000:0000          13.30 - 13.45 |****                0007:0007
  01.45 - 02.00 |                    0000:0000          13.45 - 14.00 |***                 0006:0006
  02.00 - 02.15 |                    0000:0000          14.00 - 14.15 |***                 0005:0005
  02.15 - 02.30 |                    0000:0000          14.15 - 14.30 |***                 0005:0005
  02.30 - 02.45 |                    0000:0000          14.30 - 14.45 |****                0007:0007
  02.45 - 03.00 |                    0000:0000          14.45 - 15.00 |***                 0006:0006
  03.00 - 03.15 |                    0000:0000          15.00 - 15.15 |**                  0004:0004
  03.15 - 03.30 |                    0000:0000          15.15 - 15.30 |****                0008:0008
  03.30 - 03.45 |                    0000:0000          15.30 - 15.45 |***                 0005:0005
  03.45 - 04.00 |                    0000:0000          15.45 - 16.00 |***                 0006:0006
  04.00 - 04.15 |                    0000:0000          16.00 - 16.15 |**                  0003:0003
  04.15 - 04.30 |                    0000:0000          16.15 - 16.30 |*                   0002:0002
  04.30 - 04.45 |                    0000:0000          16.30 - 16.45 |**                  0003:0003
  04.45 - 05.00 |                    0000:0000          16.45 - 17.00 |**                  0004:0004
  05.00 - 05.15 |                    0000:0000          17.00 - 17.15 |                    0000:0000
  05.15 - 05.30 |                    0000:0000          17.15 - 17.30 |                    0000:0000
  05.30 - 05.45 |                    0000:0000          17.30 - 17.45 |                    0000:0000
  05.45 - 06.00 |                    0000:0000          17.45 - 18.00 |                    0000:0000
            +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
            0...10...20...30...40...50...60...70...80...90..100             0...10...20...30...40...50...60...70...80...90..100

  06.00 - 06.15 |                    0000:0000          18.00 - 18.15 |                    0000:0000
  06.15 - 06.30 |                    0000:0000          18.15 - 18.30 |                    0000:0000
  06.30 - 06.45 |                    0000:0000          18.30 - 18.45 |                    0000:0000
  06.45 - 07.00 |                    0000:0000          18.45 - 19.00 |                    0000:0000
  07.00 - 07.15 |                    0000:0000          19.00 - 19.15 |                    0000:0000
  07.15 - 07.30 |                    0000:0000          19.15 - 19.30 |*                   0001:0001
  07.30 - 07.45 |                    0000:0000          19.30 - 19.45 |*                   0001:0001
  07.45 - 08.00 |**                  0003:0003          19.45 - 20.00 |*                   0001:0001
  08.00 - 08.15 |**                  0004:0004          20.00 - 20.15 |*                   0001:0001
  08.15 - 08.30 |**                  0003:0003          20.15 - 20.30 |                    0000:0000
  08.30 - 08.45 |**                  0003:0003          20.30 - 20.45 |                    0000:0000
  08.45 - 09.00 |***                 0006:0006          20.45 - 21.00 |                    0000:0000
  09.00 - 09.15 |***                 0005:0005          21.00 - 21.15 |                    0000:0000
  09.15 - 09.30 |***                 0006:0006          21.15 - 21.30 |                    0000:0000
  09.30 - 09.45 |**                  0003:0003          21.30 - 21.45 |                    0000:0000
  09.45 - 10.00 |**                  0004:0004          21.45 - 22.00 |                    0000:0000
  10.00 - 10.15 |****                0007:0007          22.00 - 22.15 |                    0000:0000
  10.15 - 10.30 |***                 0006:0006          22.15 - 22.30 |                    0000:0000
  10.30 - 10.45 |****                0007:0007          22.30 - 22.45 |                    0000:0000
  10.45 - 11.00 |***                 0005:0005          22.45 - 23.00 |                    0000:0000
  11.00 - 11.15 |**                  0004:0004          23.00 - 23.15 |                    0000:0000
  11.15 - 11.30 |***                 0006:0006          23.15 - 23.30 |                    0000:0000
  11.30 - 11.45 |****                0008:0008          23.30 - 23.45 |                    0000:0000
  11.45 - 12.00 |****                0008:0008          23.45 - 24.00 |                    0000:0000
            +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
            0...10...20...30...40...50...60...70...80...90..100             0...10...20...30...40...50...60...70...80...90..100

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

IDMS CPU Activity Graph

The CPU Activity Graph shows, by day of the week, the percentage of the CPU processing capacity that was expended in processing IDMS transactions for a specified IDMS region. The average and peak average percentage values are reported in 15 minute intervals throughout the day. As is the case with the other graphs, you can specify the measured period to include anywhere from a day to several months.

Following is a sample of the IDMS CPU Activity Graph:

```
IDMSID=IDMS1                                  DAY SHOWN: MONDAY                                  SYSID:CAGE
                                               06/12/96-06/17/96
                                      IDMS CPU ACTIVITY GRAPH: PERCENT BUSY

 00.00 - 00.15 |                        0000:0000      12.00 - 12.15 |*                       0001:0001
 00.15 - 00.30 |                        0000:0000      12.15 - 12.30 |*                       0002:0002
 00.30 - 00.45 |                        0000:0000      12.30 - 12.45 |*                       0002:0002
 00.45 - 01.00 |                        0000:0000      12.45 - 13.00 |*                       0001:0001
 01.00 - 01.15 |                        0000:0000      13.00 - 13.15 |******                  0012:0012
 01.15 - 01.30 |                        0000:0000      13.15 - 13.30 |****                    0008:0008
 01.30 - 01.45 |                        0000:0000      13.30 - 13.45 |*********               0018:0018
 01.45 - 02.00 |                        0000:0000      13.45 - 14.00 |***                     0006:0006
 02.00 - 02.15 |                        0000:0000      14.00 - 14.15 |**                      0004:0004
 02.15 - 02.30 |                        0000:0000      14.15 - 14.30 |**                      0004:0004
 02.30 - 02.45 |                        0000:0000      14.30 - 14.45 |***                     0006:0006
 02.45 - 03.00 |                        0000:0000      14.45 - 15.00 |***                     0006:0006
 03.00 - 03.15 |                        0000:0000      15.00 - 15.15 |***                     0005:0005
 03.15 - 03.30 |                        0000:0000      15.15 - 15.30 |***                     0005:0005
 03.30 - 03.45 |                        0000:0000      15.30 - 15.45 |*                       0002:0002
 03.45 - 04.00 |                        0000:0000      15.45 - 16.00 |**                      0004:0004
 04.00 - 04.15 |                        0000:0000      16.00 - 16.15 |***                     0005:0005
 04.15 - 04.30 |                        0000:0000      16.15 - 16.30 |***                     0005:0005
 04.30 - 04.45 |                        0000:0000      16.30 - 16.45 |***                     0005:0005
 04.45 - 05.00 |                        0000:0000      16.45 - 17.00 |**                      0003:0003
 05.00 - 05.15 |                        0000:0000      17.00 - 17.15 |*                       0002:0002
 05.15 - 05.30 |                        0000:0000      17.15 - 17.30 |************************0047:0047
 05.30 - 05.45 |                        0000:0000      17.30 - 17.45 |********                0015:0015
 05.45 - 06.00 |                        0000:0000      17.45 - 18.00 |                        0000:0000
               +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
               0...10...20...30...40...50...60...70...80...90..100               0...10...20...30...40...50...60...70...80...90..100

 06.00 - 06.15 |                        0000:0000      18.00 - 18.15 |                        0000:0000
 06.15 - 06.30 |                        0000:0000      18.15 - 18.30 |**                      0003:0003
 06.30 - 06.45 |                        0000:0000      18.30 - 18.45 |                        0000:0000
 06.45 - 07.00 |                        0000:0000      18.45 - 19.00 |                        0000:0000
 07.00 - 07.15 |                        0000:0000      19.00 - 19.15 |                        0000:0000
 07.15 - 07.30 |                        0000:0000      19.15 - 19.30 |                        0000:0000
 07.30 - 07.45 |*                       0001:0001      19.30 - 19.45 |*                       0001:0001
 07.45 - 08.00 |*                       0002:0002      19.45 - 20.00 |                        0000:0000
 08.00 - 08.15 |**                      0003:0003      20.00 - 20.15 |                        0000:0000
 08.15 - 08.30 |*                       0002:0002      20.15 - 20.30 |                        0000:0000
 08.30 - 08.45 |**                      0003:0003      20.30 - 20.45 |                        0000:0000
 08.45 - 09.00 |**                      0003:0003      20.45 - 21.00 |                        0000:0000
 09.00 - 09.15 |***                     0005:0005      21.00 - 21.15 |                        0000:0000
 09.15 - 09.30 |****                    0008:0008      21.15 - 21.30 |                        0000:0000
 09.30 - 09.45 |***                     0006:0006      21.30 - 21.45 |                        0000:0000
 09.45 - 10.00 |*****                   0010:0010      21.45 - 22.00 |                        0000:0000
 10.00 - 10.15 |***                     0006:0006      22.00 - 22.15 |                        0000:0000
 10.15 - 10.30 |***                     0006:0006      22.15 - 22.30 |                        0000:0000
 10.30 - 10.45 |**                      0004:0004      22.30 - 22.45 |                        0000:0000
 10.45 - 11.00 |***                     0006:0006      22.45 - 23.00 |                        0000:0000
 11.00 - 11.15 |*******                 0013:0013      23.00 - 23.15 |                        0000:0000
 11.15 - 11.30 |***                     0006:0006      23.15 - 23.30 |                        0000:0000
 11.30 - 11.45 |*****                   0009:0009      23.30 - 23.45 |*                       0001:0001
 11.45 - 12.00 |****                    0007:0007      23.45 - 24.00 |                        0000:0000
               +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
               0...10...20...30...40...50...60...70...80...90..100               0...10...20...30...40...50...60...70...80...90..100

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

IDMS D/B Activity Graph

This graph shows, for a specified IDMS region, the number of data base service calls handled per second in support of the IDMS applications. The activity shown is the number of data base service calls per second for each 15 minute period throughout each day of the week. Both the daily averages and the peak daily averages are shown using the (-) and (*) notation common to all the graphs.

Following is a copy of the IDMS D/B Activity Graph:

```
IDMSID=IDMS1                                  DAY SHOWN: MONDAY                                  SYSID:CAGE
                                                06/12/96-06/17/96
                                      IDMS D/B ACTIVITY GRAPH: CALLS/SECOND

 00.00 - 00.15 |                    0000:0000          12.00 - 12.15 |*                   0013:0013
 00.15 - 00.30 |                    0000:0000          12.15 - 12.30 |**                  0023:0023
 00.30 - 00.45 |                    0000:0000          12.30 - 12.45 |***                 0034:0034
 00.45 - 01.00 |                    0000:0000          12.45 - 13.00 |**                  0017:0017
 01.00 - 01.15 |                    0000:0000          13.00 - 13.15 |********            0111:0111
 01.15 - 01.30 |                    0000:0000          13.15 - 13.30 |******              0080:0080
 01.30 - 01.45 |                    0000:0000          13.30 - 13.45 |**********          0170:0170
 01.45 - 02.00 |                    0000:0000          13.45 - 14.00 |****                0056:0056
 02.00 - 02.15 |                    0000:0000          14.00 - 14.15 |****                0051:0051
 02.15 - 02.30 |                    0000:0000          14.15 - 14.30 |****                0044:0044
 02.30 - 02.45 |                    0000:0000          14.30 - 14.45 |*****               0070:0070
 02.45 - 03.00 |                    0000:0000          14.45 - 15.00 |*****               0066:0066
 03.00 - 03.15 |                    0000:0000          15.00 - 15.15 |****                0053:0053
 03.15 - 03.30 |                    0000:0000          15.15 - 15.30 |****                0050:0050
 03.30 - 03.45 |*                   0003:0003          15.30 - 15.45 |**                  0024:0024
 03.45 - 04.00 |                    0000:0000          15.45 - 16.00 |****                0044:0044
 04.00 - 04.15 |                    0000:0000          16.00 - 16.15 |****                0049:0049
 04.15 - 04.30 |                    0000:0000          16.15 - 16.30 |*****               0061:0061
 04.30 - 04.45 |                    0000:0000          16.30 - 16.45 |****                0056:0056
 04.45 - 05.00 |                    0000:0000          16.45 - 17.00 |***                 0036:0036
 05.00 - 05.15 |                    0000:0000          17.00 - 17.15 |**                  0028:0028
 05.15 - 05.30 |                    0000:0000          17.15 - 17.30 |************************0642:0642**********
 05.30 - 05.45 |                    0000:0000          17.30 - 17.45 |***********         0144:0144
 05.45 - 06.00 |                    0000:0000          17.45 - 18.00 |*                   0006:0006
           +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
           0...70..140..210..280..350..420..490..560..630..700                0...70..140..210..280..350..420..490..560..630..700


 06.00 - 06.15 |                    0000:0000          18.00 - 18.15 |*                   0003:0003
 06.15 - 06.30 |                    0000:0000          18.15 - 18.30 |*                   0011:0011
 06.30 - 06.45 |                    0000:0000          18.30 - 18.45 |*                   0012:0012
 06.45 - 07.00 |*                   0001:0001          18.45 - 19.00 |*                   0011:0011
 07.00 - 07.15 |*                   0008:0008          19.00 - 19.15 |*                   0010:0010
 07.15 - 07.30 |*                   0005:0005          19.15 - 19.30 |*                   0008:0008
 07.30 - 07.45 |*                   0013:0013          19.30 - 19.45 |*                   0013:0013
 07.45 - 08.00 |**                  0027:0027          19.45 - 20.00 |*                   0001:0001
 08.00 - 08.15 |***                 0034:0034          20.00 - 20.15 |                    0000:0000
 08.15 - 08.30 |***                 0035:0035          20.15 - 20.30 |*                   0002:0002
 08.30 - 08.45 |***                 0038:0038          20.30 - 20.45 |*                   0005:0005
 08.45 - 09.00 |***                 0042:0042          20.45 - 21.00 |*                   0010:0010
 09.00 - 09.15 |****                0048:0048          21.00 - 21.15 |*                   0002:0002
 09.15 - 09.30 |*******             0085:0085          21.15 - 21.30 |*                   0001:0001
 09.30 - 09.45 |*****               0070:0070          21.30 - 21.45 |*                   0007:0007
 09.45 - 10.00 |*********           0120:0120          21.45 - 22.00 |*                   0003:0003
 10.00 - 10.15 |****                0056:0056          22.00 - 22.15 |*                   0004:0004
 10.15 - 10.30 |*****               0061:0061          22.15 - 22.30 |*                   0001:0001
 10.30 - 10.45 |****                0047:0047          22.30 - 22.45 |*                   0013:0013
 10.45 - 11.00 |******              0073:0073          22.45 - 23.00 |*                   0002:0002
 11.00 - 11.15 |***********         0144:0144          23.00 - 23.15 |*                   0008:0008
 11.15 - 11.30 |*****               0065:0065          23.15 - 23.30 |*                   0003:0003
 11.30 - 11.45 |*******             0091:0091          23.30 - 23.45 |**                  0015:0015
 11.45 - 12.00 |******              0072:0072          23.45 - 24.00 |*                   0006:0006
           +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
           0...70..140..210..280..350..420..490..560..630..700                0...70..140..210..280..350..420..490..560..630..700

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

IDMS I/O Activity Graph

This graph shows, for a specified IDMS region, the amount of EXCP activity related to processing transactions. Both the peak average and the average I/O rates are reported. The format of the I/O Activity Graph is identical to the graphs described above, except that the values along the horizontal axis represent the number of I/Os per second related to processing the IDMS workload.

Following is a sample of the IDMS I/O Activity Graph:

```
IDMSID=IDMS1                                  DAY SHOWN: MONDAY                                  SYSID:CAGE
                                                06/12/96-06/17/96
                                        IDMS I/O ACTIVITY GRAPH: EXCPS/SECOND

 00.00 - 00.15 |                        0000:0000      12.00 - 12.15 |*                       0001:0001
 00.15 - 00.30 |                        0000:0000      12.15 - 12.30 |*                       0001:0001
 00.30 - 00.45 |                        0000:0000      12.30 - 12.45 |*                       0001:0001
 00.45 - 01.00 |                        0000:0000      12.45 - 13.00 |                        0000:0000
 01.00 - 01.15 |                        0000:0000      13.00 - 13.15 |************            0023:0023
 01.15 - 01.30 |                        0000:0000      13.15 - 13.30 |*********               0017:0017
 01.30 - 01.45 |                        0000:0000      13.30 - 13.45 |******************      0035:0035
 01.45 - 02.00 |                        0000:0000      13.45 - 14.00 |*********               0018:0018
 02.00 - 02.15 |                        0000:0000      14.00 - 14.15 |****                    0008:0008
 02.15 - 02.30 |                        0000:0000      14.15 - 14.30 |****                    0008:0008
 02.30 - 02.45 |                        0000:0000      14.30 - 14.45 |*******                 0013:0013
 02.45 - 03.00 |                        0000:0000      14.45 - 15.00 |*****                   0009:0009
 03.00 - 03.15 |                        0000:0000      15.00 - 15.15 |******                  0012:0012
 03.15 - 03.30 |                        0000:0000      15.15 - 15.30 |******                  0011:0011
 03.30 - 03.45 |                        0000:0000      15.30 - 15.45 |**                      0004:0004
 03.45 - 04.00 |                        0000:0000      15.45 - 16.00 |****                    0008:0008
 04.00 - 04.15 |                        0000:0000      16.00 - 16.15 |*****                   0010:0010
 04.15 - 04.30 |                        0000:0000      16.15 - 16.30 |*****                   0009:0009
 04.30 - 04.45 |                        0000:0000      16.30 - 16.45 |******                  0011:0011
 04.45 - 05.00 |                        0000:0000      16.45 - 17.00 |**                      0003:0003
 05.00 - 05.15 |                        0000:0000      17.00 - 17.15 |****                    0007:0007
 05.15 - 05.30 |                        0000:0000      17.15 - 17.30 |*****                   0010:0010
 05.30 - 05.45 |                        0000:0000      17.30 - 17.45 |************************0060:0060
 05.45 - 06.00 |                        0000:0000      17.45 - 18.00 |                        0000:0000
               +----+----+----+----+----+----+----+----+----+----+            +----+----+----+----+----+----+----+----+----+----+
               0...10...20...30...40...50...60...70...80...90..100            0...10...20...30...40...50...60...70...80...90..100

 06.00 - 06.15 |                        0000:0000      18.00 - 18.15 |                        0000:0000
 06.15 - 06.30 |                        0000:0000      18.15 - 18.30 |************            0023:0023
 06.30 - 06.45 |                        0000:0000      18.30 - 18.45 |                        0000:0000
 06.45 - 07.00 |                        0000:0000      18.45 - 19.00 |                        0000:0000
 07.00 - 07.15 |*                       0001:0001      19.00 - 19.15 |                        0000:0000
 07.15 - 07.30 |                        0000:0000      19.15 - 19.30 |                        0000:0000
 07.30 - 07.45 |                        0000:0000      19.30 - 19.45 |                        0000:0000
 07.45 - 08.00 |**                      0003:0003      19.45 - 20.00 |                        0000:0000
 08.00 - 08.15 |*****                   0009:0009      20.00 - 20.15 |                        0000:0000
 08.15 - 08.30 |**                      0004:0004      20.15 - 20.30 |                        0000:0000
 08.30 - 08.45 |***                     0006:0006      20.30 - 20.45 |                        0000:0000
 08.45 - 09.00 |****                    0007:0007      20.45 - 21.00 |                        0000:0000
 09.00 - 09.15 |****                    0008:0008      21.00 - 21.15 |                        0000:0000
 09.15 - 09.30 |*******                 0013:0013      21.15 - 21.30 |                        0000:0000
 09.30 - 09.45 |*****                   0009:0009      21.30 - 21.45 |                        0000:0000
 09.45 - 10.00 |********                0015:0015      21.45 - 22.00 |                        0000:0000
 10.00 - 10.15 |******                  0011:0011      22.00 - 22.15 |                        0000:0000
 10.15 - 10.30 |******                  0011:0011      22.15 - 22.30 |                        0000:0000
 10.30 - 10.45 |******                  0012:0012      22.30 - 22.45 |                        0000:0000
 10.45 - 11.00 |*******                 0013:0013      22.45 - 23.00 |                        0000:0000
 11.00 - 11.15 |***********             0021:0021      23.00 - 23.15 |                        0000:0000
 11.15 - 11.30 |*******                 0014:0014      23.15 - 23.30 |                        0000:0000
 11.30 - 11.45 |***********             0022:0022      23.30 - 23.45 |                        0000:0000
 11.45 - 12.00 |*******                 0014:0014      23.45 - 24.00 |                        0000:0000
               +----+----+----+----+----+----+----+----+----+----+            +----+----+----+----+----+----+----+----+----+----+
               0...10...20...30...40...50...60...70...80...90..100            0...10...20...30...40...50...60...70...80...90..100

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

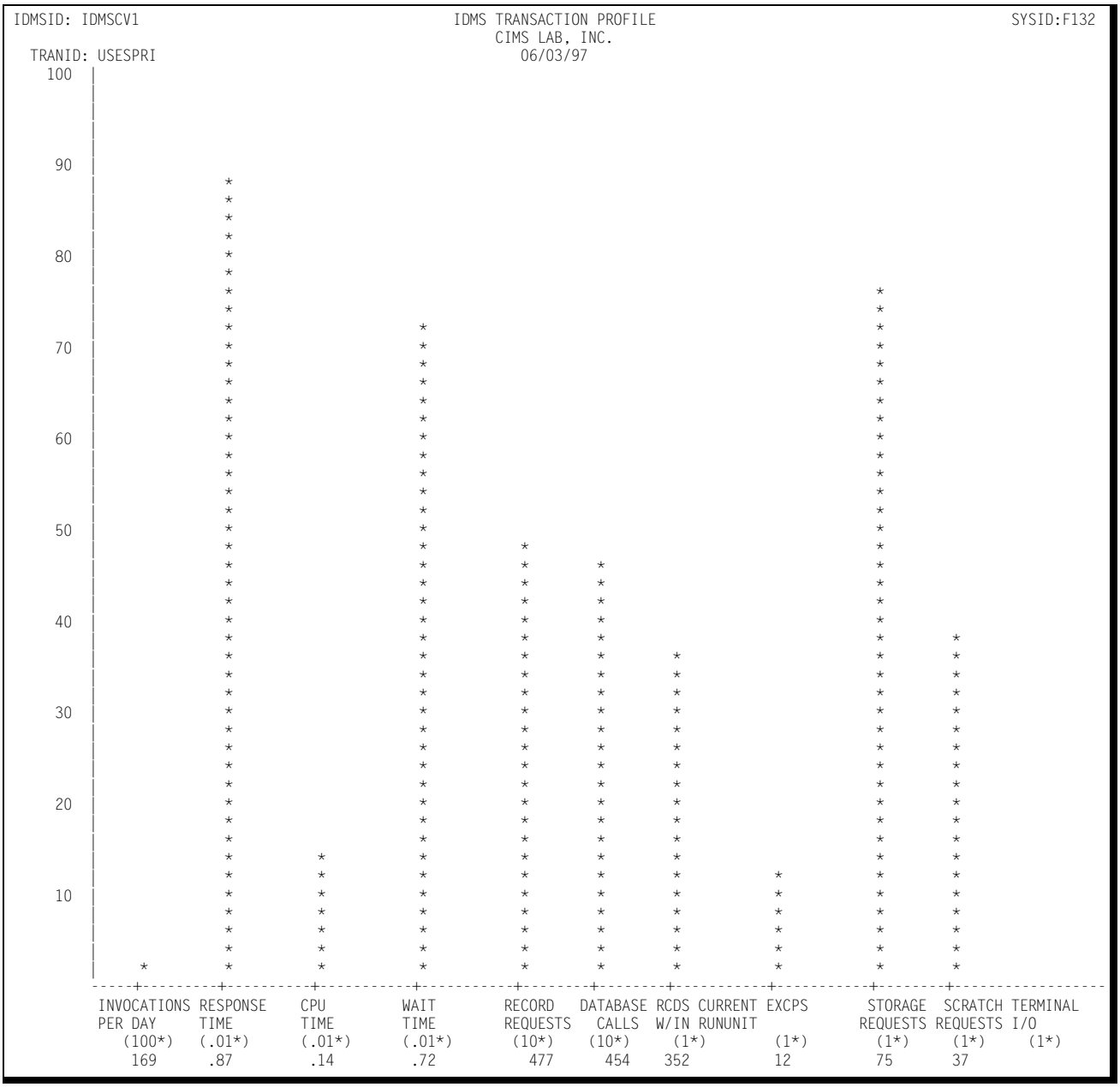
IDMS Transaction Profile

The Transaction Profile Report shows, for a specified IDMS region type, how a specified IDMS transaction behaved for the following categories:

- How many times per day, on average, it was invoked
- The average response time per invocation of the transaction
- The average CPU time per invocation used to process the transaction

- The average wait time
- The average number of record requests
- The average number of data base calls.
- The average number of records currently within a run unit
- The average number of EXCPs per invocation
- The average number of storage requests per invocation
- The average number of scratch requests per invocation
- The average number of terminal I/Os per invocation

Following is a sample of the IDMS Transaction Profile:



IDMS Trends Analysis Report

The CIMS Capacity Planner approach to Trends Analysis centers on isolating a number of capacity and performance related elements and providing either a summary or graphic comparison of the values of those elements over time. The IDMS elements that are selected for comparison are:

- CPU Utilization Statistics, including a breakdown in terms of Task Mode and System Mode CPU usage

- The number of transactions executed per minute computed as an average during Prime shift
- The average number of EXCPs per second during Prime shift
- The average response time during Prime Shift
- The ratio of Early shift to Prime shift transactions
- The ratio of Late shift to Prime shift transactions
- The ratio of Early shift to Prime shift terminals
- The ratio of Late shift to Prime shift terminals

This information is gathered and presented to you in one of two ways:

- In summary report format, showing the values of each of the elements listed above during a baseline period and comparing them to a secondary period, with the slope of each comparison indicated at the right hand side of the report
- In data suitable for graphing with the Harvard Graphics Program once it has been down loaded to a Personal Computer. The manner in which the data is down loaded is left to you. It is stored at the mainframe, however, in a PDS with the DDNAME of HGDLIB.

Note • The Include/Exclude feature is supported in the IDMS Trends Analysis Report. However, the IDMS Filtered Values=Yes parameter must be specified to cause the Include/Exclude List to be recognized.

Network Workload and Performance Reports

The following discussion enumerates the various CIMS Capacity Planner Network reports and describes the contents of each report.

Network Summary Analysis Report

The Summary Analysis Report contains key summary information required to determine the magnitude of the Network workload and how well the Network is performing. The report provides the following information for the time period specified in the report request:

- The period measured by date and time

  The Summary Report can be produced for a single day or portion of a day or it can encompass any number of days, thereby allowing an evaluation of the overall long term and short term performance of the Network.

- The number of active terminals

  The peak number of terminals concurrently active during the prime shift over the measured period.

- The average number of transactions processed

  The average number of terminal transactions processed during prime shift. If the measured period consists of only one day, the average value is equal to the day's activity.

- Response time

  The average terminal response time for transactions submitted during the prime shift over the measured period is reported in seconds (sec.hh).

- Concurrent terminal activity

  The average number of terminals active concurrently throughout the prime shift. The value is calculated by summing the average number of terminals active during each 15 minute period throughout the prime shift and and dividing the total by the number of 15 minute periods in the prime shift.

- Number of unique terminals accessing the system
- The average number of transactions processed per second during the prime shift
- The average number of outbound messages transmitted per second during the prime shift
- The average length of the inbound messages received during the prime shift
- The average length of the outbound messages transmitted during the prime shift
- The average ratio of transactions during the early shift compared to the prime shift
- The average ratio of transactions during the late shift compared to the prime shift
- The average ratio of terminals active during the early shift compared to the prime shift
- The average ratio of terminals active on the late shift compared to the prime shift
- The number of network transactions processed by shift for the measured period.

  The 25 most active terminals (inbound) are listed individually by LUNAME. All remaining terminals are reported collectively under the title of "OTHER". The total number of transactions is reported by shift.

- The number of outbound network messages by shift for the measured period.

  The 25 most active terminals (outbound) are listed individually. All remaining terminals are reported collectively under the title of "OTHER". The total number of outbound messages is reported by shift.

Following is a sample of the Network Summary Analysis Report:

```
VTAMID:TSO*                                  SUMMARY REPORT                                  SYSID:MVSB
  1. THE MEASURED PERIOD BEGINS AT 00:00 SUNDAY, MAY 21, AND CONTINUES THROUGH 23:59 SATURDAY, MAY 27.
  2. DURING THE MEASURED PERIOD NETWORK USAGE PEAKED AT  175 TERMINALS ACTIVE CONCURRENTLY
  3. DURING PRIME SHIFT, THE AVERAGE NUMBER OF TRANSACTIONS PROCESSED WAS: 59,998
  4. DURING PRIME SHIFT, RESPONSE TIME FOR ONLINE TRANSACTIONS IN THIS VTAM APPLICATION AVERAGED: .65 SECONDS
  5. DURING PRIME SHIFT, RESPONSE TIMES WERE DISTRIBUTED AS FOLLOWS:
              <_.5_SEC  .5-1_SEC  1-2_SEC   2-4_SEC   4-6_SEC   >_6_SEC
                50.16%    35.41%    11.21%     2.69%      .36%      .14%
  6. DURING PRIME SHIFT, NETWORK ACCESS FOR THIS VTAM APPLICATION AVERAGED:  148.30 TERMINALS ACTIVE CONCURRENTLY
  7. DURING THE MEASURED PERIOD A TOTAL OF  247 UNIQUE TERMINALS ACCESSED THE SYSTEM.
  8. DURING PRIME SHIFT, THE AVERAGE NUMBER OF TRANSACTIONS PER SECOND AVERAGED: 1.66
  9. DURING PRIME SHIFT, THE AVERAGE NUMBER OF OUTBOUND MESSAGES PER SECOND AVERAGED: 2.14
 10. DURING PRIME SHIFT, THE AVERAGE INBOUND MESSAGE LENGTH AVERAGED: 29.67
 11. DURING PRIME SHIFT, THE AVERAGE OUTBOUND MESSAGE LENGTH AVERAGED: 750.83
 12. DURING THE MEASURED PERIOD THE RATIO OF EARLY-TO-PRIME SHIFT TRANSACTIONS WAS: .05
 13. DURING THE MEASURED PERIOD THE RATIO OF LATE-TO-PRIME SHIFT TRANSACTIONS WAS: .07
 14. DURING THE MEASURED PERIOD THE RATIO OF EARLY-TO-PRIME SHIFT TERMINALS WAS: .08
 15. DURING THE MEASURED PERIOD THE RATIO OF LATE-TO-PRIME SHIFT TERMINALS WAS: .07
```

```
VTAMID:TSO*                                  SUMMARY REPORT                                  SYSID:MVSB
 16. DURING THE MEASURED PERIOD A TOTAL OF 324,955 NETWORK TRANSACTIONS WERE PROCESSED.
                          00:00 - 08:00                 08:00 - 18:00                 18:00 - 24:00
     LC00                         3,085                         6,257                         3,195
     F428                                                      11,289                           133
     F335                            10                         8,380                         2,789
     LD25                                                      10,920                            97
     F415                                                       8,393
     F401                           101                         6,388
     F330                           268                         5,330
     F449                                                       5,032
     F333                           246                         4,629
     F309                           242                         4,585
     F340                            35                         4,700
     F313                           299                         4,277
     F359                                                       4,531
     F10C                                                       4,286
     F351                            67                         4,179
     F409                            42                         4,030
     F42F                                                       3,922
     F021                                                       3,624                           274
     F346                           104                         3,728
     F325                           245                         3,385
     F40F                                                       3,618
     F45E                                                       3,585
     F322                           610                         2,923
     F343                            56                         3,185                           284
     F319                           148                         3,366
     OTHER                        6,489                       171,450                         6,144
                                ========                    ========                      ========
     TOTALS                      12,047                       299,992                        12,916
```

```
VTAMID:TSO*                                SUMMARY REPORT                                SYSID:MVSB
17. DURING THE MEASURED PERIOD A TOTAL OF 429,076 OUTBOUND NETWORK MESSAGES WERE PROCESSED.
                        00:00 - 08:00          08:00 - 18:00          18:00 - 24:00
    LD25                                          25,827                    162
    LC00                      4,229               9,817                  6,252
    LW19                      5,392               5,259                  2,889
    F428                                          12,216                    147
    F335                         44               8,898                  2,916
    F415                                          10,139
    F401                        124               6,885
    F330                        362               6,356
    F313                        502               6,014
    F333                        372               5,528
    F309                        348               5,496
    F449                                          5,528
    F340                         99               5,230
    F322                        762               4,439
    F342                        304               4,810
    F359                                          5,002
    F42F                                          4,838
    F351                        112               4,456
    F409                         59               4,452
    F10C                                          4,407
    F346                        145               4,225
    F021                                          3,971                    335
    F325                        352               3,923
    F319                        261               3,951
    F320                        199               3,376                    582
    OTHER                     8,335             221,277                  7,472
                            ========          ========                 ========
    TOTALS                   22,001             386,320                 20,755
```

Network Response Performance Report

This report shows, by shift, for a single day or a range of days, how the NETWORK transactions flowed through the system for a specified VTAM APPLID. Each of the 25 most most active terminals is listed individually, by shift, with an indication of what percentage of the response times fell within certain predefined ranges. Terminals that are not among the 25 most active are grouped together and reported under "OTHER". A Totals line is accumulated and written to indicate how all transactions performed as a group. The APPLID is specified through the VTAMNAME parameter.

This is a key report in measuring how well your performance goals are being met within the CPU by the transaction processing application programs and the telecommunications facilities.

The time period column headings at the top of the report are specified through the use of the &sidNETR member of the `&PREFIX.CPPR.Vnnn.PARMLIB`. Please refer to the *CIMS Capacity Planner Installation Guide* for additional information on setting up the Network Parmlib parameters.

Following is a sample of the Network Response Performance Report:

CIMS LAB, INC.
05/21/96-05/27/96
VTAMID: TSO* NETWORK RESPONSE PERFORMANCE SYSID:MVSB
SHIFT SHOWN: 00:00 - 07:00

	<_.5_SEC	.5-1_SEC	1-2_SEC	2-4_SEC	4-6_SEC	>_6_SEC	
LCOP	85.14%	11.32%	2.42%	.36%	.73%		2,719
LWOP	58.82%	35.42%	5.74%				940
LYOP	8.33%	69.16%	22.50%				480
OPSSCV29	100.00%						202
LDO7	41.48%		54.25%	4.25%			94
LDO6		39.50%	41.97%	18.51%			81
OPSSCV23	100.00%						11
SUBTOTALS	69.80%	22.20%	6.91%	.64%	.44%		4,527
TOTALS	69.80%	22.20%	6.91%	.64%	.44%		4,527

CIMS LAB, INC.
05/21/96-05/27/96
VTAMID: TSO* NETWORK RESPONSE PERFORMANCE SYSID:MVSB
SHIFT SHOWN: 19:00 - 24:00

	<_.5_SEC	.5-1_SEC	1-2_SEC	2-4_SEC	4-6_SEC	>_6_SEC	
F3OP	10.18%	87.18%	2.52%	.10%			2,738
LCOP	82.14%	17.85%					2,615
F4OP	97.68%	2.31%					432
LWOP	17.13%	68.53%	14.33%				321
OPSSCV23	100.00%						211
OPSSCV25	100.00%						175
OPSSCV26	100.00%						137
OPSSCV29	100.00%						132
LYOP	92.22%			7.77%			90
F1OP	16.94%	20.33%	62.71%				59
FOOP	36.17%	63.82%					47
F3OO			100.00%				5
TOOP	100.00%						1
SUBTOTALS	52.70%	44.89%	2.25%	.14%			6,963
TOTALS	52.70%	44.89%	2.25%	.14%			6,963

Network Terminal Statistics Report

This report shows, for a specified Network Region (APPLID), which terminals were among the top 40 in the following categories:

- Most active time

  The terminal ID, the total active time, and the percent of the measured time period that the terminal was active is listed for the 40 most active terminals. The listing is ordered in descending sequence by the time active. A terminal is considered to be active within each 15 minute period throughout the day only if it transmits a transaction. Terminals that are signed-on, but not actively submitting transactions are not considered to be active.

- Most transaction activity

  The terminal ID, the transaction count, and the percentage of all transaction activity is listed for the 40 terminals exhibiting the highest transaction traffic. The listing is ordered in descending sequence by the amount of activity.

- Most outbound message activity

  The terminal ID, the transaction count, and the percentage of all transaction activity is listed for the 40 terminals receiving the most outbound message traffic. The listing is ordered in descending sequence by the number of outbound messages.

- Average host response time

  The terminal ID and the average host CPU response time for each of 40 terminals experiencing the highest host response times are listed. The terminals are listed in descending order by host response time.

- Average network response time

  The terminal ID and the average network response time for each of 40 terminals experiencing the highest network response times are listed. The terminals are listed in descending order by network response time.

- Average total response time

  The terminal ID and the average total response time (network + host) for each of 40 terminals experiencing the highest total response times are listed. The terminals are listed in descending order by total response time.

- Average inbound message length

  The terminal ID and the average inbound message length are listed for the 40 terminals with the largest average inbound message length. The terminals are listed in descending order by average inbound message length.

- Average outbound message length

  The terminal ID and the average outbound message length are listed for the 40 terminals with the largest average outbound message length. The terminals are listed in descending order by average outbound message length.

- Total message traffic

  The terminal ID and the total number of Kbytes transmitted and received are listed for the 40 terminals with the most traffic. The terminals are listed in descending order by the number of Kbytes transmitted and received.

The APPLID is specified through the VTAMNAME parameter.

Following is a sample of the Network Terminal Statistics Report:

```
VTAMID: TSO*                              TERMINAL STATISTICS REPORT                              SYSID:MVSB
                                                CIMS LAB, INC.
                                              05/21/96-05/27/96
  TOTAL ACTIVE TIME       LC00      LW19      LD25      LD04      LD06      LD07      F335      F322      F000      F330
                       102:30:00 47:45:00  35:30:00  32:30:00  31:00:00  30:45:00  24:00:00  21:30:00  18:30:00  18:15:00
                          91.11%    42.44%    31.55%    28.88%    27.55%    27.33%    21.33%    19.11%    16.44%    16.22%

                            F415      F309      F325      F40F      F319      F313      F340      F428      F42F      F346
                       18:00:00  17:45:00  17:30:00  17:15:00  17:00:00  16:15:00  16:00:00  16:00:00  15:15:00  14:45:00
                          16.00%    15.77%    15.55%    15.33%    15.11%    14.44%    14.22%    14.22%    13.55%    13.11%

                            F320      F401      F358      F317      F333      F336      F00E      F315      F41D      F351
                       14:30:00  14:30:00  13:30:00  13:15:00  13:15:00  13:15:00  13:00:00  13:00:00  12:15:00  11:45:00
                          12.88%    12.88%    12.00%    11.77%    11.77%    11.77%    11.55%    11.55%    10.88%    10.44%

                            F343      F324      F342      F003      F310      F443      F123      F328      F409      F446
                       11:30:00  11:15:00  10:45:00  10:30:00  10:30:00  10:30:00  10:15:00  10:15:00  10:15:00  10:15:00
                          10.22%    10.00%     9.55%     9.33%     9.33%     9.33%     9.11%     9.11%     9.11%     9.11%

  TRANSACTIONS            LC00      F428      F335      LD25      F415      F401      F330      F449      F333      F309
                          12,537    11,422    11,179    11,017    8,393     6,489     5,598     5,032     4,875     4,827
                          3.85%     3.51%     3.44%     3.39%     2.58%     1.99%     1.72%     1.54%     1.50%     1.48%

                            F340      F313      F359      F10C      F351      F409      F42F      F021      F346      F325
                          4,735     4,576     4,531     4,286     4,246     4,072     3,922     3,898     3,832     3,630
                          1.45%     1.40%     1.39%     1.31%     1.30%     1.25%     1.20%     1.19%     1.17%     1.11%

                            F40F      F45E      F322      F343      F319      F320      F443      LD07      F446      F450
                          3,618     3,585     3,533     3,525     3,514     3,480     3,169     3,097     3,064     2,966
                          1.11%     1.10%     1.08%     1.08%     1.08%     1.07%     .97%      .95%      .94%      .91%

                            LW19      F353      F123      F342      F02B      LD04      F00E      F115      F315      F336
                          2,958     2,911     2,891     2,765     2,716     2,669     2,570     2,533     2,522     2,488
                          .91%      .89%      .88%      .85%      .83%      .82%      .79%      .77%      .77%      .76%

  OUTBOUND MESSAGES       LD25      LC00      LW19      F428      F335      F415      F401      F330      F313      F333
                          25,989    20,298    13,540    12,363    11,858    10,139    7,009     6,718     6,516     5,900
                          7.99%     6.24%     4.16%     3.80%     3.64%     3.12%     2.15%     2.06%     2.00%     1.81%

                            F309      F449      F340      F322      F342      F359      F42F      F351      F409      F10C
                          5,844     5,528     5,329     5,201     5,114     5,002     4,838     4,568     4,511     4,407
                          1.79%     1.70%     1.63%     1.60%     1.57%     1.53%     1.48%     1.40%     1.38%     1.35%

                            F346      F021      F325      F319      F320      F353      F40F      F45E      F443      F343
                          4,370     4,306     4,275     4,212     4,157     4,127     4,081     4,011     3,893     3,803
                          1.34%     1.32%     1.31%     1.29%     1.27%     1.27%     1.25%     1.23%     1.19%     1.17%

                            F315      LD07      F450      F123      F446      F413      F02B      F304      F336      LD04
                          3,762     3,632     3,472     3,385     3,364     3,287     3,240     3,221     3,148     3,098
                          1.15%     1.11%     1.06%     1.04%     1.03%     1.01%     .99%      .99%      .96%      .95%
```

VTAMID: TSO* TERMINAL STATISTICS REPORT SYSID:MVSB
CIMS LAB, INC.
05/21/96-05/27/96

AVG HOST RESPONSE	F130	F011	F006	LD06	F336	LD04	F319	F12A	LD07	F017
	2.71	2.31	2.21	1.44	1.41	1.20	1.17	1.12	1.06	.96
	F01B	F120	F11B	F11F	F000	F308	F116	F323	F003	F452
	.93	.90	.89	.86	.83	.80	.79	.78	.74	.72
	F45B	F113	F45C	F01C	F322	F457	F342	F010	F460	F321
	.68	.68	.66	.65	.64	.64	.62	.62	.61	.61
	F423	F023	LC00	LW19	F016	F42E	F463	F344	F343	F346
	.60	.59	.58	.56	.54	.54	.53	.52	.51	.51
AVG NETW RESPONSE	F023	F328	F335	F006	F305	LD25	F122	F11B	F336	F308
	.42	.34	.32	.32	.32	.31	.25	.24	.24	.24
	F12D	F322	F113	F000	F301	F321	F319	F338	F342	F300
	.23	.23	.23	.21	.20	.20	.20	.20	.20	.18
	F344	F130	F12F	F330	F306	F331	F358	LW19	F309	F343
	.18	.16	.15	.15	.15	.15	.15	.15	.14	.13
	F017	F01B	F307	F346	F419	F00E	F011	F12A	F313	F320
	.12	.12	.12	.12	.12	.12	.12	.12	.12	.12
AVG TOTAL RESPONSE	F130	F006	F011	F336	LD06	F319	F12A	LD04	F11B	F017
	2.88	2.54	2.43	1.66	1.47	1.38	1.24	1.23	1.14	1.09
	LD07	F01B	F000	F308	F023	F120	F11F	F113	F322	F116
	1.08	1.06	1.05	1.04	1.02	.95	.93	.91	.88	.86
	F323	F003	F342	F321	F452	LD25	F45B	F45C	F460	F01C
	.86	.84	.83	.82	.78	.74	.73	.73	.73	.73
	LW19	F344	F423	F457	F010	F343	F346	F42E	LC00	F122
	.72	.70	.70	.69	.68	.65	.63	.63	.62	.61

VTAMID: TSO* TERMINAL STATISTICS REPORT SYSID:MVSB
CIMS LAB, INC.
05/21/96-05/27/96

AVG INB MSG LENGTH	F414	F44D	F301	F305	F018	F42E	F45E	F300	F03A	F308
	1,450.39	1,244.85	839.24	489.05	219.32	215.27	208.16	55.69	41.17	31.84
	F449	F419	F130	F124	LD06	F458	F338	F460	F01B	F336
	29.56	26.65	26.62	26.53	24.56	23.65	22.12	20.46	20.22	19.72
	F335	F11B	F122	LD04	F340	LD25	LD07	F11A	F000	F322
	19.59	19.22	17.75	17.51	16.57	16.41	16.35	15.30	14.50	14.49
	F428	LW19	F319	F12D	F023	F11D	F401	F017	OPSSCV23	F442
	14.37	14.28	14.04	13.67	13.50	13.41	13.26	13.11	12.74	12.60
AVG OUTB MSG LEN	F335	F328	F431	LW19	F419	LC00	F305	F124	F322	LD07
	2,021.42	1,546.47	1,308.77	998.60	923.90	841.88	825.37	805.36	786.98	770.75
	F319	LD04	LD06	F336	F306	F000	F137	F428	F401	F42E
	769.00	689.61	670.22	666.78	630.42	608.00	597.90	592.97	576.66	573.95
	LD25	F321	F359	F45D	F432	F460	F003	F11A	F310	F343
	538.80	505.46	478.49	456.81	451.89	447.01	445.45	442.03	437.56	433.33
	F423	F346	F300	F325	F344	F308	F123	F358	F304	F340
	424.86	424.54	417.76	409.33	409.31	402.81	400.29	398.10	394.92	392.57
TOTAL TRAFFIC (KB)	F335	LC00	F428	LD25	LW19	F431	F10C	F359	F414	F401
	39,390	17,267	15,585	14,954	14,910	8,361	7,956	7,278	6,932	6,513
	9.87%	4.32%	3.90%	3.74%	3.73%	2.09%	1.99%	1.82%	1.73%	1.63%
	F45E	F415	F44D	F313	F449	F115	F333	F322	F124	F309
	6,396	5,715	5,170	5,004	4,869	4,693	4,400	4,233	4,217	3,929
	1.60%	1.43%	1.29%	1.25%	1.22%	1.17%	1.10%	1.06%	1.05%	.98%
	F42F	LD07	F340	F330	F021	F304	F409	F45D	F315	F119
	3,666	3,540	3,537	3,474	3,454	3,454	3,337	3,335	3,280	3,094
	.91%	.88%	.88%	.87%	.86%	.86%	.83%	.83%	.82%	.77%
	F343	F40F	F325	F42E	F002	F346	F319	F443	F320	F328
	3,052	3,021	3,012	2,979	2,936	2,932	2,917	2,870	2,828	2,790
	.76%	.75%	.75%	.74%	.73%	.73%	.73%	.71%	.70%	.69%

Network Exception Analysis

The Network Exception Analysis Report shows, for each fifteen minute period, for a specified VTAM APPLID, all terminals whose response times exceeded the pre-defined thresholds specified in the CIMS Capacity Planner Parmlib member &sidXCPT. The Parmlib member &sidXCPT contains a number of threshold values for the installation. This member is used to identify the performance thresholds for the various components of the overall environment.

The APPLID is specified through the VTAMNAME parameter.

Following is a sample of the Network Exception Analysis report:

```
VTAMID: WSUP*                                NETWORK EXCEPTION ANALYSIS                                SYSID:PROD
                                                    CIMS LAB, INC.
                                                  04/30/95-05/01/95
05/01 09.15 - 09.30 : TERM   TWO0113A (39.27)
05/01 09.30 - 09.45 : TERM   TWO0113A (39.27)
05/01 09.45 - 10.00 : TERM   TWGO2236 (8.15)
05/01 10.00 - 10.15 : TERM   TWGO2236 (8.15)
05/01 10.15 - 10.30 : TERM   KAWC0454 (10.63)  TWSF530  (9.90)
05/01 10.30 - 10.45 : TERM   KAWC0454 (10.63)  TWSF530  (9.90)
05/01 10.45 - 11.00 : TERM   TWO0116A (13.75)  TWO4175A (17.55)
05/01 11.00 - 11.15 : TERM   TWO0116A (13.75)  TWO4175A (17.55)
05/01 11.15 - 11.30 : TERM   TWGO0514 (10.69)
05/01 11.30 - 11.45 : TERM   TWGO0514 (10.69)
05/01 14.15 - 14.30 : TERM   TWSF508  (11.40)
05/01 14.30 - 14.45 : TERM   TWSF508  (11.40)
05/01 14.45 - 15.00 : TERM   CTWC0114 (95.18)
05/01 15.00 - 15.15 : TERM   CTWC0114 (95.18)
05/01 15.15 - 15.30 : TERM   TWGO050C (19.06)
05/01 15.30 - 15.45 : TERM   TWGO050C (19.06)
05/01 15.45 - 16.00 : TERM   SUWC0105 (45.92)  TWS7201  (9.47)   TWO4020A (35.85)  TW26102A (12.44)
05/01 16.00 - 16.15 : TERM   SUWC0105 (45.92)  TWS7201  (9.47)   TWO4020A (35.85)  TW26102A (12.44)
05/01 17.15 - 17.30 : TERM   VIWC0445 (25.40)
05/01 17.30 - 17.45 : TERM   VIWC0445 (25.40)

   TERM=AVERAGE RESPONSE TIME FOR A GIVEN TERMINAL
```

Network Physical Exception Analysis

The Network Physical Exception Analysis Report shows, for each fifteen minute period, each line that exceeds a specified percentage of its capacity and each NCP that exceeds a pre-defined percentage busy limit. The pre-defined thresholds are specified in the CIMS Capacity Planner Parmlib member &sidXCPT.

Selected lines can be excluded from the report through the use of the EXCLUDE facility. If only certain specified lines are to be considered, they are specified by the INCLUDE facility, in which case only the lines specified through the INCLUDE data set are included in the report.

Following is a sample of the Network Physical Exception Analysis Report:

```
                                    NETWORK PHYSICAL EXCEPTION ANALYSIS                                SYSID:MVS6
                                                CIMS LAB, INC.
                                              02/04/91-02/06/91
02/04 14.45 - 15.00 : % CAP  L160418 (56.67) L510215 (55.18)
02/04 15.00 - 15.15 : % CAP  L160248 (63.32) L160418 (52.41) L510218 (54.61) L510219 (54.69)
02/04 15.15 - 15.30 : % CAP  L160248 (63.32) L160418 (52.41) L510218 (54.61) L510219 (54.69)
02/04 16.00 - 16.15 : % CAP  L160418 (46.33) L160480 (46.35)
02/04 16.15 - 16.30 : % CAP  L160418 (46.33) L160480 (46.35)
02/04 16.30 - 16.45 : % CAP  L160418 (52.29) L160480 (48.78)
02/04 16.45 - 17.00 : % CAP  L160418 (52.29) L160480 (48.78)
02/04 18.00 - 18.15 : % CAP  L160228 (83.14) L160248 (82.35)
02/04 18.15 - 18.30 : % CAP  L160228 (83.14) L160248 (82.35)
02/05 21.45 - 22.00 : % CAP  L1602A1 (79.47) L16040C (46.25)
02/05 22.00 - 22.15 : % CAP  L150448 (45.79) L1602A1 (55.69) L160480 (53.08)
02/05 22.15 - 22.30 : % CAP  L150448 (45.79) L1602A1 (55.69) L160480 (53.08)
02/05 22.30 - 22.45 : % CAP  L1602A1 (47.93)
02/05 22.45 - 23.00 : % CAP  L1602A1 (47.93)
02/06 00.30 - 00.45 : % CAP  L150448 (69.85)
02/06 00.45 - 01.00 : % CAP  L150448 (69.85)
02/06 02.00 - 02.15 : % CAP  L150448 (49.97)
02/06 02.15 - 02.30 : % CAP  L150448 (49.97)
02/06 05.00 - 05.15 : % CAP  L150448 (46.73) L160414 (62.99)
02/06 05.15 - 05.30 : % CAP  L150448 (46.73) L160414 (62.99)
02/06 05.30 - 05.45 : % CAP  L150448 (46.78)
02/06 05.45 - 06.00 : % CAP  L150448 (46.78)
02/06 06.00 - 06.15 : % CAP  L160228 (51.79)
02/06 06.15 - 06.30 : % CAP  L160228 (51.79)
02/06 06.30 - 06.45 : % CAP  L510216 (57.88)
02/06 06.45 - 07.00 : % CAP  L510216 (57.88)
02/06 07.30 - 07.45 : % CAP  L16022C (52.82) L510216 (50.94)
02/06 07.45 - 08.00 : % CAP  L16022C (52.82) L510216 (50.94)
02/06 08.00 - 08.15 : % CAP  L160223 (61.54) L160228 (82.37) L160414 (46.77)
02/06 08.15 - 08.30 : % CAP  L160223 (61.54) L160228 (82.37) L160414 (46.77)
02/06 08.30 - 08.45 : % CAP  L16024E (70.70) L160400 (54.95)
02/06 08.45 - 09.00 : % CAP  L16024E (70.70) L160400 (54.95)
02/06 09.00 - 09.15 : % CAP  L160400 (64.84)
                      NCP %  RO16G02 (36.14)
02/06 09.15 - 09.30 : % CAP  L160400 (64.84)
                      NCP %  RO16G02 (36.14)
02/06 09.30 - 09.45 : % CAP  L160241 (84.34) L160248 (67.88) L160400 (59.81)
02/06 09.45 - 10.00 : % CAP  L160241 (84.34) L160248 (67.88) L160400 (59.81)
02/06 10.00 - 10.15 : % CAP  L160241 (48.53) L160400 (59.05)
02/06 10.15 - 10.30 : % CAP  L160241 (48.53) L160400 (59.05)
02/06 10.30 - 10.45 : % CAP  L160241 (65.96) L160400 (58.29) L160414 (59.57)
02/06 10.45 - 11.00 : % CAP  L160241 (65.96) L160400 (58.29) L160414 (59.57)
02/06 11.00 - 11.15 : % CAP  L16024E (82.56) L160400 (50.36) L160414 (63.72)
02/06 11.15 - 11.30 : % CAP  L16024E (82.56) L160400 (50.36) L160414 (63.72)
02/06 11.30 - 11.45 : % CAP  L1602A8 (48.65) L160400 (47.48) L160414 (61.79)
02/06 11.45 - 12.00 : % CAP  L1602A8 (48.65) L160400 (47.48) L160414 (61.79)
02/06 12.00 - 12.15 : % CAP  L160400 (45.09) L510218 (84.18) L510219 (62.18)
02/06 12.15 - 12.30 : % CAP  L160400 (45.09) L510218 (84.18) L510219 (62.18)
02/06 12.30 - 12.45 : % CAP  L16022C (48.16) L160223 (65.75) L160400 (49.47) L160414 (64.57)
   % CAP=PERCENT OF CAPACITY FOR A GIVEN LINE
   NCP %=PERCENTAGE BUSY FOR A GIVEN NCP
```

Network Ad Hoc Report

The CIMS Capacity Planner Network Subsystem supports the production of an Ad Hoc report from the original data before portions of the detail data are summarized or discarded. The Ad Hoc report is produced by the Data Reduction program - SSA1NETW.

To specify that the report is to be produced, you merely specify the report parameters in the Data Reduction Job stream as part of the SYSIN data set. The parameters that apply to the Ad Hoc report are:

VTAM TERMINAL NAME=

The Network Ad Hoc report contains the following information for each record selected for inclusion in the report.

- The VTAM APPLID
- The begin time for the period for which the record was produced.
- The begin date for the period for which the record was produced.
- The end time for the period for which the record was produced.
- The VTAM terminal ID
- The response time (RTM records)
- The inbound message count
- The outbound message count
- The inbound byte count
- The outbound byte count

In addition to selecting records for inclusion into the Ad Hoc report by specific terminal names, groups of terminals are selected through the use of the wildcard character "*".

For example, all terminals beginning with "L422" are selected by specifying VTAM TERMINAL NAME=L422*. This convention can be extended to include all terminals by specifying VTAM TERMINAL NAME=*.

The selection of records for inclusion into the Ad Hoc report can be further restricted by specifying date and/or time ranges by using the BEGIN DATE=, END DATE=, BEGIN TIME=, and END TIME= parameters.

The Ad Hoc report can be limited to a single APPLID if the SYSIN data set for the data reduction program contains a VTAMNAME parameter.

Following is a sample of the Network Ad Hoc report:

VTAMNAME	TIME ON	DATE	TIME OFF	TERM-ID	RESPONSE TIME	INBOUND COUNT	OUTBOUND COUNT	INBOUND BYTES	OUTBOUND BYTES
WSUP*	13:00:10	04/30/95	13:00:10	PGWC0139	.40	1	2	3	13
WSUP*	14:00:00	04/30/95	14:00:00	PGWC0139	.00		2		78
WSUP*	14:00:00	04/30/95	14:00:00	PGWC0143	7.20	12	21	151	10,289
WSUP*	14:30:00	04/30/95	14:30:00	PGWC0111	68.40	38	52	556	32,925
WSUP*	15:00:00	04/30/95	15:00:00	PGWC0111	33.60	24	25	355	18,522
WSUP*	16:00:01	04/30/95	16:00:01	PGWC0117	79.80	57	67	760	48,905
WSUP*	16:30:01	04/30/95	16:30:01	PGWC0117	14.70	7	8	88	4,515
WSUP*	17:00:01	04/30/95	17:00:01	PGWC0117	5.00	5	7	27	2,154
WSUP*	07:15:05	05/01/95	07:15:05	PGWC0109	11.70	13	22	439	10,723
WSUP*	07:15:05	05/01/95	07:15:05	PGWC0138	49.50	55	67	636	35,556
WSUP*	07:15:05	05/01/95	07:15:05	PGWC0143	5.60	8	18	145	8,134
WSUP*	07:45:06	05/01/95	07:45:06	PGWC0102	66.30	39	55	379	21,802
WSUP*	07:45:06	05/01/95	07:45:06	PGWC0109	9.00	9	9	487	5,233
WSUP*	07:45:06	05/01/95	07:45:06	PGWC0117	16.50	15	26	322	13,493
WSUP*	07:45:06	05/01/95	07:45:06	PGWC0118	41.60	32	41	1,193	23,876
WSUP*	07:45:06	05/01/95	07:45:06	PGWC0119	41.00	41	50	1,025	29,955
WSUP*	07:45:06	05/01/95	07:45:06	PGWC0137	32.00	40	51	472	26,922
WSUP*	07:45:06	05/01/95	07:45:06	PGWC0143	64.40	92	101	817	54,359
WSUP*	07:45:06	05/01/95	07:45:06	PGWC0148	8.10	9	19	174	9,906
WM*	07:45:06	05/01/95	07:45:06	PGWC0208	.00		10		5,359
WSUP*	08:15:07	05/01/95	08:15:07	PGWC0102	42.30	47	47	919	30,889
WSUP*	08:15:07	05/01/95	08:15:07	PGWC0109	19.80	18	19	226	15,158
WSUP*	08:15:07	05/01/95	08:15:07	PGWC0116	18.20	14	22	279	16,092
WSUP*	08:15:07	05/01/95	08:15:07	PGWC0117	28.80	16	17	203	14,102
WSUP*	08:15:07	05/01/95	08:15:07	PGWC0118	55.20	46	52	1,018	30,388
WSUP*	08:15:07	05/01/95	08:15:07	PGWC0119	8.80	8	9	270	5,439
WSUP*	08:15:07	05/01/95	08:15:07	PGWC0125	15.20	19	29	221	12,973
WSUP*	08:15:07	05/01/95	08:15:07	PGWC0138	1.40	2	3	9	611
WSUP*	08:15:07	05/01/95	08:15:07	PGWC0143	50.00	50	58	423	44,523
WSUP*	08:15:07	05/01/95	08:15:07	PGWC0148	30.60	34	43	352	22,230
WM*	08:15:07	05/01/95	08:15:07	PGWC0208	.00		6		1,879
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0102	61.10	47	47	1,079	24,721
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0105	39.00	30	45	382	22,075
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0106	145.20	121	134	1,581	92,452
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0109	3.20	4	8	12	118
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0112	52.90	23	33	361	21,856
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0116	189.00	70	79	1,302	53,878
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0117	51.00	30	33	430	22,804
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0118	55.20	23	25	343	19,817
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0122	48.00	48	63	693	32,877
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0123	2.40	1	5	170	1,708
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0125	37.20	31	32	284	24,853
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0128	31.90	29	40	282	16,748
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0134	45.50	35	45	753	23,219
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0136	25.60	32	46	440	17,054
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0137	1.60	2	3	9	601
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0138	15.40	14	16	178	9,736
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0141	12.60	9	19	226	10,217
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0143	126.00	90	90	628	75,859
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0147	11.70	13	22	196	10,835
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0148	10.80	6	14	144	6,621
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0150	4.80	3	10	200	3,983
WM*	08:45:02	05/01/95	08:45:02	PGWC0151	.00		21		11,262
WSUP*	08:45:02	05/01/95	08:45:02	PGWC0155	53.30	41	53	496	30,732
WM*	08:45:02	05/01/95	08:45:02	PGWC0208	.00		6		1,527
WSUP*	09:15:04	05/01/95	09:15:04	PGWC0102	379.10	223	222	3,051	139,571

Network Physical Line Statistics Report

This report is available if you are running a monitoring facility like, Netview NPM, that gathers information regarding the physical configuration of the network and passes it on to CIMS Capacity Planner through the SSA1NETW program. Data produced by the NETSPY and NET/MASTER physical monitoring facilities are also supported by the CIMS Capacity Planner Network Subsystem.

The Physical Line Statistics Report shows the busiest 40 lines or a specified line or group of lines (selected through the use of the INCLUDE or EXCLUDE DD statements) in terms of:

- Percent utilization

  The average percent of line utilization throughout the prime shift. The lines are listed in descending order by the utilization percentage.

- Baud rate

  The stated baud rate for the top 40 lines are listed.

- Total traffic

  The total number of Kbytes of data transmitted and the corresponding percentage of the total data communications load are listed for the 40 busiest lines. The list is presented in descending order by the number of Kbytes of data transmitted.

- Inbound traffic (KB)

  The total number of Kbytes of inbound data received is listed for the top 40 lines along with the corresponding percentage of the total inbound traffic. The list is produced in descending order by the number of Kbytes received.

- Outbound traffic (KB)

  The total number of Kbytes of outbound data transmitted is listed for the 40 busiest lines along with their corresponding percentages of the total outbound load.

- Retransmissions

  The number of bytes retransmitted for the 40 lines experiencing the most communications errors, along with their corresponding percentage of the retransmissions.

Following is a sample of the Network Physical Line Statistics Report:

PHYSICAL LINE STATISTICS REPORT SYSID:MVSB
CIMS LAB, INC.
05/21/96-05/27/96

% CAPACITY	LINK781A	LINK683A	LINK612B	LINK728B	LINK615B	LINK681A	LINK782A	LINK684A	LINK611B	LINK721B
	38.89	38.79	36.08	27.77	25.77	25.64	25.44	24.39	20.04	19.48
	LINK607B	LINK784A	LINK621B	LINK780A	LINK785A	LINK783A	LINK617B	LINK682A	LINK701B	LINK708B
	17.51	15.44	15.09	15.09	14.57	13.87	13.15	12.76	11.74	11.25
	LINK702B	LINK703B	LINK704B	LINK715B	LINK680A	LINK714B	LINK620B	LINK622B	LINK624B	LINK606B
	11.25	10.66	10.57	10.09	9.22	8.69	8.44	8.08	7.14	7.13
	LINK707B	LINK610B	LINK602B	LINK718B	LINK618B	LINK717B	LINK700B	LINK603B	LINK676C	LINK722B
	7.11	6.80	6.78	6.52	6.50	6.39	6.33	6.14	5.18	4.74
BAUD RATE (KB)	LINK794C	LINK776C	LINK772C	LINK768C	LINK764C	LINK760C	LINK756C	LINK752C	LINK748C	LINK744C
	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00
	LINK676C	LINK672C	LINK668C	LINK664C	LINK660C	LINK656C	LINK652C	LINK648C	LINK644C	LINK743B
	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00	9.60
	LINK742B	LINK741B	LINK740B	LINK739B	LINK738B	LINK737B	LINK736B	LINK735B	LINK734B	LINK733B
	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60
	LINK732B	LINK731B	LINK730B	LINK729B	LINK728B	LINK727B	LINK726B	LINK725B	LINK724B	LINK723B
	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60
TOTAL TRAFFIC (KB)	VZ13L750	VZ13L650	VZ13L760	LINK612B	VZ13L710	LINK676C	LINK615B	VZ13L660	LINK744C	LINK672C
	1,239K	516,471	366,277	114,533	111,594	76,965	73,567	73,262	62,514	59,591
	33.39%	13.91%	9.87%	3.08%	3.00%	2.07%	1.98%	1.97%	1.68%	1.60%
	LINK611B	LINK656C	LINK607B	LINK683A	LINK781A	LINK621B	LINK748C	LINK684A	LINK752C	LINK702B
	58,922	52,736	51,966	50,089	48,375	45,984	42,474	33,543	32,857	32,789
	1.58%	1.42%	1.40%	1.35%	1.30%	1.23%	1.14%	.90%	.88%	.88%
	LINK708B	LINK703B	LINK701B	LINK704B	LINK715B	LINK681A	LINK782A	LINK622B	LINK714B	LINK620B
	32,228	31,331	29,960	29,636	28,588	27,483	26,877	22,104	21,406	21,204
	.86%	.84%	.80%	.79%	.77%	.74%	.72%	.59%	.57%	.57%
	LINK780A	LINK652C	LINK784A	LINK785A	LINK756C	LINK700B	VZ13L610	LINK783A	LINK606B	LINK648C
	20,473	20,417	19,694	19,357	19,224	19,138	17,316	16,541	16,436	15,723
	.55%	.55%	.53%	.52%	.51%	.51%	.46%	.44%	.44%	.42%

```
                                  PHYSICAL LINE STATISTICS REPORT                                SYSID:MVSB
                                           CIMS LAB, INC.
                                          05/21/96-05/27/96
INBND TRAFFIC (KB)  VZ13L750  VZ13L650  VZ13L760  LINK676C  LINK744C  LINK672C  LINK615B  LINK656C  LINK611B  LINK621B
                    170,061   135,053    83,857    63,278    50,548    47,601    47,076    40,746    39,988    35,119
                     13.05%    10.37%     6.43%     4.85%     3.88%     3.65%     3.61%     3.12%     3.07%     2.69%

                   LINK607B  VZ13L710  LINK748C  LINK612B  LINK683A  LINK781A  LINK752C  LINK702B  LINK708B  LINK703B
                     33,061    32,939    31,943    30,712    26,363    25,500    23,072    22,990    22,659    21,533
                      2.53%     2.52%     2.45%     2.35%     2.02%     1.95%     1.77%     1.76%     1.73%     1.65%

                   LINK701B  LINK704B  LINK715B  LINK684A  LINK681A  VZ13L660  LINK782A  LINK714B  LINK622B  LINK620B
                     21,333    20,066    18,823    18,625    14,762    14,473    13,642    13,412    13,322    13,077
                      1.63%     1.54%     1.44%     1.43%     1.13%     1.11%     1.04%     1.02%     1.02%     1.00%

                   LINK652C  LINK780A  LINK784A  LINK785A  LINK756C  LINK680A  LINK700B  LINK606B  LINK783A  LINK648C
                     12,266    11,925    11,548    11,036    10,220     9,929     9,699     9,149     9,035     8,382
                       .94%      .91%      .88%      .84%      .78%      .76%      .74%      .70%      .69%      .64%

OUTBND TRAFFIC (KB) VZ13L750  VZ13L650  VZ13L760  LINK612B  VZ13L710  VZ13L660  LINK615B  LINK683A  LINK781A  LINK611B
                    1,069K    381,423   282,430    83,813    78,627    58,790    26,532    23,777    22,933    18,976
                     44.38%    15.83%    11.72%     3.47%     3.26%     2.44%     1.10%      .98%      .95%      .78%

                   LINK607B  VZ13L610  LINK684A  LINK676C  LINK782A  LINK681A  LINK656C  LINK672C  LINK744C  LINK621B
                     18,923    15,115    14,908    13,696    13,295    12,729    12,009    12,004    11,980    10,876
                       .78%      .62%      .61%      .56%      .55%      .52%      .49%      .49%      .49%      .45%

                   LINK748C  LINK702B  LINK703B  LINK752C  LINK715B  LINK704B  LINK708B  LINK700B  LINK756C  LINK622B
                     10,537     9,817     9,809     9,804     9,788     9,588     9,585     9,453     9,042     8,800
                       .43%      .40%      .40%      .40%      .40%      .39%      .39%      .39%      .37%      .36%

                   LINK701B  LINK780A  LINK785A  LINK652C  LINK620B  LINK784A  LINK714B  LINK783A  LINK648C  LINK606B
                      8,646     8,573     8,337     8,174     8,117     8,020     8,016     7,537     7,366     7,304
                       .35%      .35%      .34%      .33%      .33%      .33%      .33%      .31%      .30%      .30%

RETRANSMISSIONS     LINK784A  LINK611B  LINK607B  LINK703B  LINK700B  LINK621B  LINK606B  LINK704B
                    132,068     2,421     2,037     1,617     1,076       941       145        24
                     94.11%     1.72%     1.45%     1.15%      .76%      .67%      .10%      .01%
```

Network Physical Line Activity Report

The Physical Line Activity Report summarizes several key elements of information related to the communications workload. It summarizes the following information related to each line in the communications configuration:

- Line ID
- Average percent busy

  The average percent busy is calculated for each line by summing the total percent busy figures for each 15 minute period throughout the day and dividing by 96 to get the average.

- High watermark percent busy

  The high watermark is highest percent busy figure for a 15 minute period during the measured period.

- Percent of traffic

  The percent of the total communications traffic is reported for each communication line in the configuration.

- Line speed

  The baud rate is reported for each line in the communications configuration.

- Inbound traffic volume

  The number bytes of input traffic during the measured period is reported in Kbytes.

- Outbound traffic volume

  The number bytes of outbound traffic during the measured period is reported in Kbytes.

- Retransmissions

  The amount of data retransmitted during the measured period in Kbytes.

- Active time (Hours)

  The amount of time that each line is active is reported in hours and hundredths (HH.hh).

Following is a sample of the Network Physical Line Activity Report:

PHYSICAL LINE ACTIVITY REPORT SYSID:MVSB
CIMS LAB, INC.
05/21/96-05/27/96

LINE	AVG % BUSY	HWM % BUSY	% OF TRAFFIC	BAUD RATE	K-BYTES IN	K-BYTES OUT	K-BYTES RETR	HRS. ACTIVE
LINK602B	6.94%	22.95%	.18%	9,600	1,613	1,364		12.40
LINK603B	6.14%	7.02%	.08%	9,600	651	643		6.10
LINK606B	7.12%	14.83%	.20%	9,600	1,828	1,459		13.35
LINK607B	17.53%	35.80%	.65%	9,600	6,611	3,783		17.15
LINK610B	6.81%	20.53%	.16%	9,600	1,438	1,222		11.30
LINK611B	20.06%	49.64%	.73%	9,600	7,996	3,794		17.00
LINK612B	37.01%	92.60%	1.43%	9,600	6,141	16,761		17.90
LINK615B	25.72%	46.22%	.92%	9,600	9,413	5,305		16.55
LINK617B	32.03%	37.27%	.01%	9,600	2	162		.15
LINK618B	6.53%	12.07%	.16%	9,600	1,404	1,305		12.00
LINK620B	8.41%	19.81%	.26%	9,600	2,613	1,621		14.55
LINK621B	14.94%	58.17%	.57%	9,600	7,022	2,174		17.80
LINK622B	8.09%	19.53%	.27%	9,600	2,663	1,758		15.80
LINK624B	7.73%	11.32%	.00%	9,600	73	5		.30
LINK648C	1.35%	2.88%	.19%	48,000	1,675	1,472		13.45
LINK652C	1.60%	6.78%	.25%	48,000	2,452	1,633		14.70
LINK656C	3.28%	13.13%	.66%	48,000	8,148	2,400		18.55
LINK672C	3.79%	12.43%	.74%	48,000	9,519	2,399		18.15
LINK676C	5.15%	24.01%	.96%	48,000	12,654	2,738		17.25
LINK680A	9.18%	67.52%	.15%	4,800	1,984	565		16.05
LINK681A	25.64%	43.10%	.34%	4,800	2,951	2,544		12.40
LINK682A	12.79%	31.95%	.16%	4,800	1,317	1,269		11.70
LINK683A	38.80%	54.64%	.62%	4,800	5,271	4,754		14.95
LINK684A	24.39%	38.75%	.42%	4,800	3,723	2,980		15.90
LINK700B	6.34%	21.12%	.23%	9,600	1,939	1,889		17.45
LINK701B	11.63%	42.89%	.37%	9,600	4,265	1,728		14.90
LINK702B	11.32%	42.53%	.41%	9,600	4,596	1,962		16.75
LINK703B	10.66%	30.85%	.39%	9,600	4,305	1,961		17.00
LINK704B	10.45%	27.90%	.37%	9,600	4,011	1,916		16.40
LINK707B	7.21%	16.69%	.02%	9,600	229	167		1.60
LINK708B	11.23%	35.82%	.40%	9,600	4,530	1,916		16.60
LINK714B	8.66%	27.06%	.26%	9,600	2,681	1,601		14.30
LINK715B	10.02%	40.42%	.35%	9,600	3,763	1,956		16.50
LINK717B	6.39%	10.08%	.16%	9,600	1,331	1,288		11.85
LINK718B	6.56%	13.68%	.17%	9,600	1,457	1,346		12.35
LINK721B	17.93%	57.69%	.02%	9,600	226	174		.65
LINK722B	4.55%	9.45%	.00%	9,600	74	17		.60
LINK728B	31.15%	112.06%	.06%	9,600	411	555		.90
LINK744C	4.13%	17.91%	.78%	48,000	10,109	2,395		17.50
LINK748C	3.28%	10.10%	.53%	48,000	6,387	2,106		14.95
LINK752C	2.27%	7.19%	.41%	48,000	4,613	1,959		16.70
LINK756C	1.34%	3.02%	.24%	48,000	2,043	1,806		16.55
LINK780A	15.04%	29.56%	.25%	4,800	2,383	1,713		15.75
LINK781A	38.91%	54.79%	.60%	4,800	5,098	4,585		14.40
LINK782A	25.44%	35.37%	.33%	4,800	2,727	2,658		12.25
LINK783A	13.83%	33.97%	.20%	4,800	1,805	1,506		13.85
LINK784A	15.39%	59.75%	.24%	4,800	2,309	1,602	25	14.80
LINK785A	14.59%	36.93%	.24%	4,800	2,205	1,666		15.35
VZ13L610	.00%	.00%	.21%		438	3,022		14.00
VZ13L650	.00%	.00%	6.47%		27,009	76,283		22.55
VZ13L660	.00%	.00%	.91%		2,892	11,758		12.75

Cluster Controller Statistics Report

The Cluster Controller Statistics Report provides a summary of the communications workload at the cluster terminal controller level for the 40 cluster controllers experiencing the most traffic. The top 40 cluster controllers or groups of controllers (as defined by INCLUDE/EXCLUDE DD statements) are identified as they relate to the following areas:

- Total traffic (Kbytes)

  The 40 cluster controllers with the highest total traffic loads are listed along with the number of Kbytes of data transmitted and received and their relative percentages of the total cluster controller traffic. They are listed in descending sequence by the number of bytes transmitted and received.

- Inbound Traffic (Kbytes)

  The 40 busiest cluster controllers are listed along with their total traffic in Kbytes and their relative percentage of all inbound cluster controller traffic. The listing is produced in descending sequence by the amount of inbound traffic.

- Outbound Traffic (Kbytes)

  The 40 busiest cluster controllers are listed along with their total traffic in Kbytes and their relative percentage of all outbound cluster controller traffic. The listing is produced in descending sequence by the amount of outbound traffic.

- Retransmissions

  The 40 cluster control units requiring the most retransmissions are listed along with their relative percentages of the total retransmissions to all the cluster control units. The listing is ordered in descending sequence by the number of retransmissions required.

Following is a sample of the Cluster Controller Statistics Report:

CLUSTER CONTROLLER STATISTICS REPORT SYSID:MVSB

CIMS LAB, INC.
05/21/96-05/27/96

TOTAL TRAFFIC (KB)	VZ13P750	VZ13P650	VZ13P760	VZ13P710	CH4P	VZ13P660	ZL5P	ZLAP	MO2P	FD5P
	1,239K	516,476	366,277	111,594	76,964	73,260	62,514	59,592	52,735	45,985
	35.33%	14.72%	10.44%	3.18%	2.19%	2.08%	1.78%	1.69%	1.50%	1.31%
	WA7P	HO6P	DE7P	GO1P	DE5P	MR1P	HO3P	WA4P	MR2P	BA1P
	42,475	35,894	33,112	32,856	32,788	32,227	31,331	29,960	29,408	24,937
	1.21%	1.02%	.94%	.93%	.93%	.91%	.89%	.85%	.83%	.71%
	BO1P	CH1P	DE4P	HO5P	WA3P	DE1P	GO7P	GR8P	WW1P	GO4P
	24,288	22,850	22,104	21,481	21,405	20,473	20,417	19,694	19,358	19,224
	.69%	.65%	.63%	.61%	.61%	.58%	.58%	.56%	.55%	.54%
	RO2P	GR1P	VZ13P610	GH8P	MA8P	WA2P	MO8P	CA8P	ME8P	DE8P
	19,217	19,138	17,316	17,074	16,541	16,436	15,722	15,311	15,117	14,149
	.54%	.54%	.49%	.48%	.47%	.46%	.44%	.43%	.43%	.40%

```
                              CLUSTER CONTROLLER STATISTICS REPORT                               SYSID:MVSB
                                           CIMS LAB, INC.
                                          05/21/96-05/27/96
 INBND TRAFFIC (KB)  VZ13P750  VZ13P650  VZ13P760      CH4P      ZL5P      ZLAP      MO2P      FD5P  VZ13P710      WA7P
                      170,083   135,065    83,857    63,277    50,548    47,601    40,746    35,119    32,939    31,943
                       13.90%    11.04%     6.85%     5.17%     4.13%     3.89%     3.33%     2.87%     2.69%     2.61%

                         HO6P      DE7P      GO1P      DE5P      MR1P      MR2P      HO3P      WA4P      BA1P      BO1P
                       26,191    23,312    23,072    22,990    22,659    22,582    21,532    21,333    16,407    15,625
                        2.14%     1.90%     1.88%     1.87%     1.85%     1.84%     1.76%     1.74%     1.34%     1.27%

                     VZ13P660      CH1P      WA3P      DE4P      HO5P      GO7P      DE1P      GR8P      RO2P      WW1P
                       14,472    14,383    13,412    13,322    13,133    12,266    11,926    11,549    11,126    11,036
                        1.18%     1.17%     1.09%     1.08%     1.07%     1.00%      .97%      .94%      .90%      .90%

                         GO4P      GR1P      GH8P      WA2P      MA8P      MO8P      CA8P      ME8P      TO1P      DE8P
                       10,220     9,699     9,540     9,149     9,035     8,381     8,236     8,021     7,866     7,319
                         .83%      .79%      .78%      .74%      .73%      .68%      .67%      .65%      .64%      .59%

 OUTBND TRAFFIC (KB) VZ13P750  VZ13P650  VZ13P760  VZ13P710  VZ13P660  VZ13P610      CH4P      MO2P      ZLAP      ZL5P
                       1,069K   381,410   282,428    78,627    58,792    15,115    13,696    12,009    12,004    11,980
                       46.79%    16.69%    12.36%     3.44%     2.57%      .66%      .59%      .52%      .52%      .52%

                         FD5P      WA7P      DE7P      DE5P      HO3P      GO1P      HO6P      MR1P      GR1P      GO4P
                       10,876    10,537     9,817     9,817     9,810     9,803     9,721     9,586     9,453     9,042
                         .47%      .46%      .42%      .42%      .42%      .42%      .42%      .41%      .41%      .39%

                         DE4P      BO1P      WA4P      DE1P      BA1P      CH1P      HO5P      WW1P      GO7P      RO2P
                        8,799     8,682     8,645     8,573     8,545     8,478     8,356     8,337     8,174     8,117
                         .38%      .38%      .37%      .37%      .37%      .37%      .36%      .36%      .35%      .35%

                         GR8P      WA3P      GH8P      MA8P      MO8P      WA2P      ME8P      CA8P      DE8P      MR2P
                        8,020     8,015     7,558     7,537     7,366     7,304     7,112     7,090     6,849     6,821
                         .35%      .35%      .33%      .32%      .32%      .31%      .31%      .31%      .29%      .29%

 RETRANSMISSIONS           GR8P       DE7P       HO5P       HO3P       GR1P       FD5P       HO6P       WA2P
                        132,068      2,037      1,626      1,617      1,076        941        795        145
                         94.12%      1.45%      1.15%      1.15%       .76%       .67%       .56%       .10%
```

Cluster Controller Activity Report

This report provides a summary of the workload supported by each cluster controller in the communications configuration. Selected cluster controllers are eliminated from the report through the use of the EXCLUDE facility. The report is limited to specific cluster controllers by specifying those controllers to be included in the report using the INCLUDE facility. The report provides the following information for each cluster controller:

- Control Unit ID
- Inbound physical information units (PIUs)

  The number of inbound PIUs received by the host from each cluster control unit.

- Outbound PIUs

  The number of outbound PIUs sent from the host to each cluster control unit.

- Percentage of PIUs

  The percentage of the PIUs that each cluster controller contributed to the sum of the PIUs serviced by all the cluster controllers.

- Active time

  The amount of time that each cluster controller was active during the measured period is reported in hours and hundredths (HH.hh).

- Inbound traffic

  The amount of data transmitted from each cluster controller to the host in Kbytes.

- Outbound traffic

  The amount of data transmitted from the host to each cluster controller in Kbytes.

- Retransmissions

  The amount of data, in Kbytes, that were retransmitted from the host to each cluster controller.

Network Graphs

The Network Subsystem produces a number of graphs on the mainframe that depict the workload and performance of the network as it relates to specified VTAM APPLIDs or the network as a whole. The graphs are produced by day of the week (Monday, Tuesday, etc.). Whenever the measured period (the period included within the BEGIN DATE and the BEGIN TIME through the END DATE and END TIME) exceeds seven days, at least one graph will contain data pertaining to more than one day. For instance, if the measured period begins on a Monday and runs for 10 days, the resultant graphs for Monday, Tuesday, and Wednesday would contain data pertaining to two days activity, while the remaining four graphs would contain data for a single day's activity.

The majority of the Network graphs, designed to depict the communications workload, the percentage of key resources consumed, or the performance of the network share a common format. Each graph is broken into four sections, each section representing a six hour time period broken into 24 periods of 15 minutes each. The time of day is represented by the vertical axis while the quantities to be graphed are represented along the horizontal axis. The magnitude of the values represented along the horizontal axis are represented by a series of dashes (-) and asterisks (*) in bar graph format. The dashes are used to represent the peak daily average values for the quantities being graphed while the asterisks represent the average values. The peak average values differ from the average values only when multiple days data are combined into a single graph (measured period greater than seven days). Whenever no dashes appear, they have been overlaid by asterisks indicating that the peak and average values are either identical or nearly so. The average and peak values of the quantities being graphed are printed in the middle of each line of the bar graph. The scales used to represent the values along the horizontal axis, except for percentages, are determined dynamically based upon the maximum values of the data being graphed.

Network Transaction Response Graph

The Transaction Response Graph shows, for a specified APPLID, by day of the week, the average and peak daily average network transaction response times for each 15-minute period throughout the day. The terminals for which the response times are graphed are controlled through the use of the INCLUDE/EXCLUDE facility. Response time data for selected terminals are eliminated through the use of the EXCLUDE facility while the terminals to be included are specified through the INCLUDE facility. If no INCLUDE or EXCLUDE list is provided, all terminal data related to the specified APPLID are included in calculating the values shown on the graph.

The APPLID is specified using the VTAMNAME SYSIN parameter.

The Network Transaction Response Graph can be produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

Following is a sample of the Network Transaction Response Graph:

```
VTAMID=TSO*                                    DAY SHOWN: MONDAY                                    SYSID:MVSB
                                                 05/21/96-05/27/96
                                  NETWORK TRANSACTION RESPONSE GRAPH: .01 SECONDS

 00.00 - 00.15 |***                  0026:0026          12.00 - 12.15 |******               0051:0051
 00.15 - 00.30 |                     0000:0000          12.15 - 12.30 |*******              0065:0065
 00.30 - 00.45 |                     0000:0000          12.30 - 12.45 |*****                0049:0049
 00.45 - 01.00 |                     0000:0000          12.45 - 13.00 |******               0054:0054
 01.00 - 01.15 |                     0000:0000          13.00 - 13.15 |*****                0048:0048
 01.15 - 01.30 |                     0000:0000          13.15 - 13.30 |******               0053:0053
 01.30 - 01.45 |                     0000:0000          13.30 - 13.45 |******               0059:0059
 01.45 - 02.00 |                     0000:0000          13.45 - 14.00 |******               0058:0058
 02.00 - 02.15 |                     0000:0000          14.00 - 14.15 |*******              0063:0063
 02.15 - 02.30 |                     0000:0000          14.15 - 14.30 |******               0054:0054
 02.30 - 02.45 |                     0000:0000          14.30 - 14.45 |*******              0061:0061
 02.45 - 03.00 |                     0000:0000          14.45 - 15.00 |*******              0067:0067
 03.00 - 03.15 |                     0000:0000          15.00 - 15.15 |*******              0064:0064
 03.15 - 03.30 |                     0000:0000          15.15 - 15.30 |*******              0065:0065
 03.30 - 03.45 |                     0000:0000          15.30 - 15.45 |******               0055:0055
 03.45 - 04.00 |                     0000:0000          15.45 - 16.00 |******               0057:0057
 04.00 - 04.15 |                     0000:0000          16.00 - 16.15 |*******              0068:0068
 04.15 - 04.30 |                     0000:0000          16.15 - 16.30 |*******              0066:0066
 04.30 - 04.45 |                     0000:0000          16.30 - 16.45 |*****                0049:0049
 04.45 - 05.00 |                     0000:0000          16.45 - 17.00 |****                 0035:0035
 05.00 - 05.15 |                     0000:0000          17.00 - 17.15 |*******              0061:0061
 05.15 - 05.30 |                     0000:0000          17.15 - 17.30 |*****                0049:0049
 05.30 - 05.45 |                     0000:0000          17.30 - 17.45 |********             0072:0072
 05.45 - 06.00 |                     0000:0000          17.45 - 18.00 |*****                0050:0050
           +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
           0...50..100..150..200..250..300..350..400..450..500          0...50..100..150..200..250..300..350..400..450..500


 06.00 - 06.15 |                     0000:0000          18.00 - 18.15 |*****                0042:0042
 06.15 - 06.30 |**********************0439:0439**********  18.15 - 18.30 |****                 0034:0034
 06.30 - 06.45 |*******              0068:0068          18.30 - 18.45 |***                  0029:0029
 06.45 - 07.00 |**********           0099:0099          18.45 - 19.00 |****                 0036:0036
 07.00 - 07.15 |***********          0108:0108          19.00 - 19.15 |***                  0027:0027
 07.15 - 07.30 |*********            0082:0082          19.15 - 19.30 |****                 0031:0031
 07.30 - 07.45 |********             0079:0079          19.30 - 19.45 |*****                0045:0045
 07.45 - 08.00 |******               0056:0056          19.45 - 20.00 |*                    0002:0002
 08.00 - 08.15 |******               0060:0060          20.00 - 20.15 |                     0000:0000
 08.15 - 08.30 |*******              0065:0065          20.15 - 20.30 |                     0000:0000
 08.30 - 08.45 |*******              0066:0066          20.30 - 20.45 |                     0000:0000
 08.45 - 09.00 |*******              0068:0068          20.45 - 21.00 |                     0000:0000
 09.00 - 09.15 |********             0075:0075          21.00 - 21.15 |                     0000:0000
 09.15 - 09.30 |********             0075:0075          21.15 - 21.30 |******               0056:0056
 09.30 - 09.45 |*******              0070:0070          21.30 - 21.45 |**                   0017:0017
 09.45 - 10.00 |*******              0068:0068          21.45 - 22.00 |                     0000:0000
 10.00 - 10.15 |******               0054:0054          22.00 - 22.15 |**                   0012:0012
 10.15 - 10.30 |*****                0050:0050          22.15 - 22.30 |**                   0018:0018
 10.30 - 10.45 |******               0051:0051          22.30 - 22.45 |**                   0020:0020
 10.45 - 11.00 |*****                0042:0042          22.45 - 23.00 |*                    0009:0009
 11.00 - 11.15 |*****                0047:0047          23.00 - 23.15 |******               0059:0059
 11.15 - 11.30 |*******              0067:0067          23.15 - 23.30 |**********           0100:0100
 11.30 - 11.45 |********             0074:0074          23.30 - 23.45 |***                  0026:0026
 11.45 - 12.00 |*****                0050:0050          23.45 - 24.00 |                     0000:0000
           +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
           0...50..100..150..200..250..300..350..400..450..500          0...50..100..150..200..250..300..350..400..450..500

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Network Terminal Activity Graph

The Network Terminal Activity Graph shows, by day of the week, for a specified VTAM APPLID, the average and peak daily average number of active terminals for each 15-minute period throughout the day. Terminals must submit at least one transaction within each 15 minute period to be considered active. The VTAM APPLID is specified through the use of the VTAMNAME parameter.

The terminal data included in calculating the graph values is limited through the use of the EXCLUDE facility or fully defined through the INCLUDE facility.

The Network Terminal Activity Graph can be produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

Following is a sample of the Network Terminal Activity Graph:

```
VTAMID=TSO*                                  DAY SHOWN: MONDAY                                  SYSID:MVSB
                                              05/21/96-05/27/96
                                        NETWORK TERMINAL ACTIVITY GRAPH

00.00 - 00.15 |*                    0001:0001    12.00 - 12.15 |*********            0017:0017
00.15 - 00.30 |                     0000:0000    12.15 - 12.30 |***********          0022:0022
00.30 - 00.45 |                     0000:0000    12.30 - 12.45 |************         0023:0023
00.45 - 01.00 |                     0000:0000    12.45 - 13.00 |**********           0020:0020
01.00 - 01.15 |                     0000:0000    13.00 - 13.15 |********             0015:0015
01.15 - 01.30 |                     0000:0000    13.15 - 13.30 |*******              0013:0013
01.30 - 01.45 |                     0000:0000    13.30 - 13.45 |**********           0019:0019
01.45 - 02.00 |                     0000:0000    13.45 - 14.00 |************         0023:0023
02.00 - 02.15 |                     0000:0000    14.00 - 14.15 |***************      0027:0027
02.15 - 02.30 |                     0000:0000    14.15 - 14.30 |**************       0026:0026
02.30 - 02.45 |                     0000:0000    14.30 - 14.45 |************         0024:0024
02.45 - 03.00 |                     0000:0000    14.45 - 15.00 |**************       0026:0026
03.00 - 03.15 |                     0000:0000    15.00 - 15.15 |**************       0026:0026
03.15 - 03.30 |                     0000:0000    15.15 - 15.30 |************         0024:0024
03.30 - 03.45 |                     0000:0000    15.30 - 15.45 |***********          0022:0022
03.45 - 04.00 |                     0000:0000    15.45 - 16.00 |*****************    0031:0031
04.00 - 04.15 |                     0000:0000    16.00 - 16.15 |**************       0025:0025
04.15 - 04.30 |                     0000:0000    16.15 - 16.30 |**************       0025:0025
04.30 - 04.45 |                     0000:0000    16.30 - 16.45 |***********          0022:0022
04.45 - 05.00 |                     0000:0000    16.45 - 17.00 |***********          0021:0021
05.00 - 05.15 |                     0000:0000    17.00 - 17.15 |********             0016:0016
05.15 - 05.30 |                     0000:0000    17.15 - 17.30 |*********            0017:0017
05.30 - 05.45 |                     0000:0000    17.30 - 17.45 |******               0012:0012
05.45 - 06.00 |                     0000:0000    17.45 - 18.00 |*****                0010:0010
              +----+----+----+----+----+----+----+----+----+----+                    +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100                   0...10...20...30...40...50...60...70...80...90..100


06.00 - 06.15 |                     0000:0000    18.00 - 18.15 |**                   0004:0004
06.15 - 06.30 |*                    0001:0001    18.15 - 18.30 |**                   0003:0003
06.30 - 06.45 |*                    0001:0001    18.30 - 18.45 |**                   0004:0004
06.45 - 07.00 |*                    0002:0002    18.45 - 19.00 |**                   0004:0004
07.00 - 07.15 |**                   0004:0004    19.00 - 19.15 |**                   0004:0004
07.15 - 07.30 |***                  0006:0006    19.15 - 19.30 |**                   0003:0003
07.30 - 07.45 |******               0012:0012    19.30 - 19.45 |*                    0001:0001
07.45 - 08.00 |******               0012:0012    19.45 - 20.00 |**                   0003:0003
08.00 - 08.15 |********             0016:0016    20.00 - 20.15 |                     0000:0000
08.15 - 08.30 |***********          0021:0021    20.15 - 20.30 |                     0000:0000
08.30 - 08.45 |*************        0026:0026    20.30 - 20.45 |                     0000:0000
08.45 - 09.00 |**************       0027:0027    20.45 - 21.00 |                     0000:0000
09.00 - 09.15 |************         0024:0024    21.00 - 21.15 |                     0000:0000
09.15 - 09.30 |***************      0029:0029    21.15 - 21.30 |*                    0001:0001
09.30 - 09.45 |*************        0025:0025    21.30 - 21.45 |*                    0001:0001
09.45 - 10.00 |***************      0029:0029    21.45 - 22.00 |*                    0001:0001
10.00 - 10.15 |*****************    0031:0031    22.00 - 22.15 |*                    0002:0002
10.15 - 10.30 |*****************    0031:0031    22.15 - 22.30 |*                    0001:0001
10.30 - 10.45 |********************* 0037:0037    22.30 - 22.45 |*                    0001:0001
10.45 - 11.00 |*****************    0031:0031    22.45 - 23.00 |*                    0002:0002
11.00 - 11.15 |*************        0025:0025    23.00 - 23.15 |*                    0001:0001
11.15 - 11.30 |******************   0034:0034    23.15 - 23.30 |*                    0001:0001
11.30 - 11.45 |******************   0034:0034    23.30 - 23.45 |*                    0001:0001
11.45 - 12.00 |*************        0025:0025    23.45 - 24.00 |*                    0001:0001
              +----+----+----+----+----+----+----+----+----+----+                    +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100                   0...10...20...30...40...50...60...70...80...90..100

   LEGEND: (*) = AVERAGE  (-) = PEAK
```

Network Transaction Activity Graph

The Network Transaction Activity Graph shows, by day of the week, for a specified VTAM APPLID, the average and peak daily average number of transactions per minute submitted from all the terminals associated with the specified VTAM APPLID (or group of APPLIDs specified using the INCLUDE/EXCLUDE DD statements) during each 15-minute period throughout the day. The VTAM APPLID is specified through the use of the VTAMNAME parameter.

The Network Transaction Activity Graph can be produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

Following is a sample of the Network Transaction Activity Graph:

```
VTAMID=TSO*                                   DAY SHOWN: MONDAY                                   SYSID:MVSB
                                                05/21/96-05/27/96
                                      NETWORK TRANSACTION ACTIVITY GRAPH: AVG/MIN

 00.00 - 00.15 |*                      0003:0003          12.00 - 12.15 |*********              0054:0054
 00.15 - 00.30 |                       0000:0000          12.15 - 12.30 |***********            0062:0062
 00.30 - 00.45 |                       0000:0000          12.30 - 12.45 |************           0067:0067
 00.45 - 01.00 |                       0000:0000          12.45 - 13.00 |**********             0060:0060
 01.00 - 01.15 |                       0000:0000          13.00 - 13.15 |**********             0057:0057
 01.15 - 01.30 |                       0000:0000          13.15 - 13.30 |***********            0064:0064
 01.30 - 01.45 |                       0000:0000          13.30 - 13.45 |************           0067:0067
 01.45 - 02.00 |                       0000:0000          13.45 - 14.00 |***********            0064:0064
 02.00 - 02.15 |                       0000:0000          14.00 - 14.15 |****************       0092:0092
 02.15 - 02.30 |                       0000:0000          14.15 - 14.30 |*****************      0098:0098
 02.30 - 02.45 |                       0000:0000          14.30 - 14.45 |*****************      0099:0099
 02.45 - 03.00 |                       0000:0000          14.45 - 15.00 |******************     0104:0104
 03.00 - 03.15 |                       0000:0000          15.00 - 15.15 |***************        0086:0086
 03.15 - 03.30 |                       0000:0000          15.15 - 15.30 |***********            0065:0065
 03.30 - 03.45 |                       0000:0000          15.30 - 15.45 |*********************  0123:0123
 03.45 - 04.00 |                       0000:0000          15.45 - 16.00 |***************        0090:0090
 04.00 - 04.15 |                       0000:0000          16.00 - 16.15 |************           0070:0070
 04.15 - 04.30 |                       0000:0000          16.15 - 16.30 |******************     0104:0104
 04.30 - 04.45 |                       0000:0000          16.30 - 16.45 |***************        0088:0088
 04.45 - 05.00 |                       0000:0000          16.45 - 17.00 |***************        0086:0086
 05.00 - 05.15 |                       0000:0000          17.00 - 17.15 |****************       0091:0091
 05.15 - 05.30 |                       0000:0000          17.15 - 17.30 |**************         0079:0079
 05.30 - 05.45 |                       0000:0000          17.30 - 17.45 |******************     0104:0104
 05.45 - 06.00 |                       0000:0000          17.45 - 18.00 |*********              0054:0054
               +----+----+----+----+----+----+----+----+----+----+            +----+----+----+----+----+----+----+----+----+----+
               0...30...60...90..120..150..180..210..240..270..300            0...30...60...90..120..150..180..210..240..270..300


 06.00 - 06.15 |                       0000:0000          18.00 - 18.15 |*****                  0028:0028
 06.15 - 06.30 |*                      0001:0001          18.15 - 18.30 |****                   0021:0021
 06.30 - 06.45 |*                      0001:0001          18.30 - 18.45 |*****                  0030:0030
 06.45 - 07.00 |*                      0001:0001          18.45 - 19.00 |******                 0033:0033
 07.00 - 07.15 |*                      0002:0002          19.00 - 19.15 |***                    0016:0016
 07.15 - 07.30 |**                     0008:0008          19.15 - 19.30 |****                   0019:0019
 07.30 - 07.45 |****                   0022:0022          19.30 - 19.45 |*                      0001:0001
 07.45 - 08.00 |****                   0024:0024          19.45 - 20.00 |*                      0002:0002
 08.00 - 08.15 |******                 0035:0035          20.00 - 20.15 |                       0000:0000
 08.15 - 08.30 |**********             0060:0060          20.15 - 20.30 |                       0000:0000
 08.30 - 08.45 |*************          0073:0073          20.30 - 20.45 |                       0000:0000
 08.45 - 09.00 |****************       0093:0093          20.45 - 21.00 |                       0000:0000
 09.00 - 09.15 |************           0070:0070          21.00 - 21.15 |                       0000:0000
 09.15 - 09.30 |*****************      0099:0099          21.15 - 21.30 |*                      0001:0001
 09.30 - 09.45 |***************        0085:0085          21.30 - 21.45 |*                      0001:0001
 09.45 - 10.00 |****************       0095:0095          21.45 - 22.00 |*                      0001:0001
 10.00 - 10.15 |**********************  0127:0127          22.00 - 22.15 |*                      0002:0002
 10.15 - 10.30 |************************0153:0153          22.15 - 22.30 |*                      0001:0001
 10.30 - 10.45 |************************0168:0168          22.30 - 22.45 |*                      0005:0005
 10.45 - 11.00 |**********************  0129:0129          22.45 - 23.00 |*                      0003:0003
 11.00 - 11.15 |******************     0106:0106          23.00 - 23.15 |*                      0002:0002
 11.15 - 11.30 |***************        0085:0085          23.15 - 23.30 |*                      0001:0001
 11.30 - 11.45 |*************          0075:0075          23.30 - 23.45 |*                      0003:0003
 11.45 - 12.00 |*********              0049:0049          23.45 - 24.00 |                       0000:0000
               +----+----+----+----+----+----+----+----+----+----+            +----+----+----+----+----+----+----+----+----+----+
               0...30...60...90..120..150..180..210..240..270..300            0...30...60...90..120..150..180..210..240..270..300

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Network Inbound Message Activity Graph

The Inbound Message Activity Graph shows, for a specified VTAM APPLID, by day of the week, the average number of inbound messages/minute transmitted during each 15-minute period throughout the day. Both the average and peak daily average values are reported.

The VTAM APPLID is specified using the VTAMNAME parameter.

The Network Inbound Activity Graph can be produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters). The data to be included in calculating the values shown in the graphs is limited by specifying a list of terminals to be excluded from the calculations through the use of the EXCLUDE facility or specifically defining the terminals to be included through the use of the INCLUDE facility.

Network Inbound Message Traffic Graph

The Network Inbound Traffic Graph shows, by day of the week, for a specified VTAM APPLID, the average and peak daily average number of bytes per second transmitted from the host to the terminals associated with the specified VTAM APPLID during each 15-minute period throughout the day. The VTAM APPLID is specified through the use of the VTAMNAME parameter.

The data used in calculating the graph values is limited by excluding selected terminals or groups of terminals through the use of the EXCLUDE facility or fully defined through the use of the INCLUDE facility.

The Network Inbound Message Traffic Graph can be produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

Following is a sample of the Network Inbound Message Traffic Graph:

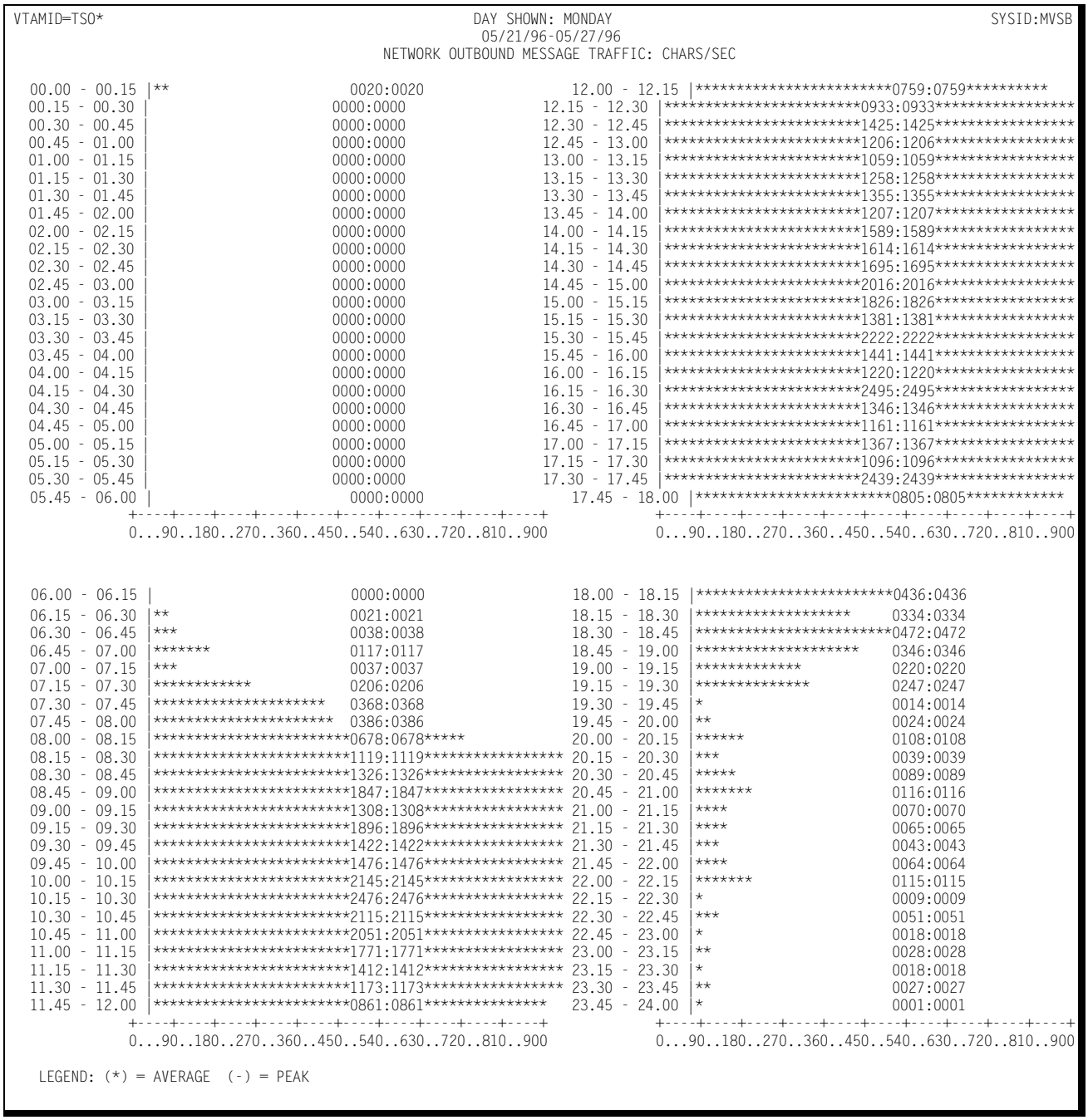
```
VTAMID=TSO*                                  DAY SHOWN: MONDAY                                  SYSID:MVSB
                                              05/21/96-05/27/96
                                  NETWORK INBOUND MESSAGE TRAFFIC: CHARS/SEC

 00.00 - 00.15 |                    0000:0000      12.00 - 12.15 |*                   0013:0013
 00.15 - 00.30 |                    0000:0000      12.15 - 12.30 |**                  0027:0027
 00.30 - 00.45 |                    0000:0000      12.30 - 12.45 |**                  0020:0020
 00.45 - 01.00 |                    0000:0000      12.45 - 13.00 |*                   0018:0018
 01.00 - 01.15 |                    0000:0000      13.00 - 13.15 |*                   0011:0011
 01.15 - 01.30 |                    0000:0000      13.15 - 13.30 |*                   0012:0012
 01.30 - 01.45 |                    0000:0000      13.30 - 13.45 |**                  0022:0022
 01.45 - 02.00 |                    0000:0000      13.45 - 14.00 |*                   0018:0018
 02.00 - 02.15 |                    0000:0000      14.00 - 14.15 |**                  0026:0026
 02.15 - 02.30 |                    0000:0000      14.15 - 14.30 |**                  0024:0024
 02.30 - 02.45 |                    0000:0000      14.30 - 14.45 |**                  0036:0036
 02.45 - 03.00 |                    0000:0000      14.45 - 15.00 |***                 0047:0047
 03.00 - 03.15 |                    0000:0000      15.00 - 15.15 |**                  0027:0027
 03.15 - 03.30 |                    0000:0000      15.15 - 15.30 |**                  0021:0021
 03.30 - 03.45 |                    0000:0000      15.30 - 15.45 |***                 0040:0040
 03.45 - 04.00 |                    0000:0000      15.45 - 16.00 |**                  0023:0023
 04.00 - 04.15 |                    0000:0000      16.00 - 16.15 |***                 0044:0044
 04.15 - 04.30 |                    0000:0000      16.15 - 16.30 |**                  0020:0020
 04.30 - 04.45 |                    0000:0000      16.30 - 16.45 |*                   0015:0015
 04.45 - 05.00 |                    0000:0000      16.45 - 17.00 |**                  0024:0024
 05.00 - 05.15 |                    0000:0000      17.00 - 17.15 |**                  0024:0024
 05.15 - 05.30 |                    0000:0000      17.15 - 17.30 |**                  0019:0019
 05.30 - 05.45 |                    0000:0000      17.30 - 17.45 |**                  0030:0030
 05.45 - 06.00 |                    0000:0000      17.45 - 18.00 |*                   0013:0013
               +----+----+----+----+----+----+----+----+----+----+                   +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900                   0...90..180..270..360..450..540..630..720..810..900

 06.00 - 06.15 |                    0000:0000      18.00 - 18.15 |*                   0005:0005
 06.15 - 06.30 |                    0000:0000      18.15 - 18.30 |*                   0004:0004
 06.30 - 06.45 |                    0000:0000      18.30 - 18.45 |*                   0005:0005
 06.45 - 07.00 |                    0000:0000      18.45 - 19.00 |*                   0007:0007
 07.00 - 07.15 |*                   0001:0001      19.00 - 19.15 |*                   0003:0003
 07.15 - 07.30 |*                   0002:0002      19.15 - 19.30 |*******             0124:0124
 07.30 - 07.45 |*                   0006:0006      19.30 - 19.45 |                    0000:0000
 07.45 - 08.00 |*                   0005:0005      19.45 - 20.00 |                    0000:0000
 08.00 - 08.15 |*                   0017:0017      20.00 - 20.15 |                    0000:0000
 08.15 - 08.30 |**                  0022:0022      20.15 - 20.30 |                    0000:0000
 08.30 - 08.45 |**                  0022:0022      20.30 - 20.45 |                    0000:0000
 08.45 - 09.00 |**                  0031:0031      20.45 - 21.00 |                    0000:0000
 09.00 - 09.15 |**                  0025:0025      21.00 - 21.15 |                    0000:0000
 09.15 - 09.30 |**                  0033:0033      21.15 - 21.30 |                    0000:0000
 09.30 - 09.45 |**                  0024:0024      21.30 - 21.45 |                    0000:0000
 09.45 - 10.00 |**                  0022:0022      21.45 - 22.00 |                    0000:0000
 10.00 - 10.15 |***                 0040:0040      22.00 - 22.15 |                    0000:0000
 10.15 - 10.30 |***                 0038:0038      22.15 - 22.30 |                    0000:0000
 10.30 - 10.45 |**                  0033:0033      22.30 - 22.45 |                    0000:0000
 10.45 - 11.00 |***                 0039:0039      22.45 - 23.00 |                    0000:0000
 11.00 - 11.15 |**                  0032:0032      23.00 - 23.15 |                    0000:0000
 11.15 - 11.30 |**                  0024:0024      23.15 - 23.30 |                    0000:0000
 11.30 - 11.45 |**                  0021:0021      23.30 - 23.45 |                    0000:0000
 11.45 - 12.00 |***                 0038:0038      23.45 - 24.00 |                    0000:0000
               +----+----+----+----+----+----+----+----+----+----+                   +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900                   0...90..180..270..360..450..540..630..720..810..900

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Network Outbound Message Traffic Graph

The Network Outbound Message Traffic Graph shows, for a specified VTAM APPLID, by day of the week, the average number of outbound bytes/second transmitted during each 15 minute period throughout the day. Both the average and the peak daily average values are reported. The VTAM APPLID is specified using the VTAMNAME parameter. The data included in the calculations is limited by excluding selected terminals or groups of terminals through the use of the EXCLUDE facility of fully specified through the use of the INCLUDE facility.

The Network Outbound Message Traffic Graph can be produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

Following is a sample of the Network Outbound Message Traffic Graph:



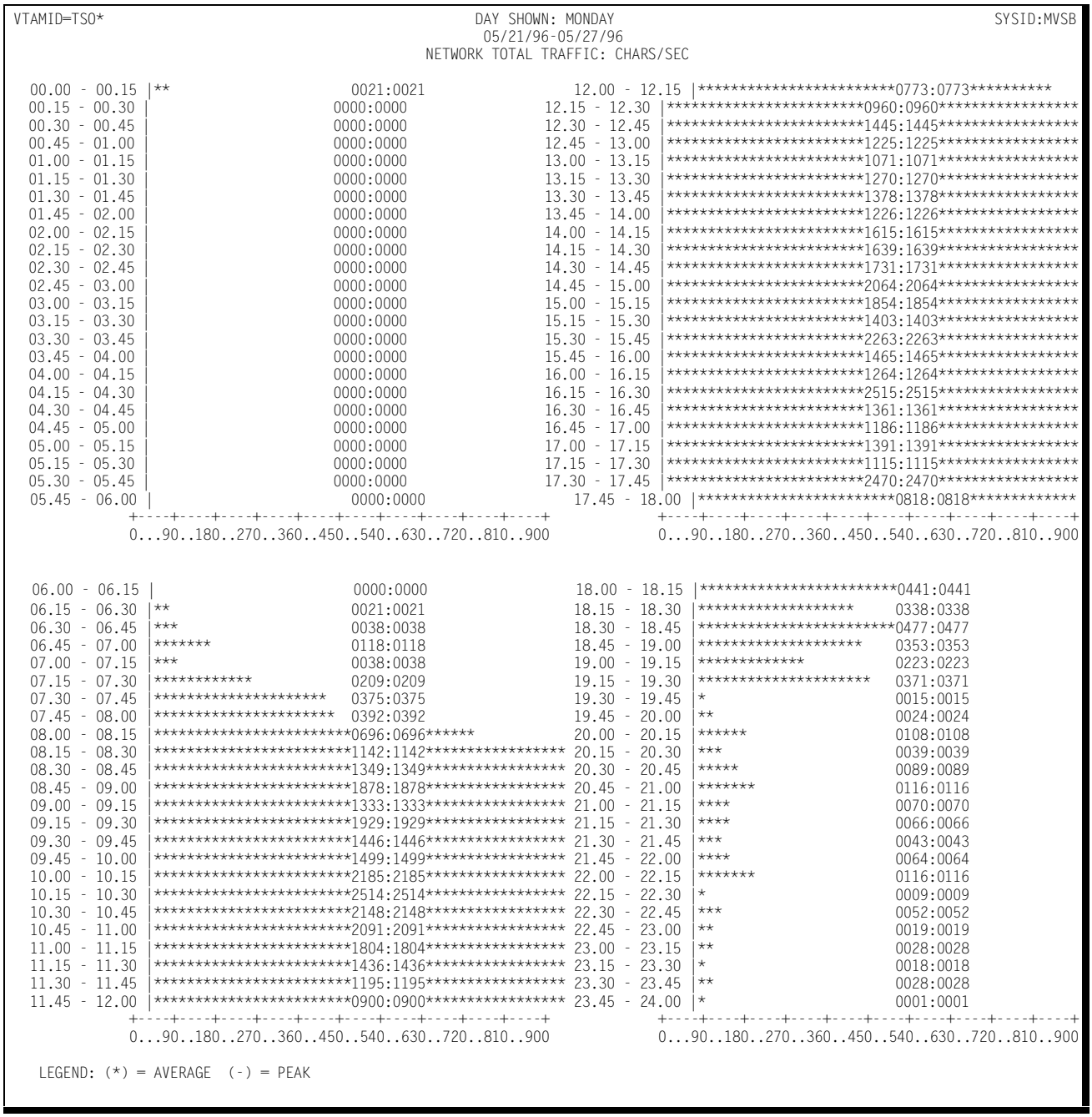
```
VTAMID=TSO*                                  DAY SHOWN: MONDAY                                  SYSID:MVSB
                                               05/21/96-05/27/96
                                  NETWORK OUTBOUND MESSAGE TRAFFIC: CHARS/SEC

 00.00 - 00.15 |**                    0020:0020          12.00 - 12.15 |************************0759:0759**********
 00.15 - 00.30 |                    0000:0000            12.15 - 12.30 |************************0933:0933**********
 00.30 - 00.45 |                    0000:0000            12.30 - 12.45 |************************1425:1425**********
 00.45 - 01.00 |                    0000:0000            12.45 - 13.00 |************************1206:1206**********
 01.00 - 01.15 |                    0000:0000            13.00 - 13.15 |************************1059:1059**********
 01.15 - 01.30 |                    0000:0000            13.15 - 13.30 |************************1258:1258**********
 01.30 - 01.45 |                    0000:0000            13.30 - 13.45 |************************1355:1355**********
 01.45 - 02.00 |                    0000:0000            13.45 - 14.00 |************************1207:1207**********
 02.00 - 02.15 |                    0000:0000            14.00 - 14.15 |************************1589:1589**********
 02.15 - 02.30 |                    0000:0000            14.15 - 14.30 |************************1614:1614**********
 02.30 - 02.45 |                    0000:0000            14.30 - 14.45 |************************1695:1695**********
 02.45 - 03.00 |                    0000:0000            14.45 - 15.00 |************************2016:2016**********
 03.00 - 03.15 |                    0000:0000            15.00 - 15.15 |************************1826:1826**********
 03.15 - 03.30 |                    0000:0000            15.15 - 15.30 |************************1381:1381**********
 03.30 - 03.45 |                    0000:0000            15.30 - 15.45 |************************2222:2222**********
 03.45 - 04.00 |                    0000:0000            15.45 - 16.00 |************************1441:1441**********
 04.00 - 04.15 |                    0000:0000            16.00 - 16.15 |************************1220:1220**********
 04.15 - 04.30 |                    0000:0000            16.15 - 16.30 |************************2495:2495**********
 04.30 - 04.45 |                    0000:0000            16.30 - 16.45 |************************1346:1346**********
 04.45 - 05.00 |                    0000:0000            16.45 - 17.00 |************************1161:1161**********
 05.00 - 05.15 |                    0000:0000            17.00 - 17.15 |************************1367:1367**********
 05.15 - 05.30 |                    0000:0000            17.15 - 17.30 |************************1096:1096**********
 05.30 - 05.45 |                    0000:0000            17.30 - 17.45 |************************2439:2439**********
 05.45 - 06.00 |                    0000:0000            17.45 - 18.00 |************************0805:0805***********
           +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
           0...90..180..270..360..450..540..630..720..810..900          0...90..180..270..360..450..540..630..720..810..900


 06.00 - 06.15 |                    0000:0000            18.00 - 18.15 |************************0436:0436
 06.15 - 06.30 |**                  0021:0021            18.15 - 18.30 |********************    0334:0334
 06.30 - 06.45 |***                 0038:0038            18.30 - 18.45 |************************0472:0472
 06.45 - 07.00 |*******             0117:0117            18.45 - 19.00 |********************    0346:0346
 07.00 - 07.15 |***                 0037:0037            19.00 - 19.15 |**************          0220:0220
 07.15 - 07.30 |************        0206:0206            19.15 - 19.30 |**************          0247:0247
 07.30 - 07.45 |********************  0368:0368         19.30 - 19.45 |*                        0014:0014
 07.45 - 08.00 |********************  0386:0386         19.45 - 20.00 |**                       0024:0024
 08.00 - 08.15 |************************0678:0678*****  20.00 - 20.15 |******                   0108:0108
 08.15 - 08.30 |************************1119:1119********** 20.15 - 20.30 |***                  0039:0039
 08.30 - 08.45 |************************1326:1326********** 20.30 - 20.45 |*****                0089:0089
 08.45 - 09.00 |************************1847:1847********** 20.45 - 21.00 |*******              0116:0116
 09.00 - 09.15 |************************1308:1308********** 21.00 - 21.15 |****                 0070:0070
 09.15 - 09.30 |************************1896:1896********** 21.15 - 21.30 |****                 0065:0065
 09.30 - 09.45 |************************1422:1422********** 21.30 - 21.45 |***                  0043:0043
 09.45 - 10.00 |************************1476:1476********** 21.45 - 22.00 |****                 0064:0064
 10.00 - 10.15 |************************2145:2145********** 22.00 - 22.15 |*******              0115:0115
 10.15 - 10.30 |************************2476:2476********** 22.15 - 22.30 |*                    0009:0009
 10.30 - 10.45 |************************2115:2115********** 22.30 - 22.45 |***                  0051:0051
 10.45 - 11.00 |************************2051:2051********** 22.45 - 23.00 |*                    0018:0018
 11.00 - 11.15 |************************1771:1771********** 23.00 - 23.15 |**                   0028:0028
 11.15 - 11.30 |************************1412:1412********** 23.15 - 23.30 |*                    0018:0018
 11.30 - 11.45 |************************1173:1173********** 23.30 - 23.45 |**                   0027:0027
 11.45 - 12.00 |************************0861:0861**********  23.45 - 24.00 |*                    0001:0001
           +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
           0...90..180..270..360..450..540..630..720..810..900          0...90..180..270..360..450..540..630..720..810..900

 LEGEND: (*) = AVERAGE  (-) = PEAK
```

Network Total Traffic Graph

The Network Total Traffic Graph shows, by day of the week, for a specified VTAM APPLID, the average and peak daily average number of bytes per second transferred to and from all the terminals associated with the specified VTAM APPLID during each 15-minute period throughout the day. The VTAM APPLID is specified using the VTAMNAME parameter. The data included in the calculations is limited by excluding selected terminals or groups of terminals through the use of the EXCLUDE facility of fully specifing the terminal data to be included through the use or the INCLUDE facility.

The Network Total Traffic Graph can be produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced - one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

Following is a sample of the Network Total Traffic Graph:



```
VTAMID=TSO*                                  DAY SHOWN: MONDAY                                  SYSID:MVSB
                                              05/21/96-05/27/96
                                          NETWORK TOTAL TRAFFIC: CHARS/SEC

 00.00 - 00.15 |**                    0021:0021          12.00 - 12.15 |**********************0773:0773**********
 00.15 - 00.30 |                      0000:0000      12.15 - 12.30 |**********************0960:0960**********
 00.30 - 00.45 |                      0000:0000      12.30 - 12.45 |**********************1445:1445**********
 00.45 - 01.00 |                      0000:0000      12.45 - 13.00 |**********************1225:1225**********
 01.00 - 01.15 |                      0000:0000      13.00 - 13.15 |**********************1071:1071**********
 01.15 - 01.30 |                      0000:0000      13.15 - 13.30 |**********************1270:1270**********
 01.30 - 01.45 |                      0000:0000      13.30 - 13.45 |**********************1378:1378**********
 01.45 - 02.00 |                      0000:0000      13.45 - 14.00 |**********************1226:1226**********
 02.00 - 02.15 |                      0000:0000      14.00 - 14.15 |**********************1615:1615**********
 02.15 - 02.30 |                      0000:0000      14.15 - 14.30 |**********************1639:1639**********
 02.30 - 02.45 |                      0000:0000      14.30 - 14.45 |**********************1731:1731**********
 02.45 - 03.00 |                      0000:0000      14.45 - 15.00 |**********************2064:2064**********
 03.00 - 03.15 |                      0000:0000      15.00 - 15.15 |**********************1854:1854**********
 03.15 - 03.30 |                      0000:0000      15.15 - 15.30 |**********************1403:1403**********
 03.30 - 03.45 |                      0000:0000      15.30 - 15.45 |**********************2263:2263**********
 03.45 - 04.00 |                      0000:0000      15.45 - 16.00 |**********************1465:1465**********
 04.00 - 04.15 |                      0000:0000      16.00 - 16.15 |**********************1264:1264**********
 04.15 - 04.30 |                      0000:0000      16.15 - 16.30 |**********************2515:2515**********
 04.30 - 04.45 |                      0000:0000      16.30 - 16.45 |**********************1361:1361**********
 04.45 - 05.00 |                      0000:0000      16.45 - 17.00 |**********************1186:1186**********
 05.00 - 05.15 |                      0000:0000      17.00 - 17.15 |**********************1391:1391**********
 05.15 - 05.30 |                      0000:0000      17.15 - 17.30 |**********************1115:1115**********
 05.30 - 05.45 |                      0000:0000      17.30 - 17.45 |**********************2470:2470**********
 05.45 - 06.00 |                      0000:0000      17.45 - 18.00 |**********************0818:0818**********
           +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
           0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900


 06.00 - 06.15 |                      0000:0000      18.00 - 18.15 |**********************0441:0441
 06.15 - 06.30 |**                    0021:0021      18.15 - 18.30 |******************     0338:0338
 06.30 - 06.45 |***                   0038:0038      18.30 - 18.45 |************************0477:0477
 06.45 - 07.00 |*******               0118:0118      18.45 - 19.00 |******************     0353:0353
 07.00 - 07.15 |***                   0038:0038      19.00 - 19.15 |************           0223:0223
 07.15 - 07.30 |************          0209:0209      19.15 - 19.30 |********************   0371:0371
 07.30 - 07.45 |********************  0375:0375      19.30 - 19.45 |*                       0015:0015
 07.45 - 08.00 |********************  0392:0392      19.45 - 20.00 |**                      0024:0024
 08.00 - 08.15 |**********************0696:0696******            20.00 - 20.15 |******                  0108:0108
 08.15 - 08.30 |**********************1142:1142********** 20.15 - 20.30 |***                     0039:0039
 08.30 - 08.45 |**********************1349:1349********** 20.30 - 20.45 |*****                   0089:0089
 08.45 - 09.00 |**********************1878:1878********** 20.45 - 21.00 |*******                 0116:0116
 09.00 - 09.15 |**********************1333:1333********** 21.00 - 21.15 |****                    0070:0070
 09.15 - 09.30 |**********************1929:1929********** 21.15 - 21.30 |****                    0066:0066
 09.30 - 09.45 |**********************1446:1446********** 21.30 - 21.45 |***                     0043:0043
 09.45 - 10.00 |**********************1499:1499********** 21.45 - 22.00 |****                    0064:0064
 10.00 - 10.15 |**********************2185:2185********** 22.00 - 22.15 |*******                 0116:0116
 10.15 - 10.30 |**********************2514:2514********** 22.15 - 22.30 |*                       0009:0009
 10.30 - 10.45 |**********************2148:2148********** 22.30 - 22.45 |***                     0052:0052
 10.45 - 11.00 |**********************2091:2091********** 22.45 - 23.00 |**                      0019:0019
 11.00 - 11.15 |**********************1804:1804********** 23.00 - 23.15 |**                      0028:0028
 11.15 - 11.30 |**********************1436:1436********** 23.15 - 23.30 |*                       0018:0018
 11.30 - 11.45 |**********************1195:1195********** 23.30 - 23.45 |**                      0028:0028
 11.45 - 12.00 |**********************0900:0900********** 23.45 - 24.00 |*                       0001:0001
           +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
           0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900

 LEGEND: (*) = AVERAGE  (-) = PEAK
```

Network Outbound Message Activity Graph

The Outbound Message Activity Graph shows, for a specified VTAM APPLID, by day of the week, the average number of outbound messages per minute transmitted during each 15-minute period throughout the day. Both the average and the peak daily average values are reported. The APPLID is specified using the VTAMNAME parameter.

The data included in calculating the graph values are limited by excluding certain terminals or groups of terminals through the use of the EXCLUDE facility or by fully specifying which terminal data is included through the use of the INCLUDE facility.

The Network Outbound Message Activity Graph can be produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

Following is a sample of the Network Outbound Message Activity Graph:

```
VTAMID=TSO*                                    DAY SHOWN: MONDAY                                    SYSID:MVSB
                                                05/21/96-05/27/96
                                  NETWORK OUTBOUND MESSAGE ACTIVITY GRAPH: AVG/MIN

 00.00 - 00.15 |*                      0003:0003      12.00 - 12.15 |**********             0064:0064
 00.15 - 00.30 |                       0000:0000      12.15 - 12.30 |************           0076:0076
 00.30 - 00.45 |                       0000:0000      12.30 - 12.45 |**************         0081:0081
 00.45 - 01.00 |                       0000:0000      12.45 - 13.00 |***************        0085:0085
 01.00 - 01.15 |                       0000:0000      13.00 - 13.15 |**************         0083:0083
 01.15 - 01.30 |                       0000:0000      13.15 - 13.30 |******************     0110:0110
 01.30 - 01.45 |                       0000:0000      13.30 - 13.45 |******************     0104:0104
 01.45 - 02.00 |                       0000:0000      13.45 - 14.00 |***************        0090:0090
 02.00 - 02.15 |                       0000:0000      14.00 - 14.15 |************************0141:0141
 02.15 - 02.30 |                       0000:0000      14.15 - 14.30 |*********************  0138:0138
 02.30 - 02.45 |                       0000:0000      14.30 - 14.45 |************************0148:0148
 02.45 - 03.00 |                       0000:0000      14.45 - 15.00 |************************0149:0149
 03.00 - 03.15 |                       0000:0000      15.00 - 15.15 |*********************    0131:0131
 03.15 - 03.30 |                       0000:0000      15.15 - 15.30 |***************          0089:0089
 03.30 - 03.45 |                       0000:0000      15.30 - 15.45 |************************0155:0155
 03.45 - 04.00 |                       0000:0000      15.45 - 16.00 |******************     0119:0119
 04.00 - 04.15 |                       0000:0000      16.00 - 16.15 |******************       0108:0108
 04.15 - 04.30 |                       0000:0000      16.15 - 16.30 |*********************  0137:0137
 04.30 - 04.45 |                       0000:0000      16.30 - 16.45 |******************     0109:0109
 04.45 - 05.00 |                       0000:0000      16.45 - 17.00 |*******************    0117:0117
 05.00 - 05.15 |                       0000:0000      17.00 - 17.15 |*********************  0126:0126
 05.15 - 05.30 |                       0000:0000      17.15 - 17.30 |******************       0104:0104
 05.30 - 05.45 |                       0000:0000      17.30 - 17.45 |************************0152:0152
 05.45 - 06.00 |                       0000:0000      17.45 - 18.00 |**********             0075:0075
               +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
               0...30...60...90..120..150..180..210..240..270..300                0...30...60...90..120..150..180..210..240..270..300


 06.00 - 06.15 |                       0000:0000      18.00 - 18.15 |*******                0037:0037
 06.15 - 06.30 |*                      0002:0002      18.15 - 18.30 |****                   0024:0024
 06.30 - 06.45 |*                      0003:0003      18.30 - 18.45 |******                 0034:0034
 06.45 - 07.00 |**                     0010:0010      18.45 - 19.00 |*******                0038:0038
 07.00 - 07.15 |**                     0007:0007      19.00 - 19.15 |****                   0019:0019
 07.15 - 07.30 |***                    0016:0016      19.15 - 19.30 |****                   0024:0024
 07.30 - 07.45 |*******                0040:0040      19.30 - 19.45 |*                      0001:0001
 07.45 - 08.00 |*****                  0030:0030      19.45 - 20.00 |*                      0004:0004
 08.00 - 08.15 |********               0046:0046      20.00 - 20.15 |*                      0005:0005
 08.15 - 08.30 |************           0071:0071      20.15 - 20.30 |*                      0002:0002
 08.30 - 08.45 |*****************      0098:0098      20.30 - 20.45 |*                      0004:0004
 08.45 - 09.00 |******************     0113:0113      20.45 - 21.00 |*                      0005:0005
 09.00 - 09.15 |*****************      0098:0098      21.00 - 21.15 |*                      0003:0003
 09.15 - 09.30 |********************   0120:0120      21.15 - 21.30 |*                      0004:0004
 09.30 - 09.45 |******************     0111:0111      21.30 - 21.45 |*                      0003:0003
 09.45 - 10.00 |*********************  0129:0129      21.45 - 22.00 |*                      0006:0006
 10.00 - 10.15 |************************0150:0150      22.00 - 22.15 |**                     0009:0009
 10.15 - 10.30 |************************0186:0186      22.15 - 22.30 |*                      0001:0001
 10.30 - 10.45 |************************0210:0210**    22.30 - 22.45 |*                      0005:0005
 10.45 - 11.00 |************************0150:0150      22.45 - 23.00 |*                      0004:0004
 11.00 - 11.15 |*********************  0134:0134      23.00 - 23.15 |*                      0003:0003
 11.15 - 11.30 |********************   0124:0124      23.15 - 23.30 |*                      0002:0002
 11.30 - 11.45 |******************     0112:0112      23.30 - 23.45 |*                      0003:0003
 11.45 - 12.00 |***********            0066:0066      23.45 - 24.00 |*                      0002:0002
               +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
               0...30...60...90..120..150..180..210..240..270..300                0...30...60...90..120..150..180..210..240..270..300

 LEGEND: (*) = AVERAGE  (-) = PEAK
```

Network Physical Line Capacity Graph

The Network Physical Line Capacity Graph shows, for a specified line or group of lines specified through the INCLUDE/EXCLUDE facility, by day of the week, the average and peak daily average percentages of the line's (lines') capacity that was utilized. The utilization percentage is shown for each 15 minute period throughout the day.

The data used in calculating the graph values are limited by excluding selected lines through the use of the EXCLUDE facility. Separate sets of graphs are produced for selected lines through the use of the INCLUDE facility. The INCLUDE facility functions differently for the physical line graphs than for most other graphs. The INCLUDE facility normally limits the data used for calculating the values displayed on a graph to a specified set of lines, terminals, etc specified in the INCLUDE list. In the case of the physical line graphs, the INCLUDE causes an individual set of graphs to be produced for each communication line specified in the INCLUDE list.

The Network Physical Line Capacity Graph can be produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

This graph is only available when a network monitoring facility such as Netview NPM, the NETSPY monitor, or the NET/MASTER monitor gathers information related to the physical configuration and utilization of the network and passes it to CIMS Capacity Planner through the SSA1NETW data reduction program.

Following is a sample of the Network Physical Line Capacity Graph:

```
VTAMID=TSO*                                  DAY SHOWN: MONDAY                                  SYSID:MVSB
                                              05/21/96-05/27/96
                                   NETWORK PHYSICAL LINE CAPACITY GRAPH (%)

 00.00 - 00.15 |***                  0006:0006      12.00 - 12.15 |******               0012:0012
 00.15 - 00.30 |                     0000:0000      12.15 - 12.30 |*******              0013:0013
 00.30 - 00.45 |                     0000:0000      12.30 - 12.45 |*******              0013:0013
 00.45 - 01.00 |                     0000:0000      12.45 - 13.00 |*******              0013:0013
 01.00 - 01.15 |                     0000:0000      13.00 - 13.15 |******               0012:0012
 01.15 - 01.30 |                     0000:0000      13.15 - 13.30 |*******              0014:0014
 01.30 - 01.45 |                     0000:0000      13.30 - 13.45 |******               0012:0012
 01.45 - 02.00 |                     0000:0000      13.45 - 14.00 |******               0012:0012
 02.00 - 02.15 |                     0000:0000      14.00 - 14.15 |*******              0013:0013
 02.15 - 02.30 |                     0000:0000      14.15 - 14.30 |*********            0017:0017
 02.30 - 02.45 |                     0000:0000      14.30 - 14.45 |*******              0013:0013
 02.45 - 03.00 |                     0000:0000      14.45 - 15.00 |**********           0019:0019
 03.00 - 03.15 |                     0000:0000      15.00 - 15.15 |*******              0014:0014
 03.15 - 03.30 |                     0000:0000      15.15 - 15.30 |********             0016:0016
 03.30 - 03.45 |                     0000:0000      15.30 - 15.45 |*******              0013:0013
 03.45 - 04.00 |                     0000:0000      15.45 - 16.00 |*******              0014:0014
 04.00 - 04.15 |                     0000:0000      16.00 - 16.15 |******               0012:0012
 04.15 - 04.30 |                     0000:0000      16.15 - 16.30 |******               0011:0011
 04.30 - 04.45 |                     0000:0000      16.30 - 16.45 |*****                0009:0009
 04.45 - 05.00 |                     0000:0000      16.45 - 17.00 |****                 0008:0008
 05.00 - 05.15 |                     0000:0000      17.00 - 17.15 |******               0011:0011
 05.15 - 05.30 |                     0000:0000      17.15 - 17.30 |*******              0013:0013
 05.30 - 05.45 |                     0000:0000      17.30 - 17.45 |*****                0009:0009
 05.45 - 06.00 |                     0000:0000      17.45 - 18.00 |*****                0009:0009
           +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
           0...10...20...30...40...50...60...70...80...90..100         0...10...20...30...40...50...60...70...80...90..100

 06.00 - 06.15 |                     0000:0000      18.00 - 18.15 |*****                0009:0009
 06.15 - 06.30 |                     0000:0000      18.15 - 18.30 |**                   0004:0004
 06.30 - 06.45 |****                 0008:0008      18.30 - 18.45 |****                 0008:0008
 06.45 - 07.00 |***                  0005:0005      18.45 - 19.00 |***                  0005:0005
 07.00 - 07.15 |*****                0009:0009      19.00 - 19.15 |*****                0009:0009
 07.15 - 07.30 |***                  0006:0006      19.15 - 19.30 |*                    0001:0001
 07.30 - 07.45 |*****                0010:0010      19.30 - 19.45 |****                 0008:0008
 07.45 - 08.00 |*****                0010:0010      19.45 - 20.00 |*                    0001:0001
 08.00 - 08.15 |*******              0013:0013      20.00 - 20.15 |****                 0008:0008
 08.15 - 08.30 |*******              0013:0013      20.15 - 20.30 |*                    0001:0001
 08.30 - 08.45 |*******              0013:0013      20.30 - 20.45 |****                 0008:0008
 08.45 - 09.00 |*******              0014:0014      20.45 - 21.00 |**                   0004:0004
 09.00 - 09.15 |*******              0013:0013      21.00 - 21.15 |****                 0008:0008
 09.15 - 09.30 |*******              0014:0014      21.15 - 21.30 |*                    0001:0001
 09.30 - 09.45 |*******              0013:0013      21.30 - 21.45 |****                 0008:0008
 09.45 - 10.00 |********             0015:0015      21.45 - 22.00 |***                  0005:0005
 10.00 - 10.15 |******               0012:0012      22.00 - 22.15 |****                 0008:0008
 10.15 - 10.30 |*******              0013:0013      22.15 - 22.30 |***                  0005:0005
 10.30 - 10.45 |*******              0014:0014      22.30 - 22.45 |****                 0008:0008
 10.45 - 11.00 |********             0015:0015      22.45 - 23.00 |*                    0002:0002
 11.00 - 11.15 |********             0015:0015      23.00 - 23.15 |****                 0008:0008
 11.15 - 11.30 |*******              0014:0014      23.15 - 23.30 |**                   0003:0003
 11.30 - 11.45 |*******              0013:0013      23.30 - 23.45 |****                 0008:0008
 11.45 - 12.00 |*******              0014:0014      23.45 - 24.00 |**                   0003:0003
           +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
           0...10...20...30...40...50...60...70...80...90..100         0...10...20...30...40...50...60...70...80...90..100

 LEGEND: (*) = AVERAGE  (-) = PEAK
```

Network Physical Line Inbound Traffic Graph

The Network Physical Line Inbound Traffic Graph shows, for a specified line or group of lines specified through the INCLUDE/EXCLUDE facility, by day of the week, the average and peak number of bytes per minute transmitted across the line(s) in transmitting input data to the host. The traffic is shown for each 15 minute period throughout the day.

The data used in calculating the graph values are limited by excluding selected lines through the use of the EXCLUDE facility. Separate sets of graphs are produced for selected lines through the use of the INCLUDE facility. The INCLUDE facility functions differently for the physical line graphs than for most other graphs. The INCLUDE facility normally limits the data used for calculating the values displayed on a graph to a specified set of lines, terminals, etc specified in the INCLUDE list. In the case of the physical line graphs, the INCLUDE causes an individual set of graphs to be produced for each communication line specified in the INCLUDE list.

The Network Physical Line Inbound Traffic Graph can be produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

This graph is only available when a Network monitoring facility such as Netview NPM, the NETSPY monitor, or the NET/MASTER monitor gathers information related to the physical configuration and utilization of the network and passes it to CIMS Capacity Planner through the SSA1NETW data reduction program.

Following is a sample of the Network Physical Line Inbound Traffic Graph:

```
VTAMID=TSO*                                    DAY SHOWN: MONDAY                                    SYSID:MVSB
                                                05/21/96-05/27/96
                                 N/W PHYSICAL LINE INBOUND TRAFFIC GRAPH (CHARS/SEC)

 00.00 - 00.15 |*********          0180:0180              12.00 - 12.15 |**********************4587:4587*****************
 00.15 - 00.30 |                   0000:0000              12.15 - 12.30 |**********************4776:4776*****************
 00.30 - 00.45 |                   0000:0000              12.30 - 12.45 |**********************5625:5625*****************
 00.45 - 01.00 |                   0000:0000              12.45 - 13.00 |**********************4631:4631*****************
 01.00 - 01.15 |                   0000:0000              13.00 - 13.15 |**********************4969:4969*****************
 01.15 - 01.30 |                   0000:0000              13.15 - 13.30 |**********************3991:3991*****************
 01.30 - 01.45 |                   0000:0000              13.30 - 13.45 |**********************5390:5390*****************
 01.45 - 02.00 |                   0000:0000              13.45 - 14.00 |**********************4906:4906*****************
 02.00 - 02.15 |                   0000:0000              14.00 - 14.15 |**********************5891:5891*****************
 02.15 - 02.30 |                   0000:0000              14.15 - 14.30 |**********************4959:4959*****************
 02.30 - 02.45 |                   0000:0000              14.30 - 14.45 |**********************6158:6158*****************
 02.45 - 03.00 |                   0000:0000              14.45 - 15.00 |**********************6588:6588*****************
 03.00 - 03.15 |                   0000:0000              15.00 - 15.15 |**********************7969:7969*****************
 03.15 - 03.30 |                   0000:0000              15.15 - 15.30 |**********************6087:6087*****************
 03.30 - 03.45 |                   0000:0000              15.30 - 15.45 |**********************4962:4962*****************
 03.45 - 04.00 |                   0000:0000              15.45 - 16.00 |**********************6883:6883*****************
 04.00 - 04.15 |                   0000:0000              16.00 - 16.15 |**********************4915:4915*****************
 04.15 - 04.30 |                   0000:0000              16.15 - 16.30 |**********************3859:3859*****************
 04.30 - 04.45 |                   0000:0000              16.30 - 16.45 |**********************2165:2165*****************
 04.45 - 05.00 |                   0000:0000              16.45 - 17.00 |**********************2029:2029*****************
 05.00 - 05.15 |                   0000:0000              17.00 - 17.15 |**********************3588:3588*****************
 05.15 - 05.30 |                   0000:0000              17.15 - 17.30 |**********************1270:1270*****************
 05.30 - 05.45 |                   0000:0000              17.30 - 17.45 |**********************2202:2202*****************
 05.45 - 06.00 |                    0000:0000               17.45 - 18.00 |**********************0854:0854*****************
            +----+----+----+----+----+----+----+----+----+----+            +----+----+----+----+----+----+----+----+----+----+
            0...90..180..270..360..450..540..630..720..810..900            0...90..180..270..360..450..540..630..720..810..900


 06.00 - 06.15 |                   0000:0000              18.00 - 18.15 |**********************1864:1864*****************
 06.15 - 06.30 |                     0000:0000                18.15 - 18.30 |***************          0266:0266
 06.30 - 06.45 |**********************3104:3104***************** 18.30 - 18.45 |**********************1797:1797*****************
 06.45 - 07.00 |************          0233:0233                  18.45 - 19.00 |********************    0346:0346
 07.00 - 07.15 |**********************1802:1802***************** 19.00 - 19.15 |**********************1730:1730*****************
 07.15 - 07.30 |**********************1477:1477***************** 19.15 - 19.30 |************              0181:0181
 07.30 - 07.45 |**********************3267:3267***************** 19.30 - 19.45 |**********************1780:1780*****************
 07.45 - 08.00 |**********************3286:3286***************** 19.45 - 20.00 |*************             0228:0228
 08.00 - 08.15 |**********************4881:4881***************** 20.00 - 20.15 |**********************1600:1600*****************
 08.15 - 08.30 |**********************4886:4886***************** 20.15 - 20.30 |******                    0093:0093
 08.30 - 08.45 |**********************5715:5715***************** 20.30 - 20.45 |**********************1598:1598*****************
 08.45 - 09.00 |**********************4795:4795***************** 20.45 - 21.00 |********                  0142:0142
 09.00 - 09.15 |**********************4570:4570***************** 21.00 - 21.15 |**********************1579:1579*****************
 09.15 - 09.30 |**********************4943:4943***************** 21.15 - 21.30 |*****                     0090:0090
 09.30 - 09.45 |**********************5496:5496***************** 21.30 - 21.45 |**********************1584:1584*****************
 09.45 - 10.00 |**********************5587:5587***************** 21.45 - 22.00 |************              0183:0183
 10.00 - 10.15 |**********************4639:4639***************** 22.00 - 22.15 |**********************1584:1584*****************
 10.15 - 10.30 |**********************5696:5696***************** 22.15 - 22.30 |*************             0215:0215
 10.30 - 10.45 |**********************7770:7770***************** 22.30 - 22.45 |**********************1579:1579*****************
 10.45 - 11.00 |**********************6373:6373***************** 22.45 - 23.00 |*******                   0115:0115
 11.00 - 11.15 |**********************5330:5330***************** 23.00 - 23.15 |**********************1596:1596*****************
 11.15 - 11.30 |**********************6185:6185***************** 23.15 - 23.30 |*****                     0088:0088
 11.30 - 11.45 |**********************6489:6489***************** 23.30 - 23.45 |**********************1578:1578*****************
 11.45 - 12.00 |**********************5780:5780***************** 23.45 - 24.00 |*****                     0087:0087
            +----+----+----+----+----+----+----+----+----+----+            +----+----+----+----+----+----+----+----+----+----+
            0...90..180..270..360..450..540..630..720..810..900            0...90..180..270..360..450..540..630..720..810..900

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Network Physical Line Outbound Traffic Graph

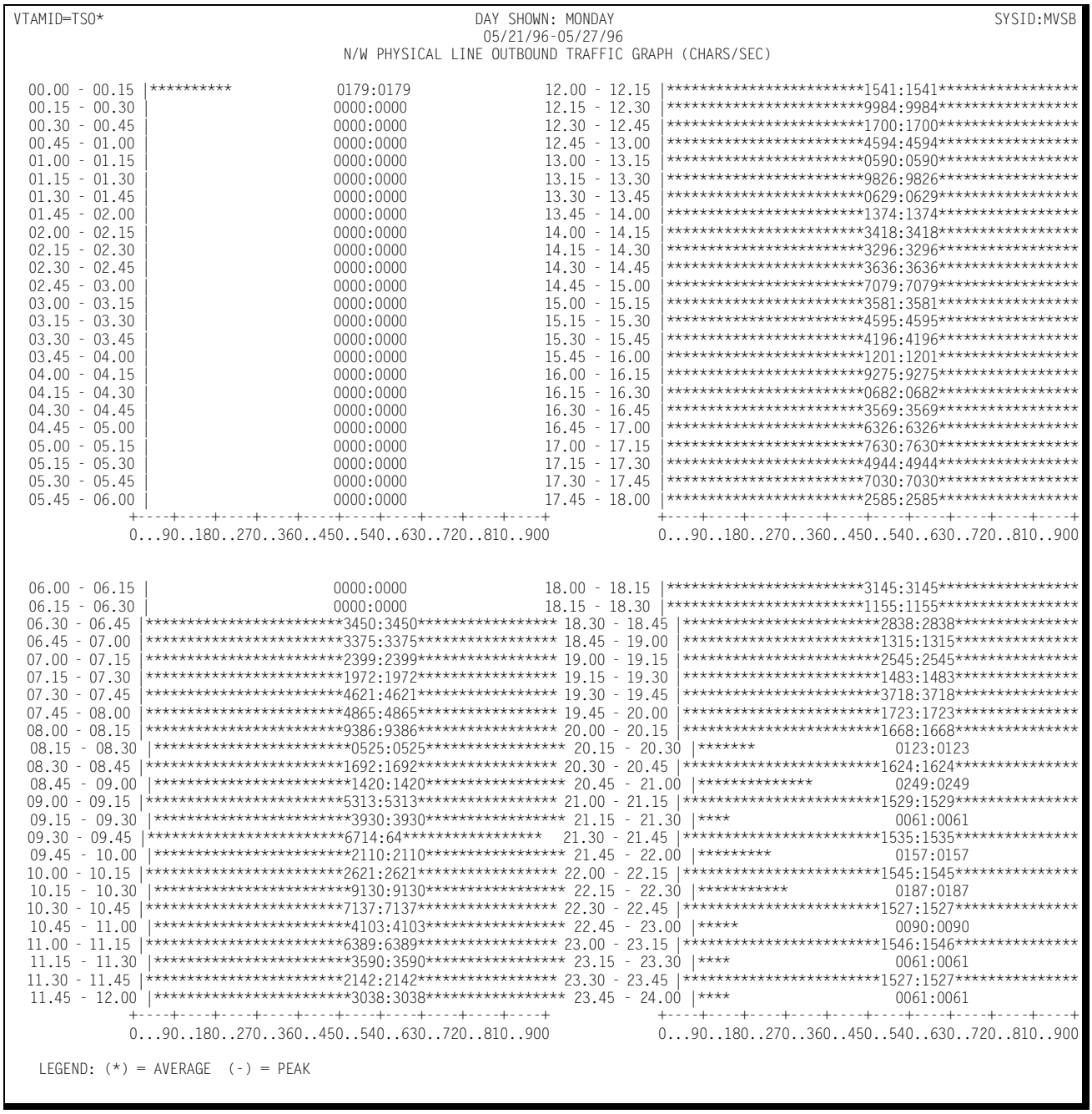
The Network Physical Line Outbound Traffic Graph shows, for a specified line or group of lines specified through the INCLUDE/EXCLUDE facility, by day of the week, the average and peak number of bytes per minute transmitted across the line(s) in transmitting response data from the host to the terminals. The traffic is shown for each 15 minute period throughout the day.

The data used in calculating the graph values is limited by excluding selected lines through the use of the EXCLUDE facility. Separate sets of graphs are produced for selected lines through the use of the INCLUDE facility. The INCLUDE facility functions differently for the physical line graphs than for most other graphs. The INCLUDE facility normally limits the data used for calculating the values displayed on a graph to a specified set of lines, terminals, etc., specified in the INCLUDE list. In the case of the physical line graphs, the INCLUDE causes an individual set of graphs to be produced for each communication line specified in the INCLUDE list.

The Network Physical Line Outbound Traffic Graph can be produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

This graph is only available when a Network monitoring facility such as Netview NPM, the NETSPY monitor, or the NET/MASTER monitor gathers information related to the physical configuration and utilization of the network and passes it to CIMS Capacity Planner through the SSA1NETW data reduction program.

Following is a sample of the Network Physical Line Outbound Traffic Graph:



```
VTAMID=TSO*                                    DAY SHOWN: MONDAY                                    SYSID:MVSB
                                                05/21/96-05/27/96
                                N/W PHYSICAL LINE OUTBOUND TRAFFIC GRAPH (CHARS/SEC)

 00.00 - 00.15 |*********          0179:0179              12.00 - 12.15 |**********************1541:1541*****************
 00.15 - 00.30 |                   0000:0000              12.15 - 12.30 |**********************9984:9984*****************
 00.30 - 00.45 |                   0000:0000              12.30 - 12.45 |**********************1700:1700*****************
 00.45 - 01.00 |                   0000:0000              12.45 - 13.00 |**********************4594:4594*****************
 01.00 - 01.15 |                   0000:0000              13.00 - 13.15 |**********************0590:0590*****************
 01.15 - 01.30 |                   0000:0000              13.15 - 13.30 |**********************9826:9826*****************
 01.30 - 01.45 |                   0000:0000              13.30 - 13.45 |**********************0629:0629*****************
 01.45 - 02.00 |                   0000:0000              13.45 - 14.00 |**********************1374:1374*****************
 02.00 - 02.15 |                   0000:0000              14.00 - 14.15 |**********************3418:3418*****************
 02.15 - 02.30 |                   0000:0000              14.15 - 14.30 |**********************3296:3296*****************
 02.30 - 02.45 |                   0000:0000              14.30 - 14.45 |**********************3636:3636*****************
 02.45 - 03.00 |                   0000:0000              14.45 - 15.00 |**********************7079:7079*****************
 03.00 - 03.15 |                   0000:0000              15.00 - 15.15 |**********************3581:3581*****************
 03.15 - 03.30 |                   0000:0000              15.15 - 15.30 |**********************4595:4595*****************
 03.30 - 03.45 |                   0000:0000              15.30 - 15.45 |**********************4196:4196*****************
 03.45 - 04.00 |                   0000:0000              15.45 - 16.00 |**********************1201:1201*****************
 04.00 - 04.15 |                   0000:0000              16.00 - 16.15 |**********************9275:9275*****************
 04.15 - 04.30 |                   0000:0000              16.15 - 16.30 |**********************0682:0682*****************
 04.30 - 04.45 |                   0000:0000              16.30 - 16.45 |**********************3569:3569*****************
 04.45 - 05.00 |                   0000:0000              16.45 - 17.00 |**********************6326:6326*****************
 05.00 - 05.15 |                   0000:0000              17.00 - 17.15 |**********************7630:7630*****************
 05.15 - 05.30 |                   0000:0000              17.15 - 17.30 |**********************4944:4944*****************
 05.30 - 05.45 |                   0000:0000              17.30 - 17.45 |**********************7030:7030*****************
 05.45 - 06.00 |                   0000:0000              17.45 - 18.00 |**********************2585:2585*****************
           +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
           0...90..180..270..360..450..540..630..720..810..900          0...90..180..270..360..450..540..630..720..810..900


 06.00 - 06.15 |                   0000:0000              18.00 - 18.15 |**********************3145:3145*****************
 06.15 - 06.30 |                   0000:0000              18.15 - 18.30 |**********************1155:1155*****************
 06.30 - 06.45 |**********************3450:3450***************** 18.30 - 18.45 |**********************2838:2838*****************
 06.45 - 07.00 |**********************3375:3375***************** 18.45 - 19.00 |**********************1315:1315*****************
 07.00 - 07.15 |**********************2399:2399***************** 19.00 - 19.15 |**********************2545:2545*****************
 07.15 - 07.30 |**********************1972:1972***************** 19.15 - 19.30 |**********************1483:1483*****************
 07.30 - 07.45 |**********************4621:4621***************** 19.30 - 19.45 |**********************3718:3718*****************
 07.45 - 08.00 |**********************4865:4865***************** 19.45 - 20.00 |**********************1723:1723*****************
 08.00 - 08.15 |**********************9386:9386***************** 20.00 - 20.15 |**********************1668:1668*****************
 08.15 - 08.30 |**********************0525:0525***************** 20.15 - 20.30 |*******                0123:0123
 08.30 - 08.45 |**********************1692:1692***************** 20.30 - 20.45 |**********************1624:1624*****************
 08.45 - 09.00 |**********************1420:1420***************** 20.45 - 21.00 |**************         0249:0249
 09.00 - 09.15 |**********************5313:5313***************** 21.00 - 21.15 |**********************1529:1529*****************
 09.15 - 09.30 |**********************3930:3930***************** 21.15 - 21.30 |****                   0061:0061
 09.30 - 09.45 |**********************6714:64*****************   21.30 - 21.45 |**********************1535:1535*****************
 09.45 - 10.00 |**********************2110:2110***************** 21.45 - 22.00 |*********              0157:0157
 10.00 - 10.15 |**********************2621:2621***************** 22.00 - 22.15 |**********************1545:1545*****************
 10.15 - 10.30 |**********************9130:9130***************** 22.15 - 22.30 |***********            0187:0187
 10.30 - 10.45 |**********************7137:7137***************** 22.30 - 22.45 |**********************1527:1527*****************
 10.45 - 11.00 |**********************4103:4103***************** 22.45 - 23.00 |*****                  0090:0090
 11.00 - 11.15 |**********************6389:6389***************** 23.00 - 23.15 |**********************1546:1546*****************
 11.15 - 11.30 |**********************3590:3590***************** 23.15 - 23.30 |****                   0061:0061
 11.30 - 11.45 |**********************2142:2142***************** 23.30 - 23.45 |**********************1527:1527*****************
 11.45 - 12.00 |**********************3038:3038***************** 23.45 - 24.00 |****                   0061:0061
           +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
           0...90..180..270..360..450..540..630..720..810..900          0...90..180..270..360..450..540..630..720..810..900

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Network Physical Line Retransmitted Traffic Graph

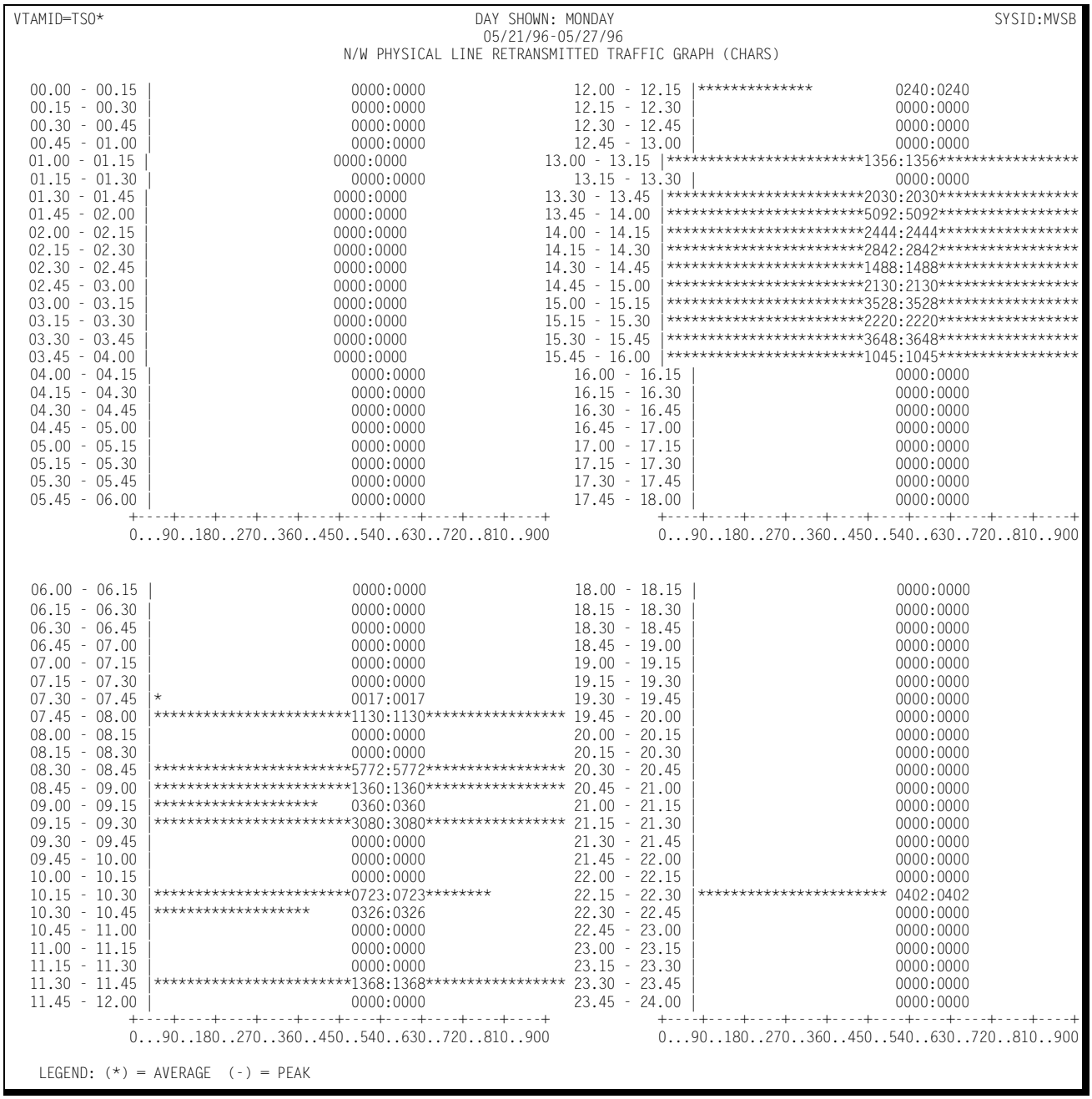
The Network Physical Line Retransmitted Traffic Graph shows, for a specified line or group of lines specified through the INCLUDE/EXCLUDE facility, by day of the week, the average and peak number of bytes per minute transmitted across the line(s) in retransmitting response data from the host to the terminals. The traffic is shown for each 15 minute period throughout the day.

The data used in calculating the graph values is limited by excluding selected lines through the use of the EXCLUDE facility. Separate sets of graphs are produced for selected lines through the use of the INCLUDE facility. The INCLUDE facility functions differently for the physical line graphs than for most other graphs. The INCLUDE facility normally limits the data used for calculating the values displayed on a graph to a specified set of lines, terminals, etc specified in the INCLUDE list. In the case of the physical line graphs, the INCLUDE causes an individual set of graphs to be produced for each communication line specified in the INCLUDE list.

The Network Physical Line Retransmitted Traffic Graph can be produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

This graph is only available when a network monitoring facility such as Netview NPM, the NETSPY monitor, or the NET/MASTER monitor gathers information related to the physical configuration and utilization of the network and passes it to CIMS Capacity Planner through the SSA1NETW data reduction program.

Following is a sample of the Network Physical Line Retransmitted Traffic Graph:



```
VTAMID=TSO*                                  DAY SHOWN: MONDAY                                  SYSID:MVSB
                                              05/21/96-05/27/96
                                 N/W PHYSICAL LINE RETRANSMITTED TRAFFIC GRAPH (CHARS)

 00.00 - 00.15 |                        0000:0000                 12.00 - 12.15 |**************          0240:0240
 00.15 - 00.30 |                        0000:0000                 12.15 - 12.30 |                        0000:0000
 00.30 - 00.45 |                        0000:0000                 12.30 - 12.45 |                        0000:0000
 00.45 - 01.00 |                        0000:0000                 12.45 - 13.00 |                        0000:0000
 01.00 - 01.15 |                      0000:0000                 13.00 - 13.15 |************************1356:1356******************
 01.15 - 01.30 |                        0000:0000                 13.15 - 13.30 |                        0000:0000
 01.30 - 01.45 |                      0000:0000                 13.30 - 13.45 |************************2030:2030******************
 01.45 - 02.00 |                      0000:0000                 13.45 - 14.00 |************************5092:5092******************
 02.00 - 02.15 |                      0000:0000                 14.00 - 14.15 |************************2444:2444******************
 02.15 - 02.30 |                      0000:0000                 14.15 - 14.30 |************************2842:2842******************
 02.30 - 02.45 |                      0000:0000                 14.30 - 14.45 |************************1488:1488******************
 02.45 - 03.00 |                      0000:0000                 14.45 - 15.00 |************************2130:2130******************
 03.00 - 03.15 |                      0000:0000                 15.00 - 15.15 |************************3528:3528******************
 03.15 - 03.30 |                      0000:0000                 15.15 - 15.30 |************************2220:2220******************
 03.30 - 03.45 |                      0000:0000                 15.30 - 15.45 |************************3648:3648******************
 03.45 - 04.00 |                      0000:0000                 15.45 - 16.00 |************************1045:1045******************
 04.00 - 04.15 |                        0000:0000                 16.00 - 16.15 |                        0000:0000
 04.15 - 04.30 |                        0000:0000                 16.15 - 16.30 |                        0000:0000
 04.30 - 04.45 |                        0000:0000                 16.30 - 16.45 |                        0000:0000
 04.45 - 05.00 |                        0000:0000                 16.45 - 17.00 |                        0000:0000
 05.00 - 05.15 |                        0000:0000                 17.00 - 17.15 |                        0000:0000
 05.15 - 05.30 |                        0000:0000                 17.15 - 17.30 |                        0000:0000
 05.30 - 05.45 |                        0000:0000                 17.30 - 17.45 |                        0000:0000
 05.45 - 06.00 |                        0000:0000                 17.45 - 18.00 |                        0000:0000
               +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900


 06.00 - 06.15 |                        0000:0000                 18.00 - 18.15 |                        0000:0000
 06.15 - 06.30 |                        0000:0000                 18.15 - 18.30 |                        0000:0000
 06.30 - 06.45 |                        0000:0000                 18.30 - 18.45 |                        0000:0000
 06.45 - 07.00 |                        0000:0000                 18.45 - 19.00 |                        0000:0000
 07.00 - 07.15 |                        0000:0000                 19.00 - 19.15 |                        0000:0000
 07.15 - 07.30 |                        0000:0000                 19.15 - 19.30 |                        0000:0000
 07.30 - 07.45 |*                       0017:0017                 19.30 - 19.45 |                        0000:0000
 07.45 - 08.00 |************************1130:1130****************** 19.45 - 20.00 |                        0000:0000
 08.00 - 08.15 |                        0000:0000                 20.00 - 20.15 |                        0000:0000
 08.15 - 08.30 |                        0000:0000                 20.15 - 20.30 |                        0000:0000
 08.30 - 08.45 |************************5772:5772****************** 20.30 - 20.45 |                        0000:0000
 08.45 - 09.00 |************************1360:1360****************** 20.45 - 21.00 |                        0000:0000
 09.00 - 09.15 |********************    0360:0360                 21.00 - 21.15 |                        0000:0000
 09.15 - 09.30 |************************3080:3080****************** 21.15 - 21.30 |                        0000:0000
 09.30 - 09.45 |                        0000:0000                 21.30 - 21.45 |                        0000:0000
 09.45 - 10.00 |                        0000:0000                 21.45 - 22.00 |                        0000:0000
 10.00 - 10.15 |                        0000:0000                 22.00 - 22.15 |                        0000:0000
 10.15 - 10.30 |************************0723:0723********          22.15 - 22.30 |************************ 0402:0402
 10.30 - 10.45 |********************    0326:0326                 22.30 - 22.45 |                        0000:0000
 10.45 - 11.00 |                        0000:0000                 22.45 - 23.00 |                        0000:0000
 11.00 - 11.15 |                        0000:0000                 23.00 - 23.15 |                        0000:0000
 11.15 - 11.30 |                        0000:0000                 23.15 - 23.30 |                        0000:0000
 11.30 - 11.45 |************************1368:1368****************** 23.30 - 23.45 |                        0000:0000
 11.45 - 12.00 |                        0000:0000                 23.45 - 24.00 |                        0000:0000
               +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Network Physical Line Total Traffic Graph

The Network Physical Line Total Traffic Graph shows, for a specified line or group of lines specified through the INCLUDE/EXCLUDE facility, by day of the week, the average and peak daily average number of bytes per second transmitted across the line(s) in transmitting inbound and outbound messages to/from the host and retransmitting response data from the host to the terminals. The traffic is shown for each 15 minute period throughout the day.

The data used in calculating the graph values is limited by excluding selected lines through the use of the EXCLUDE facility. Separate sets of graphs are produced for selected lines through the use of the INCLUDE facility. The INCLUDE facility functions differently for the physical line graphs than for most other graphs. The INCLUDE facility normally limits the data used for calculating the values displayed on a graph to a specified set of lines, terminals, etc specified in the INCLUDE list. In the case of the physical line graphs, the INCLUDE causes an individual set of graphs to be produced for each communication line specified in the INCLUDE list.

The Network Physical Line Total Traffic Graph can be produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

This graph is only available when a network monitoring facility such as Netview NPM, the NETSPY monitor, or the NET/MASTER monitor gathers information related to the physical configuration and utilization of the network and passes it to CIMS Capacity Planner through the SSA1NETW data reduction program.

Following is a sample of the Network Physical Line Total Traffic Graph:

```
VTAMID=TSO*                                    DAY SHOWN: MONDAY                                    SYSID:MVSB
                                                05/21/96-05/27/96
                                  N/W PHYSICAL LINE TOTAL TRAFFIC GRAPH (CHARS/SEC)

 00.00 - 00.15 |********************   0360:0360                12.00 - 12.15 |************************6141:6141*****************
 00.15 - 00.30 |                       0000:0000                12.15 - 12.30 |************************4778:4778*****************
 00.30 - 00.45 |                       0000:0000                12.30 - 12.45 |************************7347:7347*****************
 00.45 - 01.00 |                       0000:0000                12.45 - 13.00 |************************9248:9248*****************
 01.00 - 01.15 |                       0000:0000                13.00 - 13.15 |************************5575:5575*****************
 01.15 - 01.30 |                       0000:0000                13.15 - 13.30 |************************3831:3831*****************
 01.30 - 01.45 |                       0000:0000                13.30 - 13.45 |************************6038:6038*****************
 01.45 - 02.00 |                       0000:0000                13.45 - 14.00 |************************6294:6294*****************
 02.00 - 02.15 |                       0000:0000                14.00 - 14.15 |************************9326:9326*****************
 02.15 - 02.30 |                       0000:0000                14.15 - 14.30 |************************8275:8275*****************
 02.30 - 02.45 |                       0000:0000                14.30 - 14.45 |************************9814:9814*****************
 02.45 - 03.00 |                       0000:0000                14.45 - 15.00 |************************3682:3682*****************
 03.00 - 03.15 |                       0000:0000                15.00 - 15.15 |************************1574:1574*****************
 03.15 - 03.30 |                       0000:0000                15.15 - 15.30 |************************0699:0699*****************
 03.30 - 03.45 |                       0000:0000                15.30 - 15.45 |************************9174:9174*****************
 03.45 - 04.00 |                       0000:0000                15.45 - 16.00 |************************8101:8101*****************
 04.00 - 04.15 |                       0000:0000                16.00 - 16.15 |************************4202:4202*****************
 04.15 - 04.30 |                       0000:0000                16.15 - 16.30 |************************4553:4553*****************
 04.30 - 04.45 |                       0000:0000                16.30 - 16.45 |************************5747:5747*****************
 04.45 - 05.00 |                       0000:0000                16.45 - 17.00 |************************8363:8363*****************
 05.00 - 05.15 |                       0000:0000                17.00 - 17.15 |************************1227:1227*****************
 05.15 - 05.30 |                       0000:0000                17.15 - 17.30 |************************6217:6217*****************
 05.30 - 05.45 |                       0000:0000                17.30 - 17.45 |************************9236:9236*****************
 05.45 - 06.00 |                       0000:0000                17.45 - 18.00 |************************3443:3443*****************
               +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900


 06.00 - 06.15 |                       0000:0000                18.00 - 18.15 |************************5015:5015*****************
 06.15 - 06.30 |                       0000:0000                18.15 - 18.30 |************************1424:1424*****************
 06.30 - 06.45 |************************6560:6560***************** 18.30 - 18.45 |************************4640:4640*****************
 06.45 - 07.00 |************************3610:3610***************** 18.45 - 19.00 |************************1665:1665*****************
 07.00 - 07.15 |************************4208:4208***************** 19.00 - 19.15 |************************4281:4281*****************
 07.15 - 07.30 |************************3465:3465***************** 19.15 - 19.30 |************************1667:1667*****************
 07.30 - 07.45 |************************7901:7901***************** 19.30 - 19.45 |************************5504:5504*****************
 07.45 - 08.00 |************************8163:8163***************** 19.45 - 20.00 |************************1954:1954*****************
 08.00 - 08.15 |************************80:4280*****************   20.00 - 20.15 |************************3273:3273*****************
 08.15 - 08.30 |************************5422:5422***************** 20.15 - 20.30 |*************           0217:0217
 08.30 - 08.45 |************************7435:7435***************** 20.30 - 20.45 |************************3224:3224*****************
 08.45 - 09.00 |************************6234:6234***************** 20.45 - 21.00 |**********************  0393:0393
 09.00 - 09.15 |************************9901:9901***************** 21.00 - 21.15 |************************3112:3112*****************
 09.15 - 09.30 |************************8892:8892***************** 21.15 - 21.30 |*********               0152:0152
 09.30 - 09.45 |************************2229:2229***************** 21.30 - 21.45 |************************3123:3123*****************
 09.45 - 10.00 |************************7716:7716***************** 21.45 - 22.00 |********************    0343:0343
 10.00 - 10.15 |************************7279:7279***************** 22.00 - 22.15 |************************3136:3136*****************
 10.15 - 10.30 |************************4845:4845***************** 22.15 - 22.30 |************************ 0403:0403
 10.30 - 10.45 |************************4926:4926***************** 22.30 - 22.45 |************************3110:3110*****************
 10.45 - 11.00 |************************0496:0496***************** 22.45 - 23.00 |************            0208:0208
 11.00 - 11.15 |************************1737:1737***************** 23.00 - 23.15 |************************3149:3149*****************
 11.15 - 11.30 |************************9792:9792***************** 23.15 - 23.30 |*********               0150:0150
 11.30 - 11.45 |************************8651:8651***************** 23.30 - 23.45 |************************3109:3109*****************
 11.45 - 12.00 |************************8839:8839***************** 23.45 - 24.00 |*********               0150:0150
               +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Network Processor Activity Graph

The NCP Activity Graph shows, for a specified NCP or set of NCPs selected through the INCLUDE/EXCLUDE facility, by day of the week, the average and peak percentage capacity used in controlling its associated communications traffic. The utilization percentage is shown for each 15 minute period throughout the day.

Data pertaining to selected NCPs is eliminated from the utilization calculations through the use of the EXCLUDE facility. The data is limited to specific NCPs by specifying the NCPs to be considered in the calculations through the use of the INCLUDE facility. If no NCPs are specified for inclusion or exclusion, then the data pertaining to all NCPs is used in calculating the graph values.

The NCP Activity Graph can be produced for a single day's activity or multiple days. When more than one day's activity is graphed, separate graphs are produced - one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

This graph is only available when a network monitoring facility such as Netview NPM, the NETSPY monitor, or the NET/MASTER monitor gathers information related to the physical configuration and utilization of the network and passes it to CIMS Capacity Planner through the SSA1NETW data reduction program.

Following is a sample of the Network Processor Activity Graph:

```
VTAMID=TSO*                                  DAY SHOWN: MONDAY                                  SYSID:MVSB
                                              05/21/96-05/27/96
                                   N C P  A C T I V I T Y  G R A P H (% BUSY)

 00.00 - 00.15 |*****                0010:0010          12.00 - 12.15 |******************     0037:0037
 00.15 - 00.30 |                     0000:0000          12.15 - 12.30 |******************     0035:0035
 00.30 - 00.45 |                     0000:0000          12.30 - 12.45 |******************     0036:0036
 00.45 - 01.00 |                     0000:0000          12.45 - 13.00 |**********************   0042:0042
 01.00 - 01.15 |                     0000:0000          13.00 - 13.15 |******************     0035:0035
 01.15 - 01.30 |                     0000:0000          13.15 - 13.30 |*****************      0034:0034
 01.30 - 01.45 |                     0000:0000          13.30 - 13.45 |********************   0039:0039
 01.45 - 02.00 |                     0000:0000          13.45 - 14.00 |******************     0038:0038
 02.00 - 02.15 |                     0000:0000          14.00 - 14.15 |********************   0040:0040
 02.15 - 02.30 |                     0000:0000          14.15 - 14.30 |********************   0039:0039
 02.30 - 02.45 |                     0000:0000          14.30 - 14.45 |**********************   0041:0041
 02.45 - 03.00 |                     0000:0000          14.45 - 15.00 |**********************   0042:0042
 03.00 - 03.15 |                     0000:0000          15.00 - 15.15 |**********************   0042:0042
 03.15 - 03.30 |                     0000:0000          15.15 - 15.30 |**********************   0041:0041
 03.30 - 03.45 |                     0000:0000          15.30 - 15.45 |**********************   0042:0042
 03.45 - 04.00 |                     0000:0000          15.45 - 16.00 |********************   0039:0039
 04.00 - 04.15 |                     0000:0000          16.00 - 16.15 |******************     0035:0035
 04.15 - 04.30 |                     0000:0000          16.15 - 16.30 |********************   0037:0037
 04.30 - 04.45 |                     0000:0000          16.30 - 16.45 |******************     0038:0038
 04.45 - 05.00 |                     0000:0000          16.45 - 17.00 |*****************      0032:0032
 05.00 - 05.15 |                     0000:0000          17.00 - 17.15 |*****************      0031:0031
 05.15 - 05.30 |                     0000:0000          17.15 - 17.30 |***************        0028:0028
 05.30 - 05.45 |                     0000:0000          17.30 - 17.45 |****************       0029:0029
 05.45 - 06.00 |                     0000:0000          17.45 - 18.00 |**************         0026:0026
               +----+----+----+----+----+----+----+----+----+----+                             +----+----+----+----+----+----+----+----+----+----+
               0...10...20...30...40...50...60...70...80...90..100                           0...10...20...30...40...50...60...70...80...90..100

 06.00 - 06.15 |                     0000:0000          18.00 - 18.15 |************           0023:0023
 06.15 - 06.30 |                     0000:0000          18.15 - 18.30 |***********            0022:0022
 06.30 - 06.45 |***************      0029:0029          18.30 - 18.45 |************           0023:0023
 06.45 - 07.00 |************         0023:0023          18.45 - 19.00 |***********            0022:0022
 07.00 - 07.15 |***********          0021:0021          19.00 - 19.15 |***********            0022:0022
 07.15 - 07.30 |***********          0021:0021          19.15 - 19.30 |***********            0022:0022
 07.30 - 07.45 |*************        0026:0026          19.30 - 19.45 |************           0023:0023
 07.45 - 08.00 |*************        0027:0027          19.45 - 20.00 |***********            0022:0022
 08.00 - 08.15 |****************     0032:0032          20.00 - 20.15 |***********            0021:0021
 08.15 - 08.30 |******************   0036:0036          20.15 - 20.30 |**********             0020:0020
 08.30 - 08.45 |******************   0037:0037          20.30 - 20.45 |**********             0020:0020
 08.45 - 09.00 |******************   0036:0036          20.45 - 21.00 |**********             0020:0020
 09.00 - 09.15 |********************   0040:0040          21.00 - 21.15 |**********             0020:0020
 09.15 - 09.30 |**********************   0041:0041          21.15 - 21.30 |**********             0020:0020
 09.30 - 09.45 |********************   0039:0039          21.30 - 21.45 |**********             0020:0020
 09.45 - 10.00 |******************   0037:0037          21.45 - 22.00 |**********             0020:0020
 10.00 - 10.15 |********************   0039:0039          22.00 - 22.15 |**********             0020:0020
 10.15 - 10.30 |************************   0044:0044          22.15 - 22.30 |**********             0020:0020
 10.30 - 10.45 |************************   0045:0045          22.30 - 22.45 |**********             0020:0020
 10.45 - 11.00 |********************   0040:0040          22.45 - 23.00 |**********             0020:0020
 11.00 - 11.15 |********************   0040:0040          23.00 - 23.15 |**********             0020:0020
 11.15 - 11.30 |********************   0040:0040          23.15 - 23.30 |**********             0020:0020
 11.30 - 11.45 |**********************   0041:0041          23.30 - 23.45 |**********             0020:0020
 11.45 - 12.00 |******************   0038:0038          23.45 - 24.00 |**********             0019:0019
               +----+----+----+----+----+----+----+----+----+----+                             +----+----+----+----+----+----+----+----+----+----+
               0...10...20...30...40...50...60...70...80...90..100                           0...10...20...30...40...50...60...70...80...90..100

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Network Processor Slowdown Count Graph

The NCP Slowdown Count Graph shows, for a specified NCP (selected through the INCLUDE/EXCLUDE facility), by day of the week, the average and peak daily average number of times the NCP entered the slowdown mode due to excessive traffic or insufficient resources. The slowdown counts are shown for each 15 minute period throughout the day.

Data pertaining to selected NCPs is eliminated from the slowdown calculations through the use of the EXCLUDE facility. The data is limited to selected NCPs by specifying the NCPs to be considered in the calculations through the use of the INCLUDE facility. If no NCPs are specified for inclusion or exclusion, then the data pertaining to all NCPs is used in calculating the graph values.

The NCP Slowdown Count Graph can be produced for a single day's activity or multiple days. When more than one day's activity is graphed, separate graphs are produced - one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

This graph is only available when a network monitoring facility such as Netview NPM, the NETSPY monitor, or the NET/MASTER monitor gathers information related to the physical configuration and utilization of the network and passes it to CIMS Capacity Planner through the SSA1NETW data reduction program.

NCP Free Buffer High Watermark Graph

The NCP Free Buffer High Watermark Graph shows, for a specified NCP selected through the INCLUDE/EXCLUDE facility, by day of the week, the average and peak daily average values of the maximum number of free buffers available in the NCP during each 15 minute period throughout the day. This is a key measure of whether or not the NCP has sufficient storage to support the communications workload.

The NCP Buffer High Watermark Graph can be produced for a single day's activity or multiple days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

This graph is only available when a network monitoring facility such as Netview NPM, the NETSPY monitor, or the NET/MASTER monitor gathers information related to the physical configuration and utilization of the network and passes it to CIMS Capacity Planner through the SSA1NETW data reduction program.

Following is a sample of the NCP Free Buffer High Watermark Graph:

```
VTAMID=TSO*                                    DAY SHOWN: MONDAY                                    SYSID:MVSB
                                                05/21/96-05/27/96
                                  NCP FREE BUFFER HIGH WATER MARK GRAPH (*10)

 00.00 - 00.15 |**********************1496:1496***************** 12.00 - 12.15 |**********************1496:1496*****************
 00.15 - 00.30 |                      0000:0000                  12.15 - 12.30 |**********************1496:1496*****************
 00.30 - 00.45 |                      0000:0000                  12.30 - 12.45 |**********************1496:1496*****************
 00.45 - 01.00 |                      0000:0000                  12.45 - 13.00 |**********************1496:1496*****************
 01.00 - 01.15 |                      0000:0000                  13.00 - 13.15 |**********************1496:1496*****************
 01.15 - 01.30 |                      0000:0000                  13.15 - 13.30 |**********************1496:1496*****************
 01.30 - 01.45 |                      0000:0000                  13.30 - 13.45 |**********************1496:1496*****************
 01.45 - 02.00 |                      0000:0000                  13.45 - 14.00 |**********************1496:1496*****************
 02.00 - 02.15 |                      0000:0000                  14.00 - 14.15 |**********************1496:1496*****************
 02.15 - 02.30 |                      0000:0000                  14.15 - 14.30 |**********************1496:1496*****************
 02.30 - 02.45 |                      0000:0000                  14.30 - 14.45 |**********************1496:1496*****************
 02.45 - 03.00 |                      0000:0000                  14.45 - 15.00 |**********************1496:1496*****************
 03.00 - 03.15 |                      0000:0000                  15.00 - 15.15 |**********************1496:1496*****************
 03.15 - 03.30 |                      0000:0000                  15.15 - 15.30 |**********************1496:1496*****************
 03.30 - 03.45 |                      0000:0000                  15.30 - 15.45 |**********************1496:1496*****************
 03.45 - 04.00 |                      0000:0000                  15.45 - 16.00 |**********************1496:1496*****************
 04.00 - 04.15 |                      0000:0000                  16.00 - 16.15 |**********************1496:1496*****************
 04.15 - 04.30 |                      0000:0000                  16.15 - 16.30 |**********************1496:1496*****************
 04.30 - 04.45 |                      0000:0000                  16.30 - 16.45 |**********************1496:1496*****************
 04.45 - 05.00 |                      0000:0000                  16.45 - 17.00 |**********************1496:1496*****************
 05.00 - 05.15 |                      0000:0000                  17.00 - 17.15 |**********************1496:1496*****************
 05.15 - 05.30 |                      0000:0000                  17.15 - 17.30 |**********************1496:1496*****************
 05.30 - 05.45 |                      0000:0000                  17.30 - 17.45 |**********************1496:1496*****************
 05.45 - 06.00 |                      0000:0000                  17.45 - 18.00 |**********************1496:1496*****************
               +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900


 06.00 - 06.15 |                      0000:0000                  18.00 - 18.15 |**********************1496:1496*****************
 06.15 - 06.30 |                      0000:0000                  18.15 - 18.30 |**********************1496:1496*****************
 06.30 - 06.45 |**********************1496:1496***************** 18.30 - 18.45 |**********************1496:1496*****************
 06.45 - 07.00 |**********************1496:1496***************** 18.45 - 19.00 |**********************1496:1496*****************
 07.00 - 07.15 |**********************1496:1496***************** 19.00 - 19.15 |**********************1496:1496*****************
 07.15 - 07.30 |**********************1496:1496***************** 19.15 - 19.30 |**********************1496:1496*****************
 07.30 - 07.45 |**********************1496:1496***************** 19.30 - 19.45 |**********************1496:1496*****************
 07.45 - 08.00 |**********************1496:1496***************** 19.45 - 20.00 |**********************1496:1496*****************
 08.00 - 08.15 |**********************1496:1496***************** 20.00 - 20.15 |**********************1496:1496*****************
 08.15 - 08.30 |**********************1496:1496***************** 20.15 - 20.30 |**********************1496:1496*****************
 08.30 - 08.45 |**********************1496:1496***************** 20.30 - 20.45 |**********************1496:1496*****************
 08.45 - 09.00 |**********************1496:1496***************** 20.45 - 21.00 |**********************1496:1496*****************
 09.00 - 09.15 |**********************1496:1496***************** 21.00 - 21.15 |**********************1496:1496*****************
 09.15 - 09.30 |**********************1496:1496***************** 21.15 - 21.30 |**********************1496:1496*****************
 09.30 - 09.45 |**********************1496:1496***************** 21.30 - 21.45 |**********************1496:1496*****************
 09.45 - 10.00 |**********************1496:1496***************** 21.45 - 22.00 |**********************1496:1496*****************
 10.00 - 10.15 |**********************1496:1496***************** 22.00 - 22.15 |**********************1496:1496*****************
 10.15 - 10.30 |**********************1496:1496***************** 22.15 - 22.30 |**********************1496:1496*****************
 10.30 - 10.45 |**********************1496:1496***************** 22.30 - 22.45 |**********************1496:1496*****************
 10.45 - 11.00 |**********************1496:1496***************** 22.45 - 23.00 |**********************1496:1496*****************
 11.00 - 11.15 |**********************1496:1496***************** 23.00 - 23.15 |**********************1496:1496*****************
 11.15 - 11.30 |**********************1496:1496***************** 23.15 - 23.30 |**********************1496:1496*****************
 11.30 - 11.45 |**********************1496:1496***************** 23.30 - 23.45 |**********************1496:1496*****************
 11.45 - 12.00 |**********************1496:1496***************** 23.45 - 24.00 |**********************1496:1496*****************
               +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

NCP Free Buffer Low Watermark Graph

The NCP Free Buffer Low Watermark Graph shows, for a specified NCP selected through the INCLUDE/EXCLUDE facility, by day of the week, the average and peak daily average values of the minimum number of free buffers available in the NCP for each 15 minute period throughout the day. This is a key measure of whether or not the NCP has sufficient storage to support the communications workload.

The NCP Buffer Low Watermark Graph can be produced for a single day's activity or multiple days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

This graph is only available when a network monitoring facility such as Netview NPM, the NETSPY monitor, or the NET/MASTER monitor gathers information related to the physical configuration and utilization of the network and passes it to CIMS Capacity Planner through the SSA1NETW data reduction program.

Following is a sample of the NCP Free Buffer Low Watermark Graph:

```
VTAMID=TSO*                                   DAY SHOWN: MONDAY                                   SYSID:MVSB
                                               05/21/96-05/27/96
                                  NCP FREE BUFFER LOW WATER MARK GRAPH (*10)

 00.00 - 00.15 |**********************1493:1493**********  12.00 - 12.15 |**********************1454:1454**********
 00.15 - 00.30 |                      0000:0000              12.15 - 12.30 |**********************1475:1475**********
 00.30 - 00.45 |                      0000:0000              12.30 - 12.45 |**********************1489:1489**********
 00.45 - 01.00 |                      0000:0000              12.45 - 13.00 |**********************1487:1487**********
 01.00 - 01.15 |                      0000:0000              13.00 - 13.15 |**********************1486:1486**********
 01.15 - 01.30 |                      0000:0000              13.15 - 13.30 |**********************1486:1486**********
 01.30 - 01.45 |                      0000:0000              13.30 - 13.45 |**********************1486:1486**********
 01.45 - 02.00 |                      0000:0000              13.45 - 14.00 |**********************1479:1479**********
 02.00 - 02.15 |                      0000:0000              14.00 - 14.15 |**********************1481:1481**********
 02.15 - 02.30 |                      0000:0000              14.15 - 14.30 |**********************1481:1481**********
 02.30 - 02.45 |                      0000:0000              14.30 - 14.45 |**********************1481:1481**********
 02.45 - 03.00 |                      0000:0000              14.45 - 15.00 |**********************1485:1485**********
 03.00 - 03.15 |                      0000:0000              15.00 - 15.15 |**********************1484:1484**********
 03.15 - 03.30 |                      0000:0000              15.15 - 15.30 |**********************1484:1484**********
 03.30 - 03.45 |                      0000:0000              15.30 - 15.45 |**********************1485:1485**********
 03.45 - 04.00 |                      0000:0000              15.45 - 16.00 |**********************1486:1486**********
 04.00 - 04.15 |                      0000:0000              16.00 - 16.15 |**********************1486:1486**********
 04.15 - 04.30 |                      0000:0000              16.15 - 16.30 |**********************1479:1479**********
 04.30 - 04.45 |                      0000:0000              16.30 - 16.45 |**********************1482:1482**********
 04.45 - 05.00 |                      0000:0000              16.45 - 17.00 |**********************1481:1481**********
 05.00 - 05.15 |                      0000:0000              17.00 - 17.15 |**********************1483:1483**********
 05.15 - 05.30 |                      0000:0000              17.15 - 17.30 |**********************1485:1485**********
 05.30 - 05.45 |                      0000:0000              17.30 - 17.45 |**********************1482:1482**********
 05.45 - 06.00 |                      0000:0000              17.45 - 18.00 |**********************1491:1491**********
               +----+----+----+----+----+----+----+----+----+               +----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900          0...90..180..270..360..450..540..630..720..810..900


 06.00 - 06.15 |                      0000:0000              18.00 - 18.15 |**********************1491:1491**********
 06.15 - 06.30 |                      0000:0000              18.15 - 18.30 |**********************1493:1493**********
 06.30 - 06.45 |**********************1494:1494**********  18.30 - 18.45 |**********************1493:1493**********
 06.45 - 07.00 |**********************1484:1484**********  18.45 - 19.00 |**********************1492:1492**********
 07.00 - 07.15 |**********************1485:1485**********  19.00 - 19.15 |**********************1492:1492**********
 07.15 - 07.30 |**********************1490:1490**********  19.15 - 19.30 |**********************1489:1489**********
 07.30 - 07.45 |**********************1490:1490**********  19.30 - 19.45 |**********************1485:1485**********
 07.45 - 08.00 |**********************1487:1487**********  19.45 - 20.00 |**********************1488:1488**********
 08.00 - 08.15 |**********************1484:1484**********  20.00 - 20.15 |**********************1492:1492**********
 08.15 - 08.30 |**********************1482:1482**********  20.15 - 20.30 |**********************1494:1494**********
 08.30 - 08.45 |**********************1486:1486**********  20.30 - 20.45 |**********************1493:1493**********
 08.45 - 09.00 |**********************1487:1487**********  20.45 - 21.00 |**********************1494:1494**********
 09.00 - 09.15 |**********************1483:1483**********  21.00 - 21.15 |**********************1493:1493**********
 09.15 - 09.30 |**********************1484:1484**********  21.15 - 21.30 |**********************1496:1496**********
 09.30 - 09.45 |**********************1480:1480**********  21.30 - 21.45 |**********************1493:1493**********
 09.45 - 10.00 |**********************1481:1481**********  21.45 - 22.00 |**********************1494:1494**********
 10.00 - 10.15 |**********************1485:1485**********  22.00 - 22.15 |**********************1493:1493**********
 10.15 - 10.30 |**********************1485:1485**********  22.15 - 22.30 |**********************1492:1492**********
 10.30 - 10.45 |**********************1482:1482**********  22.30 - 22.45 |**********************1493:1493**********
 10.45 - 11.00 |**********************1474:1474**********  22.45 - 23.00 |**********************1496:1496**********
 11.00 - 11.15 |**********************1485:1485**********  23.00 - 23.15 |**********************1489:1489**********
 11.15 - 11.30 |**********************1485:1485**********  23.15 - 23.30 |**********************1494:1494**********
 11.30 - 11.45 |**********************1486:1486**********  23.30 - 23.45 |**********************1493:1493**********
 11.45 - 12.00 |**********************1485:1485**********  23.45 - 24.00 |**********************1496:1496**********
               +----+----+----+----+----+----+----+----+----+               +----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900          0...90..180..270..360..450..540..630..720..810..900

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

NCP Channel Hold Queue Length Graph

The NCP Channel Hold Queue Length Graph shows, for a specified NCP selected through the INCLUDE/EXCLUDE facility, by day of the week, the average and peak daily average number of entries in the channel hold queue for each 15 minute period throughout the day.

The NCP Hold Queue Length Graph can be produced for a single day's activity or multiple days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

Following is a sample of the NCP Channel Hold Queue Length Graph:

```
VTAMID=TSO*                                DAY SHOWN: MONDAY                                SYSID:MVSB
                                            05/21/96-05/27/96
                                  NCP CHANNEL HOLD QUEUE LENGTH GRAPH

  00.00 - 00.15 |*                    0002:0002          12.00 - 12.15 |***                  0005:0005
  00.15 - 00.30 |                     0000:0000          12.15 - 12.30 |***                  0005:0005
  00.30 - 00.45 |                     0000:0000          12.30 - 12.45 |***                  0006:0006
  00.45 - 01.00 |                     0000:0000          12.45 - 13.00 |***                  0006:0006
  01.00 - 01.15 |                     0000:0000          13.00 - 13.15 |***                  0005:0005
  01.15 - 01.30 |                     0000:0000          13.15 - 13.30 |***                  0006:0006
  01.30 - 01.45 |                     0000:0000          13.30 - 13.45 |***                  0006:0006
  01.45 - 02.00 |                     0000:0000          13.45 - 14.00 |***                  0005:0005
  02.00 - 02.15 |                     0000:0000          14.00 - 14.15 |***                  0006:0006
  02.15 - 02.30 |                     0000:0000          14.15 - 14.30 |***                  0005:0005
  02.30 - 02.45 |                     0000:0000          14.30 - 14.45 |***                  0006:0006
  02.45 - 03.00 |                     0000:0000          14.45 - 15.00 |***                  0005:0005
  03.00 - 03.15 |                     0000:0000          15.00 - 15.15 |***                  0005:0005
  03.15 - 03.30 |                     0000:0000          15.15 - 15.30 |***                  0006:0006
  03.30 - 03.45 |                     0000:0000          15.30 - 15.45 |***                  0005:0005
  03.45 - 04.00 |                     0000:0000          15.45 - 16.00 |***                  0005:0005
  04.00 - 04.15 |                     0000:0000          16.00 - 16.15 |***                  0005:0005
  04.15 - 04.30 |                     0000:0000          16.15 - 16.30 |***                  0005:0005
  04.30 - 04.45 |                     0000:0000          16.30 - 16.45 |**                   0004:0004
  04.45 - 05.00 |                     0000:0000          16.45 - 17.00 |**                   0004:0004
  05.00 - 05.15 |                     0000:0000          17.00 - 17.15 |***                  0005:0005
  05.15 - 05.30 |                     0000:0000          17.15 - 17.30 |**                   0004:0004
  05.30 - 05.45 |                     0000:0000          17.30 - 17.45 |**                   0004:0004
  05.45 - 06.00 |                     0000:0000          17.45 - 18.00 |**                   0004:0004
            +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
            0...10...20...30...40...50...60...70...80...90..100         0...10...20...30...40...50...60...70...80...90..100

  06.00 - 06.15 |                     0000:0000          18.00 - 18.15 |**                   0004:0004
  06.15 - 06.30 |                     0000:0000          18.15 - 18.30 |**                   0003:0003
  06.30 - 06.45 |**                   0003:0003          18.30 - 18.45 |**                   0004:0004
  06.45 - 07.00 |*                    0002:0002          18.45 - 19.00 |**                   0004:0004
  07.00 - 07.15 |**                   0003:0003          19.00 - 19.15 |**                   0003:0003
  07.15 - 07.30 |***                  0005:0005          19.15 - 19.30 |***                  0005:0005
  07.30 - 07.45 |***                  0005:0005          19.30 - 19.45 |**                   0004:0004
  07.45 - 08.00 |***                  0006:0006          19.45 - 20.00 |**                   0003:0003
  08.00 - 08.15 |***                  0006:0006          20.00 - 20.15 |**                   0003:0003
  08.15 - 08.30 |***                  0005:0005          20.15 - 20.30 |**                   0003:0003
  08.30 - 08.45 |***                  0005:0005          20.30 - 20.45 |**                   0003:0003
  08.45 - 09.00 |***                  0005:0005          20.45 - 21.00 |**                   0003:0003
  09.00 - 09.15 |***                  0006:0006          21.00 - 21.15 |**                   0003:0003
  09.15 - 09.30 |***                  0006:0006          21.15 - 21.30 |**                   0003:0003
  09.30 - 09.45 |***                  0005:0005          21.30 - 21.45 |**                   0003:0003
  09.45 - 10.00 |***                  0006:0006          21.45 - 22.00 |**                   0003:0003
  10.00 - 10.15 |***                  0006:0006          22.00 - 22.15 |**                   0003:0003
  10.15 - 10.30 |***                  0006:0006          22.15 - 22.30 |**                   0003:0003
  10.30 - 10.45 |***                  0006:0006          22.30 - 22.45 |**                   0003:0003
  10.45 - 11.00 |***                  0005:0005          22.45 - 23.00 |**                   0003:0003
  11.00 - 11.15 |***                  0006:0006          23.00 - 23.15 |**                   0003:0003
  11.15 - 11.30 |***                  0006:0006          23.15 - 23.30 |**                   0003:0003
  11.30 - 11.45 |***                  0006:0006          23.30 - 23.45 |**                   0003:0003
  11.45 - 12.00 |***                  0006:0006          23.45 - 24.00 |**                   0003:0003
            +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
            0...10...20...30...40...50...60...70...80...90..100         0...10...20...30...40...50...60...70...80...90..100

   LEGEND: (*) = AVERAGE  (-) = PEAK
```

Cluster Controller Inbound PIU Graph

The Cluster Controller Inbound PIU Graph shows, for a specified cluster controller, by day of the week, the average and peak daily average counts of inbound physical information units that were received from the Network into the host for each 15 minute period throughout the day.

The data used in calculating the graph values is limited by excluding selected cluster controllers through the use of the EXCLUDE facility. Separate sets of graphs are produced for selected cluster controllers through the use of the INCLUDE facility. The INCLUDE facility functions differently for the cluster controller graphs than for most other graphs. The INCLUDE facility normally limits the data used for calculating the values displayed on a graph to a specified set of lines, terminals, etc., specified in the INCLUDE list. In the case of the cluster controller graphs, the INCLUDE causes an individual set of graphs to be produced for each cluster controller specified in the INCLUDE list.

The Cluster Controller Inbound PIU Graph can be produced for a single day's activity or multiple days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

This graph is only available when a network monitoring facility such as Netview NPM, the NETSPY monitor, or the NET/MASTER monitor gathers information related to the physical configuration and utilization of the network and passes it to CIMS Capacity Planner through the SSA1NETW data reduction program.

Following is a sample of the Cluster Controller Inbound PIU Graph:

```
VTAMID=TSO*                                    DAY SHOWN: MONDAY                                    SYSID:MVSB
                                                 05/21/96-05/27/96
                                        CLUSTER CONTROLLER INBOUND PIU GRAPH

 00.00 - 00.15 |                    0000:0000              12.00 - 12.15 |**********************7466:7466*****************
 00.15 - 00.30 |                    0000:0000              12.15 - 12.30 |**********************8314:8314*****************
 00.30 - 00.45 |                    0000:0000              12.30 - 12.45 |**********************0841:0841*****************
 00.45 - 01.00 |                    0000:0000              12.45 - 13.00 |**********************6305:6305*****************
 01.00 - 01.15 |                    0000:0000              13.00 - 13.15 |**********************7962:7962*****************
 01.15 - 01.30 |                    0000:0000              13.15 - 13.30 |**********************5867:5867*****************
 01.30 - 01.45 |                    0000:0000              13.30 - 13.45 |**********************9953:9953*****************
 01.45 - 02.00 |                    0000:0000              13.45 - 14.00 |**********************9995:9995*****************
 02.00 - 02.15 |                    0000:0000              14.00 - 14.15 |**********************3406:3406*****************
 02.15 - 02.30 |                    0000:0000              14.15 - 14.30 |**********************0391:0391*****************
 02.30 - 02.45 |                    0000:0000              14.30 - 14.45 |**********************1774:1774*****************
 02.45 - 03.00 |                    0000:0000              14.45 - 15.00 |**********************0783:0783*****************
 03.00 - 03.15 |                    0000:0000              15.00 - 15.15 |**********************1905:1905*****************
 03.15 - 03.30 |                    0000:0000              15.15 - 15.30 |**********************8508:8508*****************
 03.30 - 03.45 |                    0000:0000              15.30 - 15.45 |**********************9352:9352*****************
 03.45 - 04.00 |                    0000:0000              15.45 - 16.00 |**********************7245:7245*****************
 04.00 - 04.15 |                    0000:0000              16.00 - 16.15 |**********************7670:7670*****************
 04.15 - 04.30 |                    0000:0000              16.15 - 16.30 |**********************6193:6193*****************
 04.30 - 04.45 |                    0000:0000              16.30 - 16.45 |**********************4470:4470*****************
 04.45 - 05.00 |                    0000:0000              16.45 - 17.00 |**********************5982:5982*****************
 05.00 - 05.15 |                    0000:0000              17.00 - 17.15 |**********************8286:8286*****************
 05.15 - 05.30 |                    0000:0000              17.15 - 17.30 |**********************1338:1338*****************
 05.30 - 05.45 |                    0000:0000              17.30 - 17.45 |**********************9289:9289*****************
 05.45 - 06.00 |                    0000:0000              17.45 - 18.00 |**********************6257:6257*****************
            +----+----+----+----+----+----+----+----+----+----+            +----+----+----+----+----+----+----+----+----+----+
            0...90..180..270..360..450..540..630..720..810..900            0...90..180..270..360..450..540..630..720..810..900


 06.00 - 06.15 |                    0000:0000              18.00 - 18.15 |**********************4614:4614*****************
 06.15 - 06.30 |                    0000:0000              18.15 - 18.30 |**********************2443:2443*****************
 06.30 - 06.45 |**********************1049:1049***************** 18.30 - 18.45 |**********************3593:3593*****************
 06.45 - 07.00 |**********************1624:1624***************** 18.45 - 19.00 |**********************3347:3347*****************
 07.00 - 07.15 |**********************3925:3925***************** 19.00 - 19.15 |**********************2750:2750*****************
 07.15 - 07.30 |**********************5032:5032***************** 19.15 - 19.30 |**********************2125:2125*****************
 07.30 - 07.45 |**********************2998:2998***************** 19.30 - 19.45 |**********************2224:2224*****************
 07.45 - 08.00 |**********************7502:7502***************** 19.45 - 20.00 |**********************1787:1787*****************
 08.00 - 08.15 |**********************6286:6286***************** 20.00 - 20.15 |**********************0765:0765**********
 08.15 - 08.30 |**********************1080:1080***************** 20.15 - 20.30 |***************          0254:0254
 08.30 - 08.45 |**********************1858:1858***************** 20.30 - 20.45 |**********************0575:0575
 08.45 - 09.00 |**********************9737:9737***************** 20.45 - 21.00 |**********************0442:0442
 09.00 - 09.15 |**********************7406:7406***************** 21.00 - 21.15 |******************       0319:0319
 09.15 - 09.30 |**********************3888:3888***************** 21.15 - 21.30 |******                     0104:0104
 09.30 - 09.45 |**********************3623:3623***************** 21.30 - 21.45 |********************     0345:0345
 09.45 - 10.00 |**********************5122:5122***************** 21.45 - 22.00 |********                   0130:0130
 10.00 - 10.15 |**********************7578:7578***************** 22.00 - 22.15 |********************     0349:0349
 10.15 - 10.30 |**********************1765:1765***************** 22.15 - 22.30 |************************ 0401:0401
 10.30 - 10.45 |**********************7953:7953***************** 22.30 - 22.45 |*****************        0301:0301
 10.45 - 11.00 |**********************8651:8651***************** 22.45 - 23.00 |*****                      0089:0089
 11.00 - 11.15 |**********************6169:6169***************** 23.00 - 23.15 |**********************0461:0461
 11.15 - 11.30 |**********************8459:8459***************** 23.15 - 23.30 |******                     0095:0095
 11.30 - 11.45 |**********************7930:7930***************** 23.30 - 23.45 |*****************        0301:0301
 11.45 - 12.00 |**********************4725:4725***************** 23.45 - 24.00 |******                     0091:0091
            +----+----+----+----+----+----+----+----+----+----+            +----+----+----+----+----+----+----+----+----+----+
            0...90..180..270..360..450..540..630..720..810..900            0...90..180..270..360..450..540..630..720..810..900

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Network Cluster Controller Outbound PIU Graph

The Cluster Controller Outbound PIU Graph shows, for a specified cluster controller, by day of the week, the average and peak counts of outbound PIUs that were transmitted from the host to cluster controllers on the network.

The data used in calculating the graph values is limited by excluding selected cluster controllers through the use of the EXCLUDE facility. Separate sets of graphs are produced for selected cluster controllers through the use of the INCLUDE facility. The INCLUDE facility functions differently for the cluster controller graphs than for most other graphs. The Include facility normally limits the data used for calculating the values displayed on a graph to a specified set of lines, terminals, etc specified in the INCLUDE list. In the case of the cluster controller graphs, the INCLUDE causes an individual set of graphs to be produced for each cluster controller specified in the INCLUDE list.

The Network Cluster Controller Outbound PIU Graph can be produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

This graph is only available when a network monitoring facility such as Netview NPM, the NETSPY monitor, or the NET/MASTER monitor gathers information related to the physical configuration and utilization of the network and passes it to CIMS Capacity Planner through the SSA1NETW data reduction program.

Following is a sample of the Cluster Controller Outbound PIU Graph:

```
VTAMID=TSO*                                  DAY SHOWN: MONDAY                                  SYSID:MVSB
                                              05/21/96-05/27/96
                                    CLUSTER CONTROL OUTBOUND PIU GRAPH

 00.00 - 00.15 |                        0000:0000                 12.00 - 12.15 |************************1031:1031*****************
 00.15 - 00.30 |                        0000:0000                 12.15 - 12.30 |************************7754:7754*****************
 00.30 - 00.45 |                        0000:0000                 12.30 - 12.45 |************************9485:9485*****************
 00.45 - 01.00 |                        0000:0000                 12.45 - 13.00 |************************2913:2913*****************
 01.00 - 01.15 |                        0000:0000                 13.00 - 13.15 |************************8361:8361*****************
 01.15 - 01.30 |                        0000:0000                 13.15 - 13.30 |************************8398:8398*****************
 01.30 - 01.45 |                        0000:0000                 13.30 - 13.45 |************************7008:7008*****************
 01.45 - 02.00 |                        0000:0000                 13.45 - 14.00 |************************9502:9502*****************
 02.00 - 02.15 |                        0000:0000                 14.00 - 14.15 |************************1556:1556*****************
 02.15 - 02.30 |                        0000:0000                 14.15 - 14.30 |************************3844:3844*****************
 02.30 - 02.45 |                        0000:0000                 14.30 - 14.45 |************************4506:4506*****************
 02.45 - 03.00 |                        0000:0000                 14.45 - 15.00 |************************6294:6294*****************
 03.00 - 03.15 |                        0000:0000                 15.00 - 15.15 |************************5524:5524*****************
 03.15 - 03.30 |                        0000:0000                 15.15 - 15.30 |************************5491:5491*****************
 03.30 - 03.45 |                        0000:0000                 15.30 - 15.45 |************************3465:3465*****************
 03.45 - 04.00 |                        0000:0000                 15.45 - 16.00 |************************0899:0899*****************
 04.00 - 04.15 |                        0000:0000                 16.00 - 16.15 |************************4744:4744*****************
 04.15 - 04.30 |                        0000:0000                 16.15 - 16.30 |************************6891:6891*****************
 04.30 - 04.45 |                        0000:0000                 16.30 - 16.45 |************************5934:5934*****************
 04.45 - 05.00 |                        0000:0000                 16.45 - 17.00 |************************9924:9924*****************
 05.00 - 05.15 |                        0000:0000                 17.00 - 17.15 |************************0930:0930*****************
 05.15 - 05.30 |                        0000:0000                 17.15 - 17.30 |************************7238:7238*****************
 05.30 - 05.45 |                        0000:0000                 17.30 - 17.45 |************************6811:6811*****************
 05.45 - 06.00 |                        0000:0000                 17.45 - 18.00 |************************3873:3873*****************
             +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
             0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900


 06.00 - 06.15 |                        0000:0000                 18.00 - 18.15 |************************3005:3005*****************
 06.15 - 06.30 |                        0000:0000                 18.15 - 18.30 |************************1526:1526*****************
 06.30 - 06.45 |************************0868:0868*****************  18.30 - 18.45 |************************2286:2286*****************
 06.45 - 07.00 |************************2723:2723***************** 18.45 - 19.00 |************************2022:2022*****************
 07.00 - 07.15 |************************3077:3077***************** 19.00 - 19.15 |************************1703:1703*****************
 07.15 - 07.30 |************************3920:3920***************** 19.15 - 19.30 |************************1503:1503*****************
 07.30 - 07.45 |************************1373:1373***************** 19.30 - 19.45 |************************2063:2063*****************
 07.45 - 08.00 |************************3973:3973***************** 19.45 - 20.00 |************************1644:1644*****************
 08.00 - 08.15 |************************0189:0189***************** 20.00 - 20.15 |************************0561:0561
 08.15 - 08.30 |************************2125:2125***************** 20.15 - 20.30 |*******                  0125:0125
 08.30 - 08.45 |************************1875:1875***************** 20.30 - 20.45 |************************0417:0417
 08.45 - 09.00 |************************9539:9539***************** 20.45 - 21.00 |***************          0266:0266
 09.00 - 09.15 |************************3313:3313***************** 21.00 - 21.15 |***************          0256:0256
 09.15 - 09.30 |************************2338:2338***************** 21.15 - 21.30 |**                       0035:0035
 09.30 - 09.45 |************************2891:2891***************** 21.30 - 21.45 |*****************        0282:0282
 09.45 - 10.00 |************************1542:1542***************** 21.45 - 22.00 |****                     0068:0068
 10.00 - 10.15 |************************0966:0966***************** 22.00 - 22.15 |*****************        0280:0280
 10.15 - 10.30 |************************9231:9231***************** 22.15 - 22.30 |**************           0248:0248
 10.30 - 10.45 |************************0814:0814***************** 22.30 - 22.45 |**************           0246:0246
 10.45 - 11.00 |************************4167:4167***************** 22.45 - 23.00 |**                       0034:0034
 11.00 - 11.15 |************************3823:3823***************** 23.00 - 23.15 |**********************   0363:0363
 11.15 - 11.30 |************************5275:5275***************** 23.15 - 23.30 |**                       0030:0030
 11.30 - 11.45 |************************1883:1883***************** 23.30 - 23.45 |**************           0246:0246
 11.45 - 12.00 |************************2280:2280***************** 23.45 - 24.00 |**                       0035:0035
             +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
             0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Cluster Controller Inbound Traffic Graph

The Cluster Controller Inbound Traffic Graph shows, for a specified cluster controller or group of cluster controllers specified through the INCLUDE/EXCLUDE facility, by day of the week, the average and peak daily average number of bytes per second transmitted across the line(s) in transmitting input data from the cluster controllers to the host. The values are graphed for each 15 minute period throughout the day.

The data used in calculating the graph values is limited by excluding selected cluster controllers through the use of the EXCLUDE facility. Separate sets of graphs are produced for selected cluster controllers through the use of the INCLUDE facility. The INCLUDE facility functions differently for the cluster controller graphs than for most other graphs. The INCLUDE facility normally limits the data used for calculating the values displayed on a graph to a specified set of lines, terminals, etc specified in the INCLUDE list. In the case of the cluster controller graphs, the INCLUDE causes an individual set of graphs to be produced for each cluster controller specified in the INCLUDE list.

The Cluster Controller Inbound Traffic Graph can be produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

This graph is only available when a network monitoring facility such as Netview NPM, the NETSPY monitor, or the NET/MASTER monitor gathers information related to the physical configuration and utilization of the network and passes it to CIMS Capacity Planner through the SSA1NETW data reduction program.

Following is a sample of the Cluster Controller Inbound Traffic Graph:

```
VTAMID=TSO*                                    DAY SHOWN: MONDAY                                    SYSID:MVSB
                                                 05/21/96-05/27/96
                                CLUSTER CONTROLLER INBOUND TRAFFIC GRAPH (CHARS/SEC)

 00.00 - 00.15 |                        0000:0000                12.00 - 12.15 |************************4440:4440*****************
 00.15 - 00.30 |                        0000:0000                12.15 - 12.30 |************************4491:4491*****************
 00.30 - 00.45 |                        0000:0000                12.30 - 12.45 |************************5415:5415*****************
 00.45 - 01.00 |                        0000:0000                12.45 - 13.00 |************************4222:4222*****************
 01.00 - 01.15 |                        0000:0000                13.00 - 13.15 |************************4809:4809*****************
 01.15 - 01.30 |                        0000:0000                13.15 - 13.30 |************************3593:3593*****************
 01.30 - 01.45 |                        0000:0000                13.30 - 13.45 |************************5064:5064*****************
 01.45 - 02.00 |                        0000:0000                13.45 - 14.00 |************************4570:4570*****************
 02.00 - 02.15 |                        0000:0000                14.00 - 14.15 |************************5490:5490*****************
 02.15 - 02.30 |                        0000:0000                14.15 - 14.30 |************************4427:4427*****************
 02.30 - 02.45 |                        0000:0000                14.30 - 14.45 |************************5845:5845*****************
 02.45 - 03.00 |                        0000:0000                14.45 - 15.00 |************************6092:6092*****************
 03.00 - 03.15 |                        0000:0000                15.00 - 15.15 |************************7519:7519*****************
 03.15 - 03.30 |                        0000:0000                15.15 - 15.30 |************************5629:5629*****************
 03.30 - 03.45 |                        0000:0000                15.30 - 15.45 |************************4596:4596*****************
 03.45 - 04.00 |                        0000:0000                15.45 - 16.00 |************************6532:6532*****************
 04.00 - 04.15 |                        0000:0000                16.00 - 16.15 |************************4642:4642*****************
 04.15 - 04.30 |                        0000:0000                16.15 - 16.30 |************************3648:3648*****************
 04.30 - 04.45 |                        0000:0000                16.30 - 16.45 |************************2048:2048*****************
 04.45 - 05.00 |                        0000:0000                16.45 - 17.00 |************************1959:1959*****************
 05.00 - 05.15 |                        0000:0000                17.00 - 17.15 |************************3467:3467*****************
 05.15 - 05.30 |                        0000:0000                17.15 - 17.30 |************************1122:1122*****************
 05.30 - 05.45 |                        0000:0000                17.30 - 17.45 |************************2062:2062*****************
 05.45 - 06.00 |                          0000:0000                17.45 - 18.00 |************************0764:0764**********
               +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900


 06.00 - 06.15 |                        0000:0000                18.00 - 18.15 |************************1726:1726*****************
 06.15 - 06.30 |                          0000:0000                18.15 - 18.30 |****************           0266:0266
 06.30 - 06.45 |************************3089:3089***************** 18.30 - 18.45 |************************1659:1659*****************
 06.45 - 07.00 |*************            0232:0232                  18.45 - 19.00 |********************     0348:0348
 07.00 - 07.15 |************************1764:1764***************** 19.00 - 19.15 |************************1591:1591*****************
 07.15 - 07.30 |************************1436:1436***************** 19.15 - 19.30 |************             0181:0181
 07.30 - 07.45 |************************3066:3066***************** 19.30 - 19.45 |************************1641:1641*****************
 07.45 - 08.00 |************************3127:3127***************** 19.45 - 20.00 |*************            0224:0224
 08.00 - 08.15 |************************4753:4753***************** 20.00 - 20.15 |************************1465:1465*****************
 08.15 - 08.30 |************************4564:4564***************** 20.15 - 20.30 |******                     0093:0093
 08.30 - 08.45 |************************5385:5385***************** 20.30 - 20.45 |************************1459:1459*****************
 08.45 - 09.00 |************************4412:4412***************** 20.45 - 21.00 |********                   0140:0140
 09.00 - 09.15 |************************4340:4340***************** 21.00 - 21.15 |************************1444:1444*****************
 09.15 - 09.30 |************************4592:4592***************** 21.15 - 21.30 |*****                      0088:0088
 09.30 - 09.45 |************************5106:5106***************** 21.30 - 21.45 |************************1447:1447*****************
 09.45 - 10.00 |************************5355:5355***************** 21.45 - 22.00 |*********                  0153:0153
 10.00 - 10.15 |************************4344:4344***************** 22.00 - 22.15 |************************1445:1445*****************
 10.15 - 10.30 |************************5308:5308***************** 22.15 - 22.30 |************             0216:0216
 10.30 - 10.45 |************************7567:7567***************** 22.30 - 22.45 |************************1441:1441*****************
 10.45 - 11.00 |************************6119:6119***************** 22.45 - 23.00 |*******                    0115:0115
 11.00 - 11.15 |************************5121:5121***************** 23.00 - 23.15 |************************1456:1456*****************
 11.15 - 11.30 |************************5941:5941***************** 23.15 - 23.30 |*****                      0089:0089
 11.30 - 11.45 |************************6235:6235***************** 23.30 - 23.45 |************************1441:1441*****************
 11.45 - 12.00 |************************5447:5447***************** 23.45 - 24.00 |*****                      0086:0086
               +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Cluster Controller Outbound Traffic Graph

The Cluster Controller Outbound Traffic Graph shows, for a specified cluster controller or group of cluster controllers specified through the INCLUDE/EXCLUDE facility, by day of the week, the average and peak daily average number of bytes per second transmitted across the line(s) in transmitting response data from the host to the terminals. The values are graphed for each 15 minute period throughout the day.

The data used in calculating the graph values is limited by excluding selected cluster controllers through the use of the EXCLUDE facility. Separate sets of graphs are produced for selected cluster controllers through the use of the INCLUDE facility. The INCLUDE facility functions differently for the cluster controller graphs than for most other graphs. The INCLUDE facility normally limits the data used for calculating the values displayed on a graph to a specified set of lines, terminals, etc specified in the INCLUDE list. In the case of the cluster controller graphs, the INCLUDE causes an individual set of graphs to be produced for each cluster controller specified in the INCLUDE list.

The Cluster Controller Outbound Traffic Graph can be produced for a single day's activity or multiple days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

This graph is only available when a network monitoring facility such as Netview NPM, the NETSPY monitor, or the NET/MASTER monitor gathers information related to the physical configuration and utilization of the network and passes it to CIMS Capacity Planner through the SSA1NETW data reduction program.

Following is a sample of the Cluster Controller Outbound Traffic Graph:

```
VTAMID=TSO*                                    DAY SHOWN: MONDAY                                    SYSID:MVSB
                                                 05/21/96-05/27/96
                                CLUSTER CONTROL OUTBOUND TRAFFIC GRAPH (CHARS/SEC)

 00.00 - 00.15 |                      0000:0000              12.00 - 12.15 |************************1439:1439*****************
 00.15 - 00.30 |                      0000:0000              12.15 - 12.30 |************************9870:9870*****************
 00.30 - 00.45 |                      0000:0000              12.30 - 12.45 |************************1604:1604*****************
 00.45 - 01.00 |                      0000:0000              12.45 - 13.00 |************************4341:4341*****************
 01.00 - 01.15 |                      0000:0000              13.00 - 13.15 |************************0488:0488*****************
 01.15 - 01.30 |                      0000:0000              13.15 - 13.30 |************************9613:9613*****************
 01.30 - 01.45 |                      0000:0000              13.30 - 13.45 |************************0524:0524*****************
 01.45 - 02.00 |                      0000:0000              13.45 - 14.00 |************************1193:1193*****************
 02.00 - 02.15 |                      0000:0000              14.00 - 14.15 |************************3307:3307*****************
 02.15 - 02.30 |                      0000:0000              14.15 - 14.30 |************************3074:3074*****************
 02.30 - 02.45 |                      0000:0000              14.30 - 14.45 |************************3528:3528*****************
 02.45 - 03.00 |                      0000:0000              14.45 - 15.00 |************************6833:6833*****************
 03.00 - 03.15 |                      0000:0000              15.00 - 15.15 |************************3442:3442*****************
 03.15 - 03.30 |                      0000:0000              15.15 - 15.30 |************************4348:4348*****************
 03.30 - 03.45 |                      0000:0000              15.30 - 15.45 |************************4088:4088*****************
 03.45 - 04.00 |                      0000:0000              15.45 - 16.00 |************************0955:0955*****************
 04.00 - 04.15 |                      0000:0000              16.00 - 16.15 |************************9170:9170*****************
 04.15 - 04.30 |                      0000:0000              16.15 - 16.30 |************************0557:0557*****************
 04.30 - 04.45 |                      0000:0000              16.30 - 16.45 |************************3475:3475*****************
 04.45 - 05.00 |                      0000:0000              16.45 - 17.00 |************************6219:6219*****************
 05.00 - 05.15 |                      0000:0000              17.00 - 17.15 |************************6937:6937*****************
 05.15 - 05.30 |                      0000:0000              17.15 - 17.30 |************************4827:4827*****************
 05.30 - 05.45 |                      0000:0000              17.30 - 17.45 |************************6912:6912*****************
 05.45 - 06.00 |                      0000:0000              17.45 - 18.00 |************************2495:2495*****************
               +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900


 06.00 - 06.15 |                      0000:0000              18.00 - 18.15 |************************3027:3027*****************
 06.15 - 06.30 |                      0000:0000              18.15 - 18.30 |************************1155:1155*****************
 06.30 - 06.45 |************************3449:3449***************** 18.30 - 18.45 |************************2719:2719*****************
 06.45 - 07.00 |************************3375:3375***************** 18.45 - 19.00 |************************1315:1315*****************
 07.00 - 07.15 |************************2369:2369***************** 19.00 - 19.15 |************************2426:2426*****************
 07.15 - 07.30 |************************1955:1955***************** 19.15 - 19.30 |************************1483:1483*****************
 07.30 - 07.45 |************************4555:4555***************** 19.30 - 19.45 |************************3600:3600*****************
 07.45 - 08.00 |************************4772:4772***************** 19.45 - 20.00 |************************1723:1723*****************
 08.00 - 08.15 |************************9325:9325***************** 20.00 - 20.15 |************************1550:1550*****************
 08.15 - 08.30 |************************0357:0357***************** 20.15 - 20.30 |*******                  0123:0123
 08.30 - 08.45 |************************1585:1585***************** 20.30 - 20.45 |************************1506:1506*****************
 08.45 - 09.00 |************************1226:1226***************** 20.45 - 21.00 |*************            0222:0222
 09.00 - 09.15 |************************5211:5211***************** 21.00 - 21.15 |************************1412:1412*****************
 09.15 - 09.30 |************************3747:3747***************** 21.15 - 21.30 |****                     0061:0061
 09.30 - 09.45 |************************6611:6611***************** 21.30 - 21.45 |************************1418:1418*****************
 09.45 - 10.00 |************************1938:1938***************** 21.45 - 22.00 |********                 0127:0127
 10.00 - 10.15 |************************2520:2520***************** 22.00 - 22.15 |************************1428:1428*****************
 10.15 - 10.30 |************************8970:8970***************** 22.15 - 22.30 |***********              0187:0187
 10.30 - 10.45 |************************7037:7037***************** 22.30 - 22.45 |************************1410:1410*****************
 10.45 - 11.00 |************************3969:3969***************** 22.45 - 23.00 |*****                    0090:0090
 11.00 - 11.15 |************************6287:6287***************** 23.00 - 23.15 |************************1429:1429*****************
 11.15 - 11.30 |************************3456:3456***************** 23.15 - 23.30 |****                     0061:0061
 11.30 - 11.45 |************************2033:2033***************** 23.30 - 23.45 |************************1410:1410*****************
 11.45 - 12.00 |************************2858:2858***************** 23.45 - 24.00 |****                     0061:0061
               +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Cluster Controller Retransmitted Traffic Graph

The Cluster Controller Retransmitted Traffic Graph shows, for a specified cluster controller or group of cluster controllers specified through the INCLUDE/EXCLUDE facility, by day of the week, the average and peak daily average number of bytes per second transmitted across the line(s) in retransmitting response data from the host to the specified controller(s). The values are graphed for each 15 minute period throughout the day.

The data used in calculating the graph values is limited by excluding selected cluster controllers through the use of the EXCLUDE facility. Separate sets of graphs are produced for selected cluster controllers through the use of the INCLUDE facility. The INCLUDE facility functions differently for the cluster controller graphs than for most other graphs. The Include facility normally limits the data used for calculating the values displayed on a graph to a specified set of lines, terminals, etc specified in the INCLUDE list. In the case of the cluster controller graphs, the INCLUDE causes an individual set of graphs to be produced for each cluster controller specified in the INCLUDE list.

The Cluster Controller Retransmitted Traffic Graph can be produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

This graph is only available when a network monitoring facility such as Netview NPM, the NETSPY monitor, or the NET/MASTER monitor gathers information related to the physical configuration and utilization of the network and passes it to CIMS Capacity Planner through the SSA1NETW data reduction program.

Following is a sample of the Cluster Controller Retransmitted Traffic Graph:

```
VTAMID=TSO*                                    DAY SHOWN: MONDAY                                    SYSID:MVSB
                                                 05/21/96-05/27/96
                                CLUSTER CONTROL RETRANSMITTED TRAFFIC GRAPH (CHARS)

 00.00 - 00.15 |                          0000:0000                 12.00 - 12.15 |**************          0240:0240
 00.15 - 00.30 |                          0000:0000                 12.15 - 12.30 |                          0000:0000
 00.30 - 00.45 |                          0000:0000                 12.30 - 12.45 |                          0000:0000
 00.45 - 01.00 |                          0000:0000                 12.45 - 13.00 |                          0000:0000
 01.00 - 01.15 |                        0000:0000                 13.00 - 13.15 |************************1356:1356*****************
 01.15 - 01.30 |                          0000:0000                 13.15 - 13.30 |                          0000:0000
 01.30 - 01.45 |                        0000:0000                 13.30 - 13.45 |************************2030:2030*****************
 01.45 - 02.00 |                        0000:0000                 13.45 - 14.00 |************************5092:5092*****************
 02.00 - 02.15 |                        0000:0000                 14.00 - 14.15 |************************2444:2444*****************
 02.15 - 02.30 |                        0000:0000                 14.15 - 14.30 |************************2842:2842*****************
 02.30 - 02.45 |                        0000:0000                 14.30 - 14.45 |************************1488:1488*****************
 02.45 - 03.00 |                        0000:0000                 14.45 - 15.00 |************************2130:2130*****************
 03.00 - 03.15 |                        0000:0000                 15.00 - 15.15 |************************3528:3528*****************
 03.15 - 03.30 |                        0000:0000                 15.15 - 15.30 |************************2220:2220*****************
 03.30 - 03.45 |                        0000:0000                 15.30 - 15.45 |************************3648:3648*****************
 03.45 - 04.00 |                        0000:0000                 15.45 - 16.00 |************************1045:1045*****************
 04.00 - 04.15 |                          0000:0000                 16.00 - 16.15 |                          0000:0000
 04.15 - 04.30 |                          0000:0000                 16.15 - 16.30 |                          0000:0000
 04.30 - 04.45 |                          0000:0000                 16.30 - 16.45 |                          0000:0000
 04.45 - 05.00 |                          0000:0000                 16.45 - 17.00 |                          0000:0000
 05.00 - 05.15 |                          0000:0000                 17.00 - 17.15 |                          0000:0000
 05.15 - 05.30 |                          0000:0000                 17.15 - 17.30 |                          0000:0000
 05.30 - 05.45 |                          0000:0000                 17.30 - 17.45 |                          0000:0000
 05.45 - 06.00 |                          0000:0000                 17.45 - 18.00 |                          0000:0000
               +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900


 06.00 - 06.15 |                          0000:0000                 18.00 - 18.15 |                          0000:0000
 06.15 - 06.30 |                          0000:0000                 18.15 - 18.30 |                          0000:0000
 06.30 - 06.45 |                          0000:0000                 18.30 - 18.45 |                          0000:0000
 06.45 - 07.00 |                          0000:0000                 18.45 - 19.00 |                          0000:0000
 07.00 - 07.15 |                          0000:0000                 19.00 - 19.15 |                          0000:0000
 07.15 - 07.30 |                          0000:0000                 19.15 - 19.30 |                          0000:0000
 07.30 - 07.45 |*                         0017:0017                 19.30 - 19.45 |                          0000:0000
 07.45 - 08.00 |************************1130:1130***************** 19.45 - 20.00 |                          0000:0000
 08.00 - 08.15 |                          0000:0000                 20.00 - 20.15 |                          0000:0000
 08.15 - 08.30 |                          0000:0000                 20.15 - 20.30 |                          0000:0000
 08.30 - 08.45 |************************5772:5772***************** 20.30 - 20.45 |                          0000:0000
 08.45 - 09.00 |************************1360:1360***************** 20.45 - 21.00 |                          0000:0000
 09.00 - 09.15 |********************     0360:0360                 21.00 - 21.15 |                          0000:0000
 09.15 - 09.30 |************************3080:3080***************** 21.15 - 21.30 |                          0000:0000
 09.30 - 09.45 |                          0000:0000                 21.30 - 21.45 |                          0000:0000
 09.45 - 10.00 |                          0000:0000                 21.45 - 22.00 |                          0000:0000
 10.00 - 10.15 |                          0000:0000                 22.00 - 22.15 |                          0000:0000
 10.15 - 10.30 |************************0723:0723********          22.15 - 22.30 |************************ 0402:0402
 10.30 - 10.45 |********************     0326:0326                 22.30 - 22.45 |                          0000:0000
 10.45 - 11.00 |                          0000:0000                 22.45 - 23.00 |                          0000:0000
 11.00 - 11.15 |                          0000:0000                 23.00 - 23.15 |                          0000:0000
 11.15 - 11.30 |                          0000:0000                 23.15 - 23.30 |                          0000:0000
 11.30 - 11.45 |************************1368:1368***************** 23.30 - 23.45 |                          0000:0000
 11.45 - 12.00 |                          0000:0000                 23.45 - 24.00 |                          0000:0000
               +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
               0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Cluster Controller Total Traffic Graph

The Cluster Controller Total Traffic Graph shows, for a specified cluster controller or group of cluster controllers specified through the INCLUDE/EXCLUDE facility, by day of the week, the average and peak daily average number of bytes per second transmitted across the line(s) in transmitting inbound and outbound messages to/from the host and retransmitting response data from the host to the cluster controllers. The values are graphed for each 15 minute period throughout the day.

The data used in calculating the graph values is limited by excluding selected cluster controllers through the use of the EXCLUDE facility. Separate sets of graphs are produced for selected cluster controllers through the use of the INCLUDE facility. The INCLUDE facility functions differently for the cluster controller graphs than for most other graphs. The INCLUDE facility normally limits the data used for calculating the values displayed on a graph to a specified set of lines, terminals, etc., specified in the INCLUDE list. In the case of the cluster controller graphs, the INCLUDE causes an individual set of graphs to be produced for each cluster controller specified in the INCLUDE list.

The Cluster Controller Total Traffic Graph can be produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

This graph is only available when a network monitoring facility such as Netview NPM, the NETSPY monitor, or the NET/MASTER monitor gathers information related to the physical configuration and utilization of the network and passes it to CIMS Capacity Planner through the SSA1NETW data reduction program.

Following is a sample of the Cluster Controller Total Traffic Graph:

```
VTAMID=TSO*                                    DAY SHOWN: MONDAY                                    SYSID:MVSB
                                                 05/21/96-05/27/96
                                CLUSTER CONTROLLER TOTAL TRAFFIC GRAPH (CHARS/SEC)

 00.00 - 00.15 |                        0000:0000                12.00 - 12.15 |************************5902:5902*****************
 00.15 - 00.30 |                        0000:0000                12.15 - 12.30 |************************4384:4384*****************
 00.30 - 00.45 |                        0000:0000                12.30 - 12.45 |************************7040:7040*****************
 00.45 - 01.00 |                        0000:0000                12.45 - 13.00 |************************8586:8586*****************
 01.00 - 01.15 |                        0000:0000                13.00 - 13.15 |************************5320:5320*****************
 01.15 - 01.30 |                        0000:0000                13.15 - 13.30 |************************3221:3221*****************
 01.30 - 01.45 |                        0000:0000                13.30 - 13.45 |************************5611:5611*****************
 01.45 - 02.00 |                        0000:0000                13.45 - 14.00 |************************5781:5781*****************
 02.00 - 02.15 |                        0000:0000                14.00 - 14.15 |************************8820:8820*****************
 02.15 - 02.30 |                        0000:0000                14.15 - 14.30 |************************7520:7520*****************
 02.30 - 02.45 |                        0000:0000                14.30 - 14.45 |************************9400:9400*****************
 02.45 - 03.00 |                        0000:0000                14.45 - 15.00 |************************2943:2943*****************
 03.00 - 03.15 |                        0000:0000                15.00 - 15.15 |************************0991:0991*****************
 03.15 - 03.30 |                        0000:0000                15.15 - 15.30 |************************9997:9997*****************
 03.30 - 03.45 |                        0000:0000                15.30 - 15.45 |************************8706:8706*****************
 03.45 - 04.00 |                        0000:0000                15.45 - 16.00 |************************7504:7504*****************
 04.00 - 04.15 |                        0000:0000                16.00 - 16.15 |************************3827:3827*****************
 04.15 - 04.30 |                        0000:0000                16.15 - 16.30 |************************4218:4218*****************
 04.30 - 04.45 |                        0000:0000                16.30 - 16.45 |************************5538:5538*****************
 04.45 - 05.00 |                        0000:0000                16.45 - 17.00 |************************8189:8189*****************
 05.00 - 05.15 |                        0000:0000                17.00 - 17.15 |************************0416:0416*****************
 05.15 - 05.30 |                        0000:0000                17.15 - 17.30 |************************5953:5953*****************
 05.30 - 05.45 |                        0000:0000                17.30 - 17.45 |************************8980:8980*****************
 05.45 - 06.00 |                        0000:0000                17.45 - 18.00 |************************3263:3263*****************
             +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
             0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900


 06.00 - 06.15 |                        0000:0000                18.00 - 18.15 |************************4760:4760*****************
 06.15 - 06.30 |                        0000:0000                18.15 - 18.30 |************************1425:1425*****************
 06.30 - 06.45 |************************6545:6545***************** 18.30 - 18.45 |************************4385:4385*****************
 06.45 - 07.00 |************************3609:3609***************** 18.45 - 19.00 |************************1666:1666*****************
 07.00 - 07.15 |************************4145:4145***************** 19.00 - 19.15 |************************4023:4023*****************
 07.15 - 07.30 |************************3407:3407***************** 19.15 - 19.30 |************************1668:1668*****************
 07.30 - 07.45 |************************7636:7636***************** 19.30 - 19.45 |************************5248:5248*****************
 07.45 - 08.00 |************************7910:7910***************** 19.45 - 20.00 |************************1951:1951*****************
 08.00 - 08.15 |************************4091:4091***************** 20.00 - 20.15 |************************3020:3020*****************
 08.15 - 08.30 |************************4932:4932***************** 20.15 - 20.30 |*************           0218:0218
 08.30 - 08.45 |************************7002:7002***************** 20.30 - 20.45 |************************2969:2969*****************
 08.45 - 09.00 |************************5660:5660***************** 20.45 - 21.00 |********************    0365:0365
 09.00 - 09.15 |************************9572:9572***************** 21.00 - 21.15 |************************2861:2861*****************
 09.15 - 09.30 |************************8354:8354***************** 21.15 - 21.30 |*********               0151:0151
 09.30 - 09.45 |************************1738:1738***************** 21.30 - 21.45 |************************2870:2870*****************
 09.45 - 10.00 |************************7311:7311***************** 21.45 - 22.00 |****************        0283:0283
 10.00 - 10.15 |************************6884:6884***************** 22.00 - 22.15 |************************2880:2880*****************
 10.15 - 10.30 |************************4294:4294***************** 22.15 - 22.30 |************************ 0404:0404
 10.30 - 10.45 |************************4627:4627***************** 22.30 - 22.45 |************************2855:2855*****************
 10.45 - 11.00 |************************0115:0115***************** 22.45 - 23.00 |************            0208:0208
 11.00 - 11.15 |************************1432:1432***************** 23.00 - 23.15 |************************2892:2892*****************
 11.15 - 11.30 |************************9421:9421***************** 23.15 - 23.30 |*********               0151:0151
 11.30 - 11.45 |************************8292:8292***************** 23.30 - 23.45 |************************2855:2855*****************
 11.45 - 12.00 |************************8328:8328***************** 23.45 - 24.00 |*********               0150:0150
             +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
             0...90..180..270..360..450..540..630..720..810..900              0...90..180..270..360..450..540..630..720..810..900

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Network Terminal Profile

The Network Terminals Profile reports key categories of information related to the workload processed by a specified terminal. The categories are:

- The average traffic per day in Kbytes throughout the specified period
- The average number of transactions submitted per day throughout the specified period

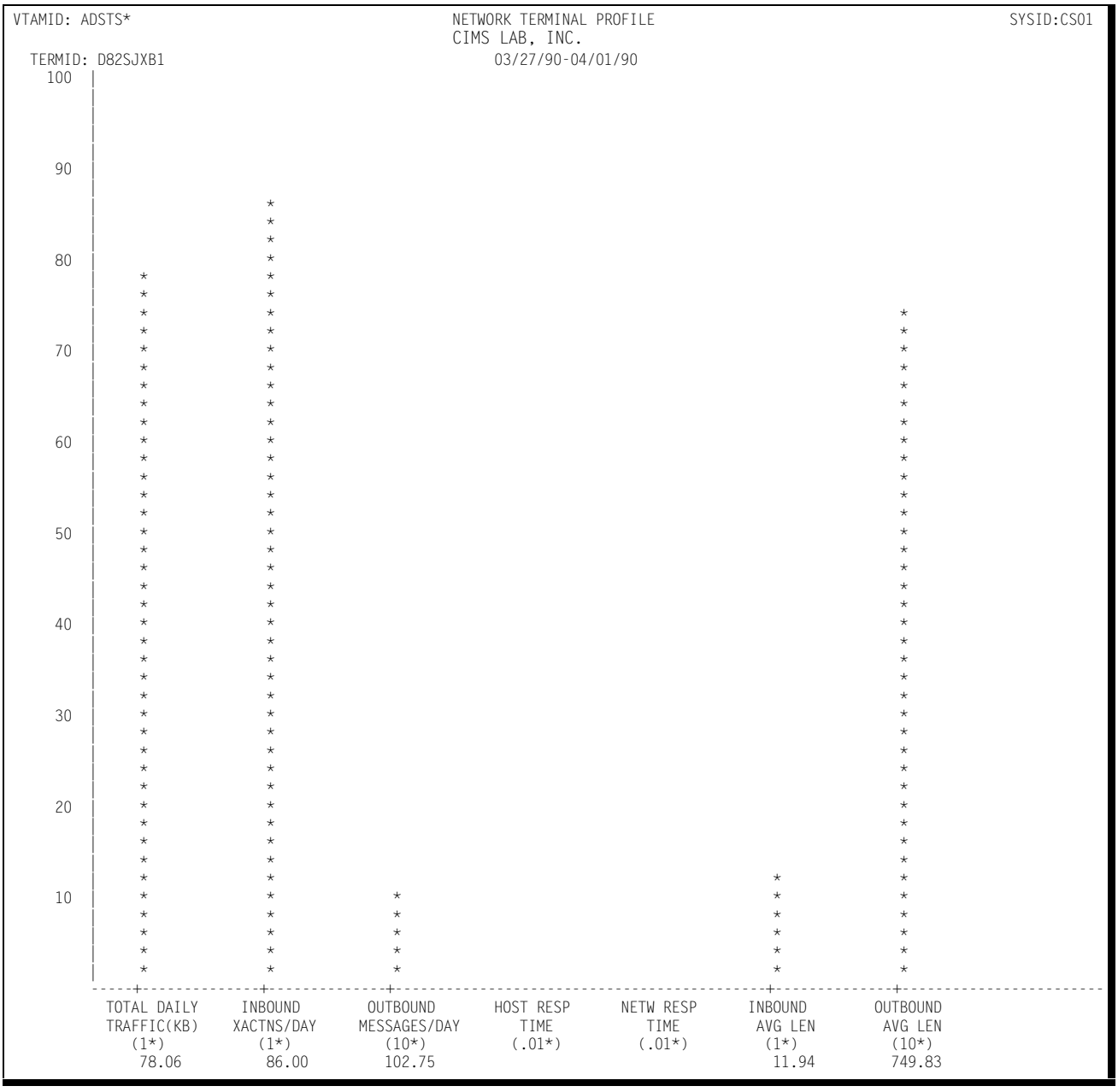
- The average number of messages received by the terminal per day during the specified period
- The average host response time for all transactions submitted
- The average network response time for all transactions submitted from the terminal during the specified time period
- The average length of the transactions submitted from the terminal
- The average length of the responses received at the terminal

The Network Terminal Profile is produced for a specific terminal that must be specified by Terminal ID specified using the INCLUDE facility running under a specified APPLID specified through the VTAMNAME parameter.

The Network Terminal Profile is produced in a bar graph format with a scale that runs from 0 to 100 along the vertical axis and the seven categories of data listed above along the horizontal axis. The graphical representation of the of each category of information in the profile originates at the horizontal axis, just above each of the seven category descriptions and extends upward in bar graph format.

The category descriptions consist of an abbreviated title, a scaling factor applied to the reading along the vertical scale, and the value for each category.

Following is a sample of the Network Terminal Profile Report:



Network Trends Analysis Reports

The CIMS Capacity Planner approach to Trends Analysis centers on isolating a number of capacity and performance related elements and providing either a summary or graphic comparison of the values of those elements over time. The Network elements that are selected for comparison are:

- The number of transactions executed per minute computed as an average during Prime shift
- The average response time during Prime Shift

- The average input transaction size during Prime Shift
- The average output message size during Prime Shift
- The ratio of Early shift to Prime shift transactions
- The ratio of Late shift to Prime shift transactions
- The ratio of Early shift to Prime shift terminals
- The ratio of Late shift to Prime shift terminals

This information is gathered and presented to you in one of two ways:

- In summary report format, showing the values of each of the elements listed above during a baseline period and comparing them to a secondary period, with the slope of each comparison indicated at the right hand side of the report
- In data suitable for graphing with the Harvard Graphics Program once it has been down loaded to a Personal Computer. The manner in which the data is down loaded is left to you. It is stored at the mainframe, however, in a PDS with the DDNAME of HGDLIB.

Following is a sample of the Network Trends Analysis report:

```
                                  T R E N D S   A N A L Y S I S
 1. THIS ANALYSIS COMPARED THE PERIODS 05/20/95-05/23/95 AND 05/24/95-05/27/95 FOR THE SYSTEM NAMED MVSB
 2. THE VALUES INCLUDED IN THIS REPORT REPRESENT A PRIME SHIFT WHICH RUNS FROM 07:00 TO 18:00
 3. A COMPARISON OF RESPONSE TIMES SHOWS:
                        05/20 - 05/23                    05/24 - 05/27                              TREND
    NETWORK                      .18                              .17                              5.55%-
    HOST                         .45                              .48                              6.66%+
    TOTALS                       .63                              .65                              3.17%+
 4. THE AVERAGE NUMBER OF TERMINALS ACTIVE DURING PRIME SHIFT WAS:
                                                                                                    TREND
                               24.28                            23.63                              2.67%-
 5. THE AVERAGE INBOUND TRAFFIC DURING PRIME SHIFT WAS:
                                                                                                    TREND

    CHARS/SEC                 74.40                           138.40                             86.02%+
 6. THE AVERAGE OUTBOUND TRAFFIC DURING PRIME SHIFT WAS:
                                                                                                    TREND

    CHARS/SEC             1,608.68                         1,751.72                               8.89%+
 7. THE AVERAGE NUMBER OF TRANSACTIONS PROCESSED DURING PRIME SHIFT WAS:
                                                                                                    TREND
                            62,005                           61,163                               1.35%-
 8. FOR EACH OF THE TWO PERIODS THE RATIO OF EARLY-TO-PRIME SHIFT TRANSACTIONS WAS:
                                                                                                    TREND
                               .00                              .02                                .00%+
 9. FOR EACH OF THE TWO PERIODS THE RATIO OF LATE-TO-PRIME SHIFT TRANSACTIONS WAS:
                                                                                                    TREND
                               .03                              .04                               33.33%+
10. FOR EACH OF THE TWO PERIODS THE RATIO OF EARLY-TO-PRIME SHIFT TERMINALS WAS:
                                                                                                    TREND
                               .04                              .05                               25.00%+
11. FOR EACH OF THE TWO PERIODS THE RATIO OF LATE-TO-PRIME SHIFT TERMINALS WAS:
                                                                                                    TREND
                               .08                              .09                               12.50%+
```

IMS Workload and Performance Reports

The following discussion enumerates the various CIMS Capacity Planner IMS reports and describes the contents of each report.

IMS Summary Analysis Report

The Summary Analysis Report contains key summary information required to determine the magnitude of the IMS workload and how well the IMS system is performing. The report provides the following information for the time period specified in the report request:

- The period measured by date and time

  The Summary Report is produced for a single day or portion of a day or it can encompass any number of days, thereby allowing an evaluation of the overall long term and short term performance of the IMS system.

- The average number of active terminals (high watermark)

  A terminal is considered active during each 15-minute period throughout the day only if at least one transaction is submitted. If a terminal is logged on throughout three shifts, but transactions are only submitted during two 15 minute periods, the terminal is considered to be active for only 30 minutes.

- The average number of IMS transactions processed per minute during the prime shift
- The average number of data base calls made per second during the prime shift
- The average number of IMS-related EXCPs per second during the prime shift
- The average transaction response time (in seconds) during the prime shift
- The average ratio of transactions submitted during the early shift compared to the prime shift
- The average ratio of transactions submitted during the late shift compared to the prime shift
- The average percentage of the CPU time consumed by IMS and the IMS applications during each shift within the measured period.
- The average number of transactions processed by shift for the measured period.

The 25 most frequently executed transactions are listed individually. All remaining transactions are reported collectively under the title of "OTHER". The total number of transactions are reported by shift.

Following is a sample of the IMS Summary Analysis Report:

```
IMSID:IMSA                                    SUMMARY REPORT                                    SYSID:MVSA
  1. THE MEASURED PERIOD BEGINS AT 00:00 WEDNESDAY, JUNE 27, AND CONTINUES THROUGH 23:59 FRIDAY, JUNE 29.
  2. DURING THE MEASURED PERIOD IMS USAGE PEAKED AT 334 TERMINALS ACTIVE CONCURRENTLY
  3. DURING PRIME SHIFT, THE NUMBER OF TRANSACTIONS PER MINUTE AVERAGED: 245.61
  4. DURING PRIME SHIFT, THE NUMBER OF DATABASE CALLS PER SECOND AVERAGED: 250.24
  5. DURING PRIME SHIFT, THE NUMBER OF EXCPS PER SECOND AVERAGED: .00
  6. DURING THE MEASURED PERIOD THE AVERAGE RESPONSE TIME FOR IMS TRANSACTIONS DURING PRIME SHIFT WAS  .67 SECONDS
  7. DURING THE MEASURED PERIOD THE RATIO OF EARLY-TO-PRIME SHIFT TRANSACTIONS WAS: .05
  8. DURING THE MEASURED PERIOD THE RATIO OF LATE-TO-PRIME SHIFT TRANSACTIONS WAS: .02
  9. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT PERCENTAGE CPU BUSY TIME WITHIN SHIFT AVERAGED:
                          00:00 - 08:00                 08:00 - 18:00                 18:00 - 24:00
     MSG RGN                       5.14                          15.80                         16.21
     ALL RGNS                       .00                           .00                           .00
 10. DURING THE MEASURED PERIOD A TOTAL OF 398,451 IMS TRANSACTIONS WERE PROCESSED
                          00:00 - 08:00                 08:00 - 18:00                 18:00 - 24:00
     ACCRT01I                      9,907                       201,051                         4,926
     ACOPT00U                      3,991                        68,973                         1,411
     ACSET00I                      4,155                        67,197                         1,987
     ACCRT01U                        775                        11,433                           190
     ACOPT100                        290                         6,332                           133
     ACTNT10I                        266                         4,733                            26
     AUTOOPER                        532                         2,257                           264
     SUMTTSUS                        181                         2,452                           108
     ACXF                             55                           939                            10
     ACRFT01I                         77                           650
     ACSET00U                                                      624
     ACRRT01I                         44                           571
     ACTNT10U                         20                           362                             1
     ACMTT010                         36                           282
     RSMTTRSS                        274
     ACMTT050                         79                            42                            74
     ACRRT01U                         12                           180
     ACRFT01U                          3                           137
     ACMTT020                         34                            60                            39
     DBOLIC                                                         78                            52
     ACTION                                                         76
     DBREAD                            3                            11
     ACCU0200                          3                             3
     ACFOCUS                           1                             5
     MPML7120                                                        5
     *OTHER*                          17                            14                             8
                                  ======                        ======                        ======
     TOTALS                       20,755                       368,467                         9,229
```

IMS Response Performance Report

This report shows, by shift, for a single day or a range of days, how the IMS transactions flowed through the system for a specified IMS region. Each of the 25 most frequently executed IMS transactions are listed individually, by shift, with an indication of what percentage of the response times fell within certain predefined time-frames. An Overall totals line is accumulated and written to indicate how all transactions performed as a group.

This is a key report in measuring how well your performance goals are being met within the CPU by the IMS system and the application programs.

Following is a sample of the IMS Response Performance Report:

CIMS LAB, INC.
06/27/96-06/29/96
IMSID: SYSID:MVSA
SHIFT SHOWN: 08:00 - 18:00

	.5 SEC	1.0 SEC	2.0 SEC	4.0 SEC	6.0 SEC	>6.0 SEC	COUNT
ACCRT01I	28.17	71.82	.00	.00	.00	.00	201,051
ACOPT00U	.00	26.17	73.82	.00	.00	.00	68,973
ACSET00I	99.21	.78	.00	.00	.00	.00	67,197
ACCRT01U	31.04	68.95	.00	.00	.00	.00	11,433
ACOPT100	.00	.00	.00	17.70	59.44	22.85	6,332
ACTNT10I	95.94	3.27	.78	.00	.00	.00	4,733
SUMTTSUS	76.46	22.18	1.34	.00	.00	.00	2,452
AUTOOPER	.00	63.35	9.57	.79	26.27	.00	2,257
ACXF	99.25	.74	.00	.00	.00	.00	939
ACRFT01I	98.15	1.84	.00	.00	.00	.00	650
ACSET00U	.32	22.27	35.09	42.30	.00	.00	624
ACRRT01I	93.52	4.90	1.57	.00	.00	.00	571
ACTNT10U	4.69	65.74	19.33	10.22	.00	.00	362
ACMTT010	7.44	48.93	39.00	4.60	.00	.00	282
ACRRT01U	70.00	22.77	7.22	.00	.00	.00	180
ACRFT01U	55.47	38.68	5.83	.00	.00	.00	137
DBOLIC	.00	.00	.00	.00	.00	100.00	78
ACTION	82.89	13.15	3.94	.00	.00	.00	76
ACMTT020	71.66	.00	.00	8.33	20.00	.00	60
ACMTT050	4.76	11.90	83.33	.00	.00	.00	42
DBREAD	9.09	.00	9.09	.00	18.18	63.63	11
ACFOCUS	.00	.00	.00	.00	.00	100.00	5
MPML7120	.00	.00	.00	.00	.00	100.00	5
ACCU0200	.00	.00	.00	.00	.00	100.00	3
RSMTTRSS	.00	.00	.00	.00	.00	.00	
OVERALL	36.83	47.13	14.02	.39	1.18	.41	368,453

IMS Transaction Statistics Report

This report shows, for a specified IMS region, which IMS transactions were among the top 40 in the following categories:

- Most frequently executed

  The transaction codes and the transaction counts of the 40 most frequently executed transactions are listed along with their respective percentages of the total IMS transaction workload. The transactions are listed in descending order by frequency of execution.

- Most cumulative elapsed time

  The transaction codes and the total amount of elapsed (residence) time for each of 40 transactions experiencing the highest residency time are listed along with their respective percentages of the total IMS transaction residence time. The transactions are listed in descending order by residency time.

- Most cumulative CPU time

  The transaction codes and the total amount of CPU time consumed for each of the 40 transactions that consumed the most CPU time along with their respective percentages of the total IMS CPU time. The transactions are listed in descending order by CPU time.

- Most File Accesses

  The transaction codes and the number of file access calls are listed for each of the 40 transactions issuing the most file access calls along with their respective percentages of all the file access activity. The transactions are listed in descending order by the number of file accesses.

Transactions are excluded from the Transaction Statistics Report through the use of the EXCLUDE facility (see JCL). Similarly, transactions that would not normally be included are included through the use of the INCLUDE facility (JCL).

Following is a sample of the IMS Transaction Statistics Report:

```
IMSID:  IMSA                              TRANSACTION STATISTICS REPORT                                SYSID:MVSA
                                                  CIMS LAB, INC.
                                                06/27/96-06/29/96
   TRANSACTION COUNT   ACCRT01I   ACOPT00U   ACSET00I   ACCRT01U   ACOPT10O   ACTNT10I   AUTOOPER   SUMTTSUS   ACXF
ACRFT01I
                       215,884     74,375     73,339     12,398      6,755      5,025      3,053      2,741      1,004       727
                        54.18%     18.66%     18.40%      3.11%      1.69%      1.26%       .76%       .68%       .25%       .18%
                     ACSET00U   ACRRT01I   ACTNT10U   ACMTT010   RSMTTRSS   ACMTT050   ACRRT01U   ACRFT01U   ACMTT020   DBOLIC
                           624        615        383        318        274        195        192        140        133        130
                          .15%       .15%       .09%       .07%       .06%       .04%       .04%       .03%       .03%       .03%
                     ACTION     DBREAD     ACFOCUS    ACCU0200   MPML7120   ACMTB400   ACMTB110   MPIC6310   MPBC1100   MPBC1200
                            76         14          6          6          5          4          3          3          2          2
                          .01%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%
                    MPMD0500   MPIC6320   MPMD0100   OPOPLOAD   ACBI1800   ACOPB101   MPBC1300   ACBI3600   ACBI0200
ACBI0800
                            2          2          2          2          2          2          1          1          1          1
                          .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%
                     ACBI0900   ACBI1000   ACBI1100   ACBI4000   ACBI4800   ACBI4900   ACCP0100   ACCP0200   ACCP0300   *OTHER*
                                1          1          1          1          1          1          1          1          1          1
                          .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%
   ELAPSED TIME        ACCRT01I   ACOPT00U   ACOPT10O   DBOLIC     ACSET00I   ACCRT01U   AUTOOPER   ACTNT10I   ACSET00U
SUMTTSUS
                     30:29:12   22:33:00    9:31:20    5:01:56    3:54:11    1:45:10    1:16:21      19:49      17:52      14:34
                        39.92%     29.53%     12.47%      6.59%      5.11%      2.29%      1.66%       .43%       .39%       .31%
                     ACMTT050   DBREAD     MPIC6310   ACTNT10U   ACMTT010   MPML7120   RSMTTRSS   ACRRT01I   ACXF       ACRFT01I
                         7:34       6:20       5:36       5:29       5:03       3:20       3:04       2:33       2:16       2:15
                          .16%       .13%       .12%       .12%       .11%       .07%       .06%       .05%       .04%       .04%
                     ACOPB101   ACBI1100   ACMTT020   ACBI1000   ACBI1800   ACRRT01U   ACRFT01U   ACMTB110   MPBC1200
ACCP0300
                         2:04       2:02       1:50       1:42       1:35       1:11       1:01        :35        :34        :21
                          .04%       .04%       .04%       .03%       .03%       .02%       .02%       .01%       .01%       .00%
                     ACFOCUS    ACTION     ACBI4000   ACBI3600   ACBI4900   ACBI4800   ACCP0200   OPOPLOAD   ACCP0100
ACMTB400
                          :16        :15        :14        :08        :08        :05        :03        :02        :02        :01
                          .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%
                     *OTHER*    ACBI0200   ACBI0800   ACBI0900   ACCU0200   MPBC1100   MPBC1300   MPIC6320   MPMD0100
MPMD0500
                          :00        :00        :00        :00        :00        :00        :00        :00        :00        :00
                          .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%
   CPU TIME            DBOLIC     ACOPT00U   ACCU0200   ACCRT01I   ACOPT10O   ACFOCUS    MPIC6320   ACSET00I   MPBC1100
MPBC1300
                     1:57:52    1:00:49      27:06      25:25      17:35      14:17      11:29      10:52      10:06       7:20
                        34.94%     18.03%      8.03%      7.53%      5.21%      4.23%      3.40%      3.22%      2.99%      2.17%
                     ACCRT01U   DBREAD     MPMD0100   MPMD0500   ACBI0800   ACBI0900   ACTNT10I   ACMTT050   MPIC6310
ACSET00U
                         5:19       5:07       3:53       3:44       3:19       2:35       2:25       1:54        :55        :39
                        1.57%      1.52%      1.15%      1.10%       .98%       .76%       .71%       .56%       .27%       .19%
                     ACMTT020   RSMTTRSS   SUMTTSUS   MPML7120   ACBI1000   ACMTT010   ACTNT10U   ACBI1100   ACBI1800
ACRFT01I
                          :35        :31        :28        :28        :26        :20        :17        :17        :10        :10
                          .17%       .15%       .14%       .14%       .12%       .10%       .08%       .08%       .05%       .05%
                     ACRRT01I   ACXF       ACRFT01U   ACMTB110   ACRRT01U   ACOPB101   MPBC1200   ACBI4000   ACCP0300   ACBI4900
                          :09        :08        :06        :04        :03        :03        :01        :01        :00        :00
                          .04%       .04%       .03%       .02%       .01%       .01%       .00%       .00%       .00%       .00%
                     ACTION     ACBI4800   ACBI3600   AUTOOPER   ACCP0200   OPOPLOAD   ACCP0100   ACMTB400   *OTHER*
ACBI0200
                          :00        :00        :00        :00        :00        :00        :00        :00        :00        :00
                          .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%
```

```
IMSID:  IMSA                                TRANSACTION STATISTICS REPORT                                SYSID:MVSA
                                                      CIMS LAB, INC.
                                                   06/27/96-06/29/96
   FILE ACCESS COUNT   ACCU0200   ACFOCUS    DBREAD     ACCRT01I   MPML7120   ACOPT00U   ACOPT100   MPIC6320   ACSET00I
ACMTT050
                  17,596,190 13,561,287 11,701,172  1,357,672    848,332    610,626    338,222    323,713    300,116
106,589
                      37.43%     28.85%     24.89%      2.88%      1.80%      1.29%       .71%       .68%       .63%       .22%
                    ACCRT01U   ACTNT10I   ACMTT020   ACBI1000   RSMTTRSS   ACBI1800   ACSET00U   ACRRT01I   ACTNT10U
SUMTTSUS
                      80,791     55,381     34,292     18,457     14,925     13,270      6,173      5,513      5,394      4,756
                        .17%       .11%       .07%       .03%       .03%       .02%       .01%       .01%       .01%       .01%
                   ACRFT01I   ACRFT01U   ACXF      MPBC1200   ACMTT010   ACRRT01U   ACBI4000   ACOPB101   ACMTB110   MPIC6310
                      4,616      4,519      3,241      2,220      1,908      1,547      1,344        973        817        484
                        .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%
                     ACTION     ACCP0300   ACBI3600   MPMD0100   OPOPLOAD   ACCP0200   ACBI0800   ACBI0900   ACBI1100
MPBC1100
                         311        196        186         65         42         13          3          3          3          2
                        .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%
                    ACCP0100   MPBC1300   ACBI4900   ACBI4800   DBOLIC     MPMD0500   AUTOOPER   ACMTB400   *OTHER*
ACBI0200
                                       2          1          1          1
                        .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%       .00%
```

IMS Terminal Statistics Report

This report shows which terminals, for a specified IMS Region, were among the top 40 in the following categories:

- Most Active

  The Terminal ID and the amount of time active (hours:minutes) are reported along with the percentage of the combined active time for all active terminals for the 40 most active terminals. A terminal is considered active within any given 15 minute period only if transactions are received from the terminal. A terminal that is signed-on, but does not submit any transactions is not considered to be active.

- Most Transactions Executed

  The Terminal ID and the number of transactions submitted are reported for the 40 terminals submitting the most transactions along with their respective percentages of the total number of transactions submitted during the measured period. The listing is produced in descending order by the number of transactions submitted.

Selected terminals/transactions are excluded from the report through the use of the EXCLUDE facility (see JCL). Similarly, terminals that can not qualify as among the top forty are included in the report through the use of the INCLUDE facility (see JCL).

Following is a sample of the IMS Terminal Statistics Report:

```
IMSID:  IMSA                              TERMINAL STATISTICS REPORT                                SYSID:MVSA
                                                CIMS LAB, INC.
                                              06/27/96-06/29/96
  ACTIVE TIME       *OTHER*    MTO       R42B02    R67A00    R67B02    R67B00    R67A02    R45A08    R45A29    R46A20
                  313:15:00  38:45:00  35:00:00  29:30:00  27:45:00  27:15:00  22:15:00  22:00:00  21:30:00
21:30:00
                    171.58%    89.08%    80.45%    67.81%    63.79%    62.64%    51.14%    50.57%    49.42%    49.42%
                   R46A18    R09A25    R34A12    R09A28    R45A08A   R45A06A   R47A06    R47A25    R08B06    R10B22
                    21:15:00  20:30:00  20:30:00  20:15:00  20:15:00  20:00:00  19:45:00  19:45:00  19:30:00
19:30:00
                    48.85%    47.12%    47.12%    46.55%    46.55%    45.97%    45.40%    45.40%    44.82%    44.82%
                   R46A15    R47A25A   R36D08A   R09B20A   R46A14    R10B12    R34C03    R40A17    R65A28    R09A26
                    19:30:00  19:30:00  19:15:00  18:45:00  18:45:00  18:30:00  18:30:00  18:30:00  18:30:00
18:15:00
                    44.82%    44.82%    44.25%    43.10%    43.10%    42.52%    42.52%    42.52%    42.52%    41.95%
                   R09B18    R67A01    R34A17A   R34B03    R36B04    R40A25    R45A29A   R47A13    R65A29    R45A06
                    18:15:00  18:15:00  18:00:00  18:00:00  18:00:00  18:00:00  18:00:00  18:00:00  18:00:00
17:45:00
                    41.95%    41.95%    41.37%    41.37%    41.37%    41.37%    41.37%    41.37%    41.37%    40.80%
                   R39C13    R45A06B   R45B07A   R47A10    R09B06A   R09B12A   R40A21    R46B02A   R46B06A   R47A05
                    17:30:00  17:30:00  17:30:00  17:30:00  17:15:00  17:15:00  17:15:00  17:15:00  17:15:00
17:15:00
                    40.22%    40.22%    40.22%    40.22%    39.65%    39.65%    39.65%    39.65%    39.65%    39.65%
   TRANSACTION COUNT  *OTHER*   R67A00    R67B00    R65A31    R47B11A   R09A29    MTO       R46A15    R42B02    R46A20
                     19,078     4,307     3,916     3,403     3,376     3,254     3,053     3,018     3,015     2,789
                      4.78%     1.08%      .98%      .85%      .84%      .81%      .76%      .75%      .75%      .69%
                    R65A28    R09B02A   R46A06    R09A30    R67B02    R09B06A   R09B18    R46B14B   R10B26A   R47A25
                      2,609     2,452     2,410     2,333     2,316     2,288     2,282     2,256     2,045     2,016
                       .65%      .61%      .60%      .58%      .58%      .57%      .57%      .56%      .51%      .50%
                    R65A29    R09B08    R46B12A   R08A22    R09A28    R67A02    R08B06    R09B03    R47B12    R46B28
                      2,013     1,957     1,939     1,937     1,886     1,806     1,775     1,722     1,714     1,694
                       .50%      .49%      .48%      .48%      .47%      .45%      .44%      .43%      .43%      .42%
                    R09A26    R46B06A   R09A11    R45A29    R46B19    R45A27A   R09B18A   R09A30B   R09A25    R09B20A
                      1,657     1,612     1,598     1,551     1,523     1,514     1,463     1,417     1,359     1,359
                       .41%      .40%      .40%      .38%      .38%      .37%      .36%      .35%      .34%      .34%
                    R46A14    R67A01    R08A13    R46A18    R46A23    R67B01    R45A08    R09B12A   R47B08    R46A16
                      1,357     1,351     1,339     1,326     1,325     1,303     1,292     1,280     1,254     1,251
                       .34%      .33%      .33%      .33%      .33%      .32%      .32%      .32%      .31%      .31%
```

IMS Exception Analysis

The IMS Exception Analysis Report shows, for each fifteen minute period, for a specified IMS region, all transactions and terminals whose response times exceeded the pre-defined thresholds specified in the CIMS Capacity Planner Parmlib member &sidXCPT. The Parmlib member &sidXCPT contains a number of threshold values for the installation. This member is used to identify the performance thresholds for the various components of the overall environment.

Following is a sample of the IMS Exception Analysis Report:

```
IMSID: IMSA                                  IMS EXCEPTION ANALYSIS                                  SYSID:MVSA
                                                  CIMS LAB, INC.
                                                06/27/96-06/29/96
 06/27 09.45 - 10.00 : XACTN  ACMTB110(25.67)
 06/27 10.15 - 10.30 : XACTN  MPML7120(51.39)
 06/27 10.30 - 10.45 : XACTN  DBREAD  (166.63)
 06/27 12.00 - 12.15 : XACTN  DBREAD  (7.24)
 06/27 13.15 - 13.30 : XACTN  DBREAD  (7.16)
 06/27 13.45 - 14.00 : XACTN  MPIC6310(132.03)
 06/27 14.00 - 14.15 : XACTN  ACOPT100(6.06)
 06/27 15.30 - 15.45 : XACTN  DBREAD  (14.65)
 06/27 16.30 - 16.45 : XACTN  DBOLIC  (202.73)
 06/27 16.45 - 17.00 : XACTN  DBOLIC  (164.80)
 06/27 17.00 - 17.15 : XACTN  DBOLIC  (180.63)
 06/27 18.00 - 18.15 : XACTN  ACOPT100(7.58)  SUMTTSUS(7.59)
 06/27 18.30 - 18.45 : XACTN  DBOLIC  (241.84)
 06/27 18.45 - 19.00 : XACTN  DBOLIC  (138.61)
 06/27 19.00 - 19.15 : XACTN  DBOLIC  (211.92)
 06/27 19.15 - 19.30 : XACTN  DBOLIC  (252.42)
 06/27 19.30 - 19.45 : XACTN  DBOLIC  (131.03)MPBC1200(32.42)
 06/27 19.45 - 20.00 : XACTN  DBOLIC  (112.06)
 06/28 01.00 - 01.15 : XACTN  ACOPB101(61.08)
 06/28 06.00 - 06.15 : XACTN  ACOPT100(7.81)
 06/28 08.45 - 09.00 : XACTN  ACFOCUS (16.26)
 06/28 11.30 - 11.45 : XACTN  ACOPT100(6.05)
 06/28 14.15 - 14.30 : XACTN  ACBI3600(8.66)  ACOPT100(6.11)
 06/28 14.30 - 14.45 : XACTN  ACOPT100(7.19)  MPIC6310(119.30)
 06/28 14.45 - 15.00 : XACTN  ACOPT100(7.42)
 06/28 15.45 - 16.00 : XACTN  ACOPT100(6.79)
 06/28 16.15 - 16.30 : XACTN  ACOPT100(6.28)
 06/28 16.30 - 16.45 : XACTN  ACOPT100(8.74)  DBOLIC  (172.23)
 06/28 16.45 - 17.00 : XACTN  ACOPT100(6.52)  DBOLIC  (181.03)
 06/28 18.15 - 18.30 : XACTN  DBOLIC  (26.73)
 06/28 18.30 - 18.45 : XACTN  DBOLIC  (194.32)
 06/28 18.45 - 19.00 : XACTN  ACOPT100(19.61) DBOLIC  (143.04)
 06/28 19.00 - 19.15 : XACTN  ACOPT100(8.75)  DBOLIC  (181.34)
 06/28 19.15 - 19.30 : XACTN  DBOLIC  (107.23)
 06/28 20.30 - 20.45 : XACTN  ACOPT100(6.35)
 06/29 03.15 - 03.30 : XACTN  ACOPB101(63.25)
 06/29 05.15 - 05.30 : XACTN  ACBI1000(102.48)ACBI1100(122.97)ACBI4000(14.54) ACBI4900(8.28)  ACOPT100(8.99)
 06/29 05.30 - 05.45 : XACTN  ACCP0300(21.71)
 06/29 06.30 - 06.45 : XACTN  ACBI1800(53.95)
 06/29 07.30 - 07.45 : XACTN  ACBI1800(41.35)
 06/29 09.00 - 09.15 : XACTN  ACOPT100(10.95)
 06/29 09.45 - 10.00 : XACTN  ACOPT100(6.02)
 06/29 10.00 - 10.15 : XACTN  ACOPT100(6.36)
 06/29 10.15 - 10.30 : XACTN  ACOPT100(6.21)
 06/29 11.00 - 11.15 : XACTN  ACOPT100(7.40)  MPML7120(148.87)
 06/29 11.15 - 11.30 : XACTN  ACOPT100(7.10)
 06/29 11.30 - 11.45 : XACTN  ACOPT100(8.42)
 06/29 11.45 - 12.00 : XACTN  ACOPT100(7.37)
 06/29 12.00 - 12.15 : XACTN  ACOPT100(7.39)
   XACTN=AVERAGE ELAPSED TIME FOR A GIVEN TRANSACTION
```

IMS Graphs

The IMS Subsystem produces a number of graphs on the mainframe that depict the magnitude of the workload and the level of performance of a specified IMS Region.

IMS Transaction Response Graph

The Transaction Response Graph shows, by day of the week, the average and peak average transaction response times for each 15-minute period throughout the day. The report page is broken into four sections—each covering a period of 6 hours. Within each section of the page, the time-of-day is represented by the vertical axis while the horizontal axis represents the response time (both average and peak average). In the middle of each line, both the average and peak average values are printed. The lines, in bar graph format, form the graphic representation of the values. The peak average values are represented by dashes while the average values are represented by asterisks. In those cases where no dashes are present, they have been overlaid by asterisks because the peak values and the average values are either equal or very nearly so. The unit of measure represented by the values along the horizontal axis is specified in the third line of the report title.

The Transaction Response Graph is produced either for a single day's activity or several days' activities. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

Following is a sample of the IMS Transaction Response Graph:

```
IMSID=IMSA                                    DAY SHOWN:   WEDNESDAY                                    SYSID:MVSA
                                                06/27/96-06/29/96
                                    IMS TRANSACTION RESPONSE GRAPH: 0.1 SECONDS

 00.00 - 00.15 |                    0000:0000          12.00 - 12.15 |***                 0005:0005
 00.15 - 00.30 |                    0000:0000          12.15 - 12.30 |***                 0005:0005
 00.30 - 00.45 |                    0000:0000          12.30 - 12.45 |***                 0005:0005
 00.45 - 01.00 |                    0000:0000          12.45 - 13.00 |***                 0005:0005
 01.00 - 01.15 |                    0000:0000          13.00 - 13.15 |**                  0004:0004
 01.15 - 01.30 |                    0000:0000          13.15 - 13.30 |***                 0005:0005
 01.30 - 01.45 |                    0000:0000          13.30 - 13.45 |***                 0005:0005
 01.45 - 02.00 |                    0000:0000          13.45 - 14.00 |***                 0006:0006
 02.00 - 02.15 |                    0000:0000          14.00 - 14.15 |***                 0006:0006
 02.15 - 02.30 |                    0000:0000          14.15 - 14.30 |****                0007:0007
 02.30 - 02.45 |                    0000:0000          14.30 - 14.45 |***                 0006:0006
 02.45 - 03.00 |                    0000:0000          14.45 - 15.00 |***                 0006:0006
 03.00 - 03.15 |                    0000:0000          15.00 - 15.15 |***                 0005:0005
 03.15 - 03.30 |                    0000:0000          15.15 - 15.30 |***                 0005:0005
 03.30 - 03.45 |                    0000:0000          15.30 - 15.45 |***                 0005:0005
 03.45 - 04.00 |                    0000:0000          15.45 - 16.00 |**                  0004:0004
 04.00 - 04.15 |                    0000:0000          16.00 - 16.15 |***                 0005:0005
 04.15 - 04.30 |                    0000:0000          16.15 - 16.30 |***                 0005:0005
 04.30 - 04.45 |                    0000:0000          16.30 - 16.45 |***                 0005:0005
 04.45 - 05.00 |                    0000:0000          16.45 - 17.00 |***                 0005:0005
 05.00 - 05.15 |                    0000:0000          17.00 - 17.15 |***                 0005:0005
 05.15 - 05.30 |                    0000:0000          17.15 - 17.30 |**                  0004:0004
 05.30 - 05.45 |                    0000:0000          17.30 - 17.45 |***                 0006:0006
 05.45 - 06.00 |                    0000:0000          17.45 - 18.00 |***                 0006:0006
           +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
           0...10...20...30...40...50...60...70...80...90..100          0...10...20...30...40...50...60...70...80...90..100

 06.00 - 06.15 |                    0000:0000          18.00 - 18.15 |*****               0009:0009
 06.15 - 06.30 |                    0000:0000          18.15 - 18.30 |****                0007:0007
 06.30 - 06.45 |                    0000:0000          18.30 - 18.45 |***                 0005:0005
 06.45 - 07.00 |                    0000:0000          18.45 - 19.00 |***                 0005:0005
 07.00 - 07.15 |                    0000:0000          19.00 - 19.15 |***                 0006:0006
 07.15 - 07.30 |                    0000:0000          19.15 - 19.30 |***                 0006:0006
 07.30 - 07.45 |                    0000:0000          19.30 - 19.45 |***                 0006:0006
 07.45 - 08.00 |                    0000:0000          19.45 - 20.00 |***                 0005:0005
 08.00 - 08.15 |                    0000:0000          20.00 - 20.15 |***                 0005:0005
 08.15 - 08.30 |                    0000:0000          20.15 - 20.30 |***                 0005:0005
 08.30 - 08.45 |                    0000:0000          20.30 - 20.45 |**                  0004:0004
 08.45 - 09.00 |                    0000:0000          20.45 - 21.00 |**                  0003:0003
 09.00 - 09.15 |***                 0005:0005          21.00 - 21.15 |*                   0002:0002
 09.15 - 09.30 |***                 0005:0005          21.15 - 21.30 |                    0000:0000
 09.30 - 09.45 |***                 0006:0006          21.30 - 21.45 |                    0000:0000
 09.45 - 10.00 |***                 0005:0005          21.45 - 22.00 |                    0000:0000
 10.00 - 10.15 |***                 0006:0006          22.00 - 22.15 |                    0000:0000
 10.15 - 10.30 |***                 0005:0005          22.15 - 22.30 |                    0000:0000
 10.30 - 10.45 |***                 0006:0006          22.30 - 22.45 |                    0000:0000
 10.45 - 11.00 |***                 0006:0006          22.45 - 23.00 |                    0000:0000
 11.00 - 11.15 |***                 0005:0005          23.00 - 23.15 |                    0000:0000
 11.15 - 11.30 |***                 0005:0005          23.15 - 23.30 |                    0000:0000
 11.30 - 11.45 |***                 0006:0006          23.30 - 23.45 |                    0000:0000
 11.45 - 12.00 |***                 0006:0006          23.45 - 24.00 |                    0000:0000
           +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
           0...10...20...30...40...50...60...70...80...90..100          0...10...20...30...40...50...60...70...80...90..100

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

IMS Transaction Activity Graph

The Transaction Activity Graph is organized in the same format as the Transaction Response Graph described above. It shows, by day of the week, the average and peak average number of transactions submitted from all the IMS terminals during each 15-minute period throughout the day. The horizontal values represent the number of transactions submitted per minute.

Following is a sample of the IMS Transaction Activity Graph:

```
IMSID=IMSA                                    DAY SHOWN:   WEDNESDAY                                    SYSID:MVSA
                                                06/27/96-06/29/96
                                  IMS TRANSACTION ACTIVITY GRAPH: AVERAGE/MINUTE

00.00 - 00.15 |                        0000:0000          12.00 - 12.15 |************************0231:0231
00.15 - 00.30 |                        0000:0000          12.15 - 12.30 |************************0248:0248
00.30 - 00.45 |                        0000:0000          12.30 - 12.45 |*********************** 0227:0227
00.45 - 01.00 |                        0000:0000          12.45 - 13.00 |*********************   0205:0205
01.00 - 01.15 |                        0000:0000          13.00 - 13.15 |*********************** 0225:0225
01.15 - 01.30 |                        0000:0000          13.15 - 13.30 |************************0250:0250
01.30 - 01.45 |                        0000:0000          13.30 - 13.45 |************************0250:0250
01.45 - 02.00 |                        0000:0000          13.45 - 14.00 |************************0263:0263
02.00 - 02.15 |                        0000:0000          14.00 - 14.15 |************************0254:0254
02.15 - 02.30 |                        0000:0000          14.15 - 14.30 |************************0274:0274
02.30 - 02.45 |                        0000:0000          14.30 - 14.45 |************************0258:0258
02.45 - 03.00 |                        0000:0000          14.45 - 15.00 |************************0280:0280
03.00 - 03.15 |                        0000:0000          15.00 - 15.15 |************************0257:0257
03.15 - 03.30 |                        0000:0000          15.15 - 15.30 |************************0280:0280
03.30 - 03.45 |                        0000:0000          15.30 - 15.45 |************************0268:0268
03.45 - 04.00 |                        0000:0000          15.45 - 16.00 |*********************** 0221:0221
04.00 - 04.15 |                        0000:0000          16.00 - 16.15 |************************0234:0234
04.15 - 04.30 |                        0000:0000          16.15 - 16.30 |************************0233:0233
04.30 - 04.45 |                        0000:0000          16.30 - 16.45 |************************0231:0231
04.45 - 05.00 |                        0000:0000          16.45 - 17.00 |*********************    0195:0195
05.00 - 05.15 |                        0000:0000          17.00 - 17.15 |*************            0126:0126
05.15 - 05.30 |                        0000:0000          17.15 - 17.30 |*************            0123:0123
05.30 - 05.45 |                        0000:0000          17.30 - 17.45 |**********               0096:0096
05.45 - 06.00 |                        0000:0000          17.45 - 18.00 |********                 0073:0073
              +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
              0...50..100..150..200..250..300..350..400..450..500                0...50..100..150..200..250..300..350..400..450..500


06.00 - 06.15 |                        0000:0000          18.00 - 18.15 |******                   0060:0060
06.15 - 06.30 |                        0000:0000          18.15 - 18.30 |****                     0040:0040
06.30 - 06.45 |                        0000:0000          18.30 - 18.45 |*****                    0044:0044
06.45 - 07.00 |                        0000:0000          18.45 - 19.00 |*****                    0043:0043
07.00 - 07.15 |                        0000:0000          19.00 - 19.15 |***                      0021:0021
07.15 - 07.30 |                        0000:0000          19.15 - 19.30 |***                      0023:0023
07.30 - 07.45 |                        0000:0000          19.30 - 19.45 |**                       0018:0018
07.45 - 08.00 |                        0000:0000          19.45 - 20.00 |**                       0019:0019
08.00 - 08.15 |                        0000:0000          20.00 - 20.15 |**                       0017:0017
08.15 - 08.30 |                        0000:0000          20.15 - 20.30 |**                       0011:0011
08.30 - 08.45 |                        0000:0000          20.30 - 20.45 |**                       0014:0014
08.45 - 09.00 |                        0000:0000          20.45 - 21.00 |*                        0008:0008
09.00 - 09.15 |************************0260:0260          21.00 - 21.15 |*                        0001:0001
09.15 - 09.30 |************************0404:0404********  21.15 - 21.30 |                         0000:0000
09.30 - 09.45 |************************0373:0373*****     21.30 - 21.45 |                         0000:0000
09.45 - 10.00 |************************0383:0383******    21.45 - 22.00 |                         0000:0000
10.00 - 10.15 |************************0380:0380*****     22.00 - 22.15 |                         0000:0000
10.15 - 10.30 |***************         0142:0142          22.15 - 22.30 |                         0000:0000
10.30 - 10.45 |************************0340:0340*        22.30 - 22.45 |                         0000:0000
10.45 - 11.00 |************************0312:0312          22.45 - 23.00 |                         0000:0000
11.00 - 11.15 |************************0304:0304          23.00 - 23.15 |                         0000:0000
11.15 - 11.30 |************************0300:0300          23.15 - 23.30 |                         0000:0000
11.30 - 11.45 |************************0247:0247          23.30 - 23.45 |                         0000:0000
11.45 - 12.00 |************************0251:0251          23.45 - 24.00 |                         0000:0000
              +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
              0...50..100..150..200..250..300..350..400..450..500                0...50..100..150..200..250..300..350..400..450..500

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

IMS Terminal Activity Graph

The Terminal Activity Graph shows, by day of the week, the number of terminals during each 15-minute period throughout the day. Both the average and the peak average values are reported. The values along the horizontal axis represent the number of active terminals.

Following is a sample of the IMS Terminal Activity Graph:

```
IMSID=IMSA                                    DAY SHOWN:   WEDNESDAY                                    SYSID:MVSA
                                                06/27/96-06/29/96
                                            IMS TERMINAL ACTIVITY GRAPH

 00.00 - 00.15 |                      0000:0000              12.00 - 12.15 |**********************0239:0239
 00.15 - 00.30 |                      0000:0000              12.15 - 12.30 |**********************0220:0220
 00.30 - 00.45 |                      0000:0000              12.30 - 12.45 |**********************0218:0218
 00.45 - 01.00 |                      0000:0000              12.45 - 13.00 |**********************0237:0237
 01.00 - 01.15 |                      0000:0000              13.00 - 13.15 |**********************0251:0251
 01.15 - 01.30 |                      0000:0000              13.15 - 13.30 |**********************0258:0258
 01.30 - 01.45 |                      0000:0000              13.30 - 13.45 |**********************0266:0266*
 01.45 - 02.00 |                      0000:0000              13.45 - 14.00 |**********************0268:0268*
 02.00 - 02.15 |                      0000:0000              14.00 - 14.15 |**********************0283:0283***
 02.15 - 02.30 |                      0000:0000              14.15 - 14.30 |**********************0295:0295****
 02.30 - 02.45 |                      0000:0000              14.30 - 14.45 |**********************0288:0288***
 02.45 - 03.00 |                      0000:0000              14.45 - 15.00 |**********************0296:0296****
 03.00 - 03.15 |                      0000:0000              15.00 - 15.15 |**********************0277:0277**
 03.15 - 03.30 |                      0000:0000              15.15 - 15.30 |**********************0275:0275**
 03.30 - 03.45 |                      0000:0000              15.30 - 15.45 |**********************0264:0264
 03.45 - 04.00 |                      0000:0000              15.45 - 16.00 |**********************0235:0235
 04.00 - 04.15 |                      0000:0000              16.00 - 16.15 |**********************0227:0227
 04.15 - 04.30 |                      0000:0000              16.15 - 16.30 |**********************0233:0233
 04.30 - 04.45 |                      0000:0000              16.30 - 16.45 |**********************0220:0220
 04.45 - 05.00 |                      0000:0000              16.45 - 17.00 |**********************0213:0213
 05.00 - 05.15 |                      0000:0000              17.00 - 17.15 |**********************  0169:0169
 05.15 - 05.30 |                      0000:0000              17.15 - 17.30 |**********************  0125:0125
 05.30 - 05.45 |                      0000:0000              17.30 - 17.45 |**********************  0119:0119
 05.45 - 06.00 |                      0000:0000              17.45 - 18.00 |**********************  0093:0093
               +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
               0...40...80..120..160..200..240..280..320..360..400                0...40...80..120..160..200..240..280..320..360..400


 06.00 - 06.15 |                      0000:0000              18.00 - 18.15 |*******                0056:0056
 06.15 - 06.30 |                      0000:0000              18.15 - 18.30 |*****                  0035:0035
 06.30 - 06.45 |                      0000:0000              18.30 - 18.45 |****                   0031:0031
 06.45 - 07.00 |                      0000:0000              18.45 - 19.00 |******                 0044:0044
 07.00 - 07.15 |                      0000:0000              19.00 - 19.15 |****                   0025:0025
 07.15 - 07.30 |                      0000:0000              19.15 - 19.30 |****                   0026:0026
 07.30 - 07.45 |                      0000:0000              19.30 - 19.45 |****                   0032:0032
 07.45 - 08.00 |                      0000:0000              19.45 - 20.00 |***                    0021:0021
 08.00 - 08.15 |                      0000:0000              20.00 - 20.15 |***                    0021:0021
 08.15 - 08.30 |                      0000:0000              20.15 - 20.30 |**                     0015:0015
 08.30 - 08.45 |                      0000:0000              20.30 - 20.45 |*                      0008:0008
 08.45 - 09.00 |                      0000:0000              20.45 - 21.00 |*                      0008:0008
 09.00 - 09.15 |**********************0275:0275**            21.00 - 21.15 |*                      0002:0002
 09.15 - 09.30 |**********************0334:0334*********     21.15 - 21.30 |                       0000:0000
 09.30 - 09.45 |**********************0304:0304*****        21.30 - 21.45 |                       0000:0000
 09.45 - 10.00 |**********************0307:0307******       21.45 - 22.00 |                       0000:0000
 10.00 - 10.15 |**********************0299:0299*****        22.00 - 22.15 |                       0000:0000
 10.15 - 10.30 |**********************0234:0234             22.15 - 22.30 |                       0000:0000
 10.30 - 10.45 |**********************0299:0299*****        22.30 - 22.45 |                       0000:0000
 10.45 - 11.00 |**********************0295:0295****         22.45 - 23.00 |                       0000:0000
 11.00 - 11.15 |**********************0283:0283***          23.00 - 23.15 |                       0000:0000
 11.15 - 11.30 |**********************0277:0277**           23.15 - 23.30 |                       0000:0000
 11.30 - 11.45 |**********************0227:0227             23.30 - 23.45 |                       0000:0000
 11.45 - 12.00 |**********************0241:0241             23.45 - 24.00 |                       0000:0000
               +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
               0...40...80..120..160..200..240..280..320..360..400                0...40...80..120..160..200..240..280..320..360..400

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

IMS CPU Activity Graph

The CPU Activity Graph shows, by day of the week, the percentage of the CPU processing capacity that was expended in processing IMS transactions for a specified IMS region. The average and peak average percentage values are reported in 15 minute intervals throughout the day. As is the case with the other graphs, the measured period is specified to include anywhere from a day to several months.

IMS I/O Activity Graph

This graph shows, for a specified IMS region, the amount of EXCP activity related to processing transactions. Both the average and the peak average I/O rates are reported. The format of the I/O Activity Graph is identical to the graphs described above, except that the values along the horizontal axis represent the number of I/Os per second related to processing the IMS workload.

IMS Trends Analysis Reports

The CIMS Capacity Planner approach to Trends Analysis centers on isolating a number of capacity and performance related elements and providing either a summary or graphic comparison of the values of those elements over time. The IMS elements that are selected for comparison are:

- CPU Utilization Statistics, including a breakdown in terms of IMS overhead and Message Region usage
- The number of transactions executed per minute computed as an average during Prime shift
- The average number of EXCPs per second during Prime shift
- The average response time during Prime Shift
- The ratio of Early shift to Prime shift transactions
- The ratio of Late shift to Prime shift transactions
- The ratio of Early shift to Prime shift terminals
- The ratio of Late shift to Prime shift terminals

This information is gathered and presented to you in one of two ways:

- In summary report format, showing the values of each of the elements listed above during a baseline period and comparing them to a secondary period, with the slope of each comparison indicated at the right hand side of the report
- In data suitable for graphing with the Harvard Graphics Program once it has been down loaded to a Personal Computer. The manner in that the data is down loaded is left to the user. It is stored at the mainframe, however, in a PDS with the DDNAME of HGDLIB.

Following is a sample of the IMS Trends Analysis Report:

```
                              T R E N D S   A N A L Y S I S
 1. THIS ANALYSIS COMPARED THE PERIODS 06/27/90 AND 06/29/90 FOR THE SYSTEM NAMED MVSA
 2. THE VALUES INCLUDED IN THIS REPORT REPRESENT A PRIME SHIFT WHICH RUNS FROM 07:00 TO 17:00
 3. A COMPARISON OF CPU BUSY PERCENTAGES SHOWS:
                                06/27                          06/29                          TREND
    CPU                         13.59                           9.26                         31.86%-
 4. THE AVERAGE NUMBER OF IMS USERS ACTIVE DURING PRIME SHIFT WAS:
                                                                                               TREND
                                467                            448                           4.06%-
 5. THE AVERAGE RESPONSE TIME FOR IMS TRANSACTIONS DURING PRIME SHIFT WAS:
                                                                                               TREND

    SECONDS                     .64                            .74                          15.62%+
 6. THE AVERAGE NUMBER OF IMS TRANSACTIONS PROCESSED DURING PRIME SHIFT WAS:
                                                                                               TREND
                            128,466                        87,297                           32.04%-
 7. THE AVERAGE NUMBER OF EXCPS PER SECOND DURING PRIME SHIFT WAS:
                                                                                               TREND
                                .00                            .00                           .00%+
 8. FOR EACH OF THE TWO PERIODS THE RATIO OF EARLY-TO-PRIME SHIFT TRANSACTIONS WAS:
                                                                                               TREND
                                .00                            .03                           .00%+
 9. FOR EACH OF THE TWO PERIODS THE RATIO OF LATE-TO-PRIME SHIFT TRANSACTIONS WAS:
                                                                                               TREND
                                .08                            .00                         100.00%-
10. FOR EACH OF THE TWO PERIODS THE RATIO OF EARLY-TO-PRIME SHIFT TERMINALS WAS:
                                                                                               TREND
                                .00                            .10                           .00%+
11. FOR EACH OF THE TWO PERIODS THE RATIO OF LATE-TO-PRIME SHIFT TERMINALS WAS:
                                                                                               TREND
                                .17                            .00                         100.00%-
```

DB2 Workload and Performance Reports

The following discussion enumerates the various CIMS Capacity Planner DB2 reports and describes the contents of each report.

DB2 Subsystem-Wide Reports

DB2 Subsystem Summary Analysis Report

The DB2 Subsystem Summary Analysis Report contains key summary information required to determine the magnitude of the DB2 workload and how well the DB2 system is performing. The report provides the following information for the time period specified in the report request:

- The period measured by date and time

  The Summary Report can be produced for a single day or portion of a day or it can encompass any number of days, thereby allowing an evaluation of the overall long term and short term performance of the DB2 system.

- The average number of threads processed during the prime shift
- The average number of successful commits that took place during the prime shift

- The average percent of threads that required a create thread during the prime shift
- The average percentage of create threads that were delayed by queuing during the prime shift
- The average number of times that a short-on-storage condition arose during the prime shift
- The average percentage of LOAD CT SECTION requests that required DASD access during the prime shift
- The average percentage of LOAD DBD requests that required DASD access during the prime shift
- The low watermark percentage of EDM POOL PAGES that were free during the prime shift
- The average number of BUFFER POOL expansions that took place during the prime shift
- The number of deferred write conditions that arose during the prime shift
- The number of times that Data Manager Critical Threshold Conditions arose during the prime shift
- The percentage of Sequential Prefetch operations that resulted in Prefetch Disabled during the prime shift
- The percent of the time that Get Page requests resulted in physical reads during the prime shift
- The percent of the time that System Page Writes resulted in physical writes during the prime shift
- The average number of EXCPs per second during the prime shift
- The number of Write Active Log Buffers that took place during prime shift
- The number of SQL calls that were processed by shift for: INSERT, SELECT, UPDATE, DELETE, FETCH, and OTHER call types.

Following is a sample of the DB2 Subsystem Summary Analysis Report:

```
DB2SSID:DB2D                                  SUMMARY REPORT                                          SYSID:308B
1. THE MEASURED PERIOD BEGINS AT 00:00 SUNDAY, FEBRUARY 4, AND CONTINUES THROUGH 23:59 FRIDAY, FEBRUARY 9.
2. DURING PRIME SHIFT,  2,172 THREADS WERE PROCESSED.
3. DURING PRIME SHIFT,  1,062 SUCCESSFUL COMMITS TOOK PLACE.
4. DURING PRIME SHIFT,  87.47% OF THREADS REQUIRED A CREATE THREAD.
5. DURING PRIME SHIFT,  .00% OF CREATE THREAD REQUESTS WERE DELAYED BY QUEUEING.
6. DURING PRIME SHIFT, *NO* SHORT ON STORAGE CONDITIONS AROSE.
7. DURING PRIME SHIFT,  19.90% OF LOAD CT SECTION REQUESTS REQUIRED DASD ACCESS.
8. DURING PRIME SHIFT,  .24% OF LOAD DBD REQUESTS REQUIRED DASD ACCESS.
9. DURING PRIME SHIFT, AT ITS LOWEST POINT,  72.40% OF EDM POOL PAGES WERE FREE.
10. DURING PRIME SHIFT, *NO* BUFFER POOL EXPANSIONS TOOK PLACE.
11. DURING PRIME SHIFT,  380 DEFERRED WRITE CONDITIONS AROSE.
12. DURING PRIME SHIFT, *NO* DATA MANAGER CRITICAL THRESHOLD CONDITIONS AROSE.
13. DURING PRIME SHIFT,  .00% OF SEQUENTIAL PREFETCH RESULTED IN PREFETCH DISABLED.
14. DURING PRIME SHIFT,  1.29% OF GET PAGE REQUESTS RESULTED IN A PHYSICAL READ.
15. DURING PRIME SHIFT,  4.60% OF SYSTEM PAGE WRITE REQUESTS RESULTED IN A PHYSICAL WRITE.
16. DURING PRIME SHIFT,  THE NUMBER OF EXCPS PER SECOND AVERAGED: .71
17. DURING PRIME SHIFT,  10,883 WRITE ACTIVE LOG BUFFERS TOOK PLACE.
18. DURING THE MEASURED PERIOD A TOTAL OF 3,246,722 SQL CALLS WERE PROCESSED.
                          00:00 - 08:00          08:00 - 18:00          18:00 - 24:00
      INSERT                                        126,352
      SELECT                                        702,881                  3,794
      UPDATE                                        181,786
      DELETE                                          1,106
      FETCH                                       1,941,340
      OTHER                                         289,463
                          ========               ========               ========
      TOTALS                                      3,242,928                  3,794
```

DB2 Connect Name Reports–by Plan

DB2 Connect Name Summary Analysis Report

The DB2 Connect Name Summary Analysis Report contains key summary information required to determine the magnitude of the DB2 connected applications workload and how well the DB2 system is performing. The report provides the following information for the time period specified in the report request:

- The period measured by date and time

  The Summary Report can be produced for a single day or portion of a day or it can encompass any number of days, thereby allowing an evaluation of the overall long term and short term performance of the DB2 system.

- The average number of threads per minute that were processed during the prime shift
- The average number of commits per thread during the prime shift
- The average percent of threads that required a create thread during the prime shift
- The average number of SQL commands per thread during prime shift
- The average transit time for DB2 threads during the prime shift
- The average number of SQL INSERTS per minute during the prime shift
- The average number of SQL SELECTS per minute during the prime shift

- The average number of SQL UPDATES per minute during the prime shift
- The average number of SQL DELETES per minute during the prime shift
- The average number of SQL FETCHES per minute during the prime shift
- The average number of OTHER SQL calls per minute during the prime shift
- The average percent of the CPU utilized by each DB2 Connect Name by shift throughout the measured period
- The number of DB2 threads processed by shift for each Connect Name throughout the measured period

Following is a sample of the DB2 Connect Name Summary Analysis Report:

```
DB2NAME:CPA1                                SUMMARY REPORT                                          SYSID:308B
1. THE MEASURED PERIOD BEGINS AT 00:00 SUNDAY, FEBRUARY 4, AND CONTINUES THROUGH 23:59 FRIDAY, FEBRUARY 9.
2. DURING PRIME SHIFT, THE NUMBER OF THREADS PER MINUTE AVERAGED: 6.72
3. DURING PRIME SHIFT,  THE NUMBER OF COMMITS PER THREAD AVERAGED: .99
4. DURING PRIME SHIFT,  100.00% OF THREADS REQUIRED A CREATE THREAD.
5. DURING PRIME SHIFT,  THE NUMBER OF SQL COMMANDS PER THREAD AVERAGED: 29.42
6. DURING PRIME SHIFT, TRANSIT TIME FOR DB2 THREADS AVERAGED: .61 SECONDS
7. DURING PRIME SHIFT, THE NUMBER OF SQL INSERTS PER MINUTE AVERAGED: 4.17
8. DURING PRIME SHIFT, THE NUMBER OF SQL SELECTS PER MINUTE AVERAGED: .11
9. DURING PRIME SHIFT, THE NUMBER OF SQL UPDATES PER MINUTE AVERAGED: 1.41
10. DURING PRIME SHIFT, THE NUMBER OF SQL DELETES PER MINUTE AVERAGED: .42
11. DURING PRIME SHIFT, THE NUMBER OF SQL FETCHES PER MINUTE AVERAGED: 80.29
12. DURING PRIME SHIFT, THE NUMBER OF OTHER SQL CALLS PER MINUTE AVERAGED: 111.52
13. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT PERCENTAGE CPU BUSY TIME WITHIN SHIFT AVERAGED:
                          00:00 - 08:00                  08:00 - 18:00                  18:00 - 24:00
     DB2                          .00                            .14                            .01
14. DURING THE MEASURED PERIOD A TOTAL OF 20,273 DB2 THREADS WERE PROCESSED.
                          00:00 - 08:00                  08:00 - 18:00                  18:00 - 24:00
     HRPR                          109                         11,509                            343
     HRPY                           58                          5,104                            223
     HREH                                                       1,384
     HRMS                           10                            684                             40
     HRBN                                                         499                              8
     HRCT                            4                            111
     HRDS                                                         100
     HRSY                                                          85
     HRMD                                                           2
                               ========                    ========                       ========
     TOTALS                         181                         19,478                            614
```

DB2 Transit Time Performance Report–by Plan

The DB2 Transit Time Performance Report shows, by shift, for a selected (INCLUDED/EXCLUDED) set of Plans within a specified DB2 connect name, how the DB2 threads flowed through the system. The 25 most commonly executed threads are listed individually with the percentages of the time that the threads were processed within a set of time bounds defined by the entries contained within the CPPR.PARMLIB member &sidDB2R. The threads that are not among the 25 most common are summarized under "OTHER" and reported as a single line on the report. The counts of each of the threads are also reported. The transit times are defined in seconds and tenths of seconds. Specific threads that might be of interest, but not reported individually (part of "OTHER") can be reported using the INCLUDE facility, which allows you to specify

which threads are to be reported. For information related to specifying the times in the CPPR.PARMLIB member &sidDB2R, please refer to the Installation Instructions in the *CIMS Capacity Planner Installation Guide*.

Following is a sample of the DB2 Transit Time Performance Report—by Plan:

CIMS LAB, INC.
02/04/96-02/09/96
DB2NAME:CPA1 DB2 TRANSIT TIME PERFORMANCE SYSID:308B
SHIFT SHOWN: 08:00 - 18:00

	0.2 SEC	0.5 SEC	1.0 SEC	2.0 SEC	4.0 SEC	>4.0 SEC	COUNT
HRPR	.34%	30.41%	67.71%	.88%	.64%		11,509
HRPY	63.10%	32.26%	2.78%	1.52%	.07%	.23%	5,104
HREH	.14%	1.08%	34.68%	49.34%	12.57%	2.16%	1,384
HRMS	8.33%	82.45%	6.28%	2.92%			684
HRBN	19.03%	55.91%	22.24%	2.00%		.80%	499
HRCT	49.54%	45.04%	5.40%				111
HRDS	1.00%	6.00%	61.00%	32.00%			100
HRSY	98.82%	1.17%					85
HRMD	100.00%						2
SUBTOTALS	18.26%	31.12%	44.33%	4.74%	1.29%	.23%	19,478
TOTALS	18.26%	31.12%	44.33%	4.74%	1.29%	.23%	19,478

DB2 Plan Statistics Report

The DB2 Plan Statistics Report shows, for a specified DB2 region, which plans were among the top 40 plans in terms of volume and resource consumption based upon the following categories:

- Most frequently executed

  The plan name and the number of threads executed are shown along with the percentage of all activity for each of the 40 most commonly executed plans.

- Transit Time

  The plan name and the total transit time is shown along with the percentage of all transit time for the plans requiring the most total transit time.

- CPU time

  The plan name and the total CPU time is shown along with the percentage of all CPU time for the plans requiring the most total CPU time.

- Selects

  The plan name and the total number of Selects issued is shown along with the percentage of all Selects for the plans issuing the most total Selects.

- Inserts

  The plan name and the total number of Inserts is shown along with the percentage of all Inserts for the plans requiring the most total Inserts.

- Updates

  The plan name and the total number of Updates is shown along with the percentage of all Updates for the plans requiring the most total Updates.

- Deletes

  The plan name and the total number of Deletes is shown along with the percentage of all Deletes for the plans requiring the most total Deletes.

- Fetches

  The plan name and the total number of Fetches is shown along with the percentage of all Fetches for the plans requiring the most total Fetches.

- Other

  The Plan name and the total number of OTHER DB2 commands is shown along with the percentage of all other commands for the Plans issuing the most commands not itemized above.

In the event the activity for any given Plan is not reported among the top 40, the data is available through the use of the INCLUDE facility. Similarly, you can use the EXCLUDE facility to exclude selected Plans from the report.

Following is a sample of the DB2 Plan Statistics Report:

DB2NAME:CPA1 PLAN STATISTICS REPORT SYSID:308B
CIMS LAB, INC.
02/04/96-02/09/96

THREADS	HRPR	HRPY	HREH	HRMS	HRBN	HRCT	HRDS	HRSY	HRMD
	11,961	5,385	1,384	734	507	115	100	85	2
	58.99%	26.56%	6.82%	3.62%	2.50%	.56%	.49%	.41%	.00%

TRANSIT TIME	HRPR	HREH	HRPY	HRMS	HRBN	HRDS	HRCT	HRSY	HRMD
	2:12:59	0:32:43	0:27:13	0:05:28	0:04:45	0:01:25	0:00:37	0:00:10	0:00:00
	64.74%	15.93%	13.25%	2.66%	2.31%	.69%	.30%	.08%	.00%

CPU TIME	HREH	HRPR	HRPY	HRMS	HRBN	HRDS	HRCT	HRSY	HRMD
	0:13:14	0:10:12	0:02:01	0:00:25	0:00:17	0:00:10	0:00:04	0:00:00	0:00:00
	50.05%	38.59%	7.63%	1.57%	1.12%	.68%	.29%	.03%	.00%

DB2NAME:CPA1 PLAN STATISTICS REPORT SYSID:308B
CIMS LAB, INC.
02/04/96-02/09/96

SELECTS	HRPY
	344
	100.00%

INSERTS	HRPR	HRPY	HREH	HRDS	HRBN	HRMS	HRCT	HRMD
	9,754	1,433	964	191	183	85	11	2
	77.27%	11.35%	7.63%	1.51%	1.44%	.67%	.08%	.01%

UPDATES	HRPR	HRPY	HREH	HRBN	HRDS	HRMS
	2,145	1,400	604	55	38	13
	50.41%	32.90%	14.19%	1.29%	.89%	.30%

DB2NAME:CPA1 PLAN STATISTICS REPORT SYSID:308B
CIMS LAB, INC.
02/04/96-02/09/96

DELETES	HRPR	HREH
	957	326
	74.59%	25.40%

FETCHES	HRPR	HRPY	HREH	HRMS	HRBN	HRDS	HRCT	HRSY
	172,501	45,337	8,411	7,112	4,916	1,992	1,377	85
	71.36%	18.75%	3.47%	2.94%	2.03%	.82%	.56%	.03%

OTHER	HRPR	HRPY	HREH	HRMS	HRBN	HRDS	HRCT	HRSY
	274,759	28,808	12,474	10,258	5,488	3,544	374	170
	81.80%	8.57%	3.71%	3.05%	1.63%	1.05%	.11%	.05%

DB2 Exception Analysis

The DB2 Exception Analysis Report shows, for each 15-minute period, for a specified DB2 Connect Name, all threads whose transit times exceeded the thresholds specified in the CIMS Capacity Planner Parmlib member &sidXCPT.

Following is a sample of the DB2 Exception Analysis Report:

```
DB2NAME:CPA1                          DB2 EXCEPTION ANALYSIS                    SYSID:308B
                                            CIMS LAB, INC.
                                          02/04/96-02/09/96
02/06 15.30 - 15.45 : PLAN
02/08 09.45 - 10.00 : PLAN
02/08 14.45 - 15.00 : PLAN
02/08 17.00 - 17.15 : PLAN









PLAN=AVERAGE TRANSIT TIME FOR A GIVEN THREAD
```

DB2 Thread Transit Time Graph

The DB2 Thread Transit Time Graph shows, by day of the week, the average and peak average thread processing times for each 15-minute period throughout the day. The report page is broken into four sections - each covering a period of 6 hours. Within each section of the page, the time-of-day is represented by the vertical axis while the horizontal axis represents the average transit time (both average and peak average). In the middle of each line, both the average and peak average values are printed. The lines, in bar graph format, form the graphic representation of the transit time values. The peak average values are represented by dashes while the average values are represented by asterisks. In those cases where no dashes are present, they have been overlaid by asterisks because the peak values and *the average values are either equal or very nearly so. The unit of measure represented by the values along horizontal axis is specified in the third line of the report title.

You can produce the DB2 Transit Time Graph for a single day's activity or for several days. When more than one day's activity is graphed, separate graphs are produced—one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

You can control the data used to construct the DB2 Transit Time Graph using the INCLUDE/EXCLUDE facility. You can exclude data related to specific plan names from the graph using EXCLUDE facility. (All plan data except the plans that are excluded will be reflected in the graph). Also, you can use the INCLUDE facility to specify that the graph reflect data limited to a specific set of plans .

Following is a sample of the DB2 Thread Transit Time Graph:

```
DB2NAME:CPA1                                DAY SHOWN: MONDAY                                SYSID:308B
                                             02/04/96-02/09/96
                                  DB2 THREAD TRANSIT TIME GRAPH: .1 SECONDS

 00.00 - 00.15 |                    0000:0000      12.00 - 12.15 |*                   0002:0002
 00.15 - 00.30 |                    0000:0000      12.15 - 12.30 |                    0000:0000
 00.30 - 00.45 |                    0000:0000      12.30 - 12.45 |***                 0006:0006
 00.45 - 01.00 |                    0000:0000      12.45 - 13.00 |**                  0003:0003
 01.00 - 01.15 |                    0000:0000      13.00 - 13.15 |***                 0005:0005
 01.15 - 01.30 |                    0000:0000      13.15 - 13.30 |****                0007:0007
 01.30 - 01.45 |                    0000:0000      13.30 - 13.45 |**                  0003:0003
 01.45 - 02.00 |                    0000:0000      13.45 - 14.00 |***                 0005:0005
 02.00 - 02.15 |                    0000:0000      14.00 - 14.15 |***                 0006:0006
 02.15 - 02.30 |                    0000:0000      14.15 - 14.30 |****                0008:0008
 02.30 - 02.45 |                    0000:0000      14.30 - 14.45 |****                0007:0007
 02.45 - 03.00 |                    0000:0000      14.45 - 15.00 |**                  0004:0004
 03.00 - 03.15 |                    0000:0000      15.00 - 15.15 |***                 0005:0005
 03.15 - 03.30 |                    0000:0000      15.15 - 15.30 |**                  0004:0004
 03.30 - 03.45 |                    0000:0000      15.30 - 15.45 |**                  0004:0004
 03.45 - 04.00 |                    0000:0000      15.45 - 16.00 |**                  0004:0004
 04.00 - 04.15 |                    0000:0000      16.00 - 16.15 |***                 0005:0005
 04.15 - 04.30 |                    0000:0000      16.15 - 16.30 |***                 0005:0005
 04.30 - 04.45 |                    0000:0000      16.30 - 16.45 |***                 0006:0006
 04.45 - 05.00 |                    0000:0000      16.45 - 17.00 |***                 0005:0005
 05.00 - 05.15 |                    0000:0000      17.00 - 17.15 |***                 0006:0006
 05.15 - 05.30 |                    0000:0000      17.15 - 17.30 |***                 0006:0006
 05.30 - 05.45 |                    0000:0000      17.30 - 17.45 |**                  0003:0003
 05.45 - 06.00 |                    0000:0000      17.45 - 18.00 |*                   0001:0001
               +----+----+----+----+----+----+----+----+----+----+                    +----+----+----+----+----+----+----+----+----+----+
               0...10...20...30...40...50...60...70...80...90..100                  0...10...20...30...40...50...60...70...80...90..100

 06.00 - 06.15 |                    0000:0000      18.00 - 18.15 |*                   0002:0002
 06.15 - 06.30 |                    0000:0000      18.15 - 18.30 |                    0000:0000
 06.30 - 06.45 |                    0000:0000      18.30 - 18.45 |                    0000:0000
 06.45 - 07.00 |*                   0002:0002      18.45 - 19.00 |**                  0004:0004
 07.00 - 07.15 |**                  0003:0003      19.00 - 19.15 |*                   0001:0001
 07.15 - 07.30 |*                   0001:0001      19.15 - 19.30 |*                   0002:0002
 07.30 - 07.45 |                    0000:0000      19.30 - 19.45 |*                   0001:0001
 07.45 - 08.00 |                    0000:0000      19.45 - 20.00 |*                   0001:0001
 08.00 - 08.15 |**                  0004:0004      20.00 - 20.15 |*                   0001:0001
 08.15 - 08.30 |*                   0002:0002      20.15 - 20.30 |                    0000:0000
 08.30 - 08.45 |*                   0002:0002      20.30 - 20.45 |**                  0004:0004
 08.45 - 09.00 |**                  0003:0003      20.45 - 21.00 |                    0000:0000
 09.00 - 09.15 |***                 0006:0006      21.00 - 21.15 |                    0000:0000
 09.15 - 09.30 |****                0007:0007      21.15 - 21.30 |                    0000:0000
 09.30 - 09.45 |**                  0003:0003      21.30 - 21.45 |                    0000:0000
 09.45 - 10.00 |***                 0006:0006      21.45 - 22.00 |                    0000:0000
 10.00 - 10.15 |******              0011:0011      22.00 - 22.15 |                    0000:0000
 10.15 - 10.30 |****                0008:0008      22.15 - 22.30 |                    0000:0000
 10.30 - 10.45 |*****               0009:0009      22.30 - 22.45 |                    0000:0000
 10.45 - 11.00 |****                0007:0007      22.45 - 23.00 |                    0000:0000
 11.00 - 11.15 |***                 0005:0005      23.00 - 23.15 |                    0000:0000
 11.15 - 11.30 |***                 0006:0006      23.15 - 23.30 |                    0000:0000
 11.30 - 11.45 |**                  0004:0004      23.30 - 23.45 |                    0000:0000
 11.45 - 12.00 |**                  0003:0003      23.45 - 24.00 |                    0000:0000
               +----+----+----+----+----+----+----+----+----+----+                    +----+----+----+----+----+----+----+----+----+----+
               0...10...20...30...40...50...60...70...80...90..100                  0...10...20...30...40...50...60...70...80...90..100

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

DB2 Commit Activity Graph

The DB2 Commit Activity Graph is produced in the same format as the Thread Transit Time Graph described above, except that the horizontal axis represents the number of commits per minute (both average and peak average) processed during each 15-minute period throughout the day.

You can control the data used to construct the DB2 Commit Activity Graph using INCLUDE/EXCLUDE facility. You can use the EXCLUDE facility to exclude data related to specific plan names from the graph. (All plan data except the plans that are excluded will be reflected in the graph). Also, you can use the INCLUDE facility to specify that the graph reflect data limited to a specific set of plans.

Following is a sample of the DB2 Commit Activity Graph:

```
DB2NAME:CPA1                                DAY SHOWN: MONDAY                                SYSID:308B
                                              02/04/96-02/09/96
                                          DB2 COMMIT ACTIVITY GRAPH

  00.00 - 00.15 |                        0000:0000          12.00 - 12.15 |***************        0191:0191
  00.15 - 00.30 |                        0000:0000          12.15 - 12.30 |                        0000:0000
  00.30 - 00.45 |                        0000:0000          12.30 - 12.45 |*                       0007:0007
  00.45 - 01.00 |                        0000:0000          12.45 - 13.00 |****                    0039:0039
  01.00 - 01.15 |                        0000:0000          13.00 - 13.15 |***                     0033:0033
  01.15 - 01.30 |                        0000:0000          13.15 - 13.30 |*********               0107:0107
  01.30 - 01.45 |                        0000:0000          13.30 - 13.45 |********                0089:0089
  01.45 - 02.00 |                        0000:0000          13.45 - 14.00 |**********              0119:0119
  02.00 - 02.15 |                        0000:0000          14.00 - 14.15 |**********              0112:0112
  02.15 - 02.30 |                        0000:0000          14.15 - 14.30 |***********             0132:0132
  02.30 - 02.45 |                        0000:0000          14.30 - 14.45 |****************        0187:0187
  02.45 - 03.00 |                        0000:0000          14.45 - 15.00 |**************          0167:0167
  03.00 - 03.15 |                        0000:0000          15.00 - 15.15 |**********              0116:0116
  03.15 - 03.30 |                        0000:0000          15.15 - 15.30 |******************      0198:0198
  03.30 - 03.45 |                        0000:0000          15.30 - 15.45 |*****************       0194:0194
  03.45 - 04.00 |                        0000:0000          15.45 - 16.00 |*****************       0194:0194
  04.00 - 04.15 |                        0000:0000          16.00 - 16.15 |******************      0202:0202
  04.15 - 04.30 |                        0000:0000          16.15 - 16.30 |***********             0128:0128
  04.30 - 04.45 |                        0000:0000          16.30 - 16.45 |*************           0145:0145
  04.45 - 05.00 |                        0000:0000          16.45 - 17.00 |********************    0239:0239
  05.00 - 05.15 |                        0000:0000          17.00 - 17.15 |*************           0154:0154
  05.15 - 05.30 |                        0000:0000          17.15 - 17.30 |*******                 0079:0079
  05.30 - 05.45 |                        0000:0000          17.30 - 17.45 |******                  0071:0071
  05.45 - 06.00 |                        0000:0000          17.45 - 18.00 |********************    0235:0235
              +----+----+----+----+----+----+----+----+----+----+            +----+----+----+----+----+----+----+----+----+----+
              0...60..120..180..240..300..360..420..480..540..600            0...60..120..180..240..300..360..420..480..540..600

  06.00 - 06.15 |                        0000:0000          18.00 - 18.15 |**                      0023:0023
  06.15 - 06.30 |                        0000:0000          18.15 - 18.30 |                        0000:0000
  06.30 - 06.45 |                        0000:0000          18.30 - 18.45 |                        0000:0000
  06.45 - 07.00 |**                      0022:0022          18.45 - 19.00 |*                       0007:0007
  07.00 - 07.15 |***                     0035:0035          19.00 - 19.15 |*                       0001:0001
  07.15 - 07.30 |**                      0024:0024          19.15 - 19.30 |****                    0039:0039
  07.30 - 07.45 |                        0000:0000          19.30 - 19.45 |****                    0048:0048
  07.45 - 08.00 |                        0000:0000          19.45 - 20.00 |*******                 0074:0074
  08.00 - 08.15 |**                      0023:0023          20.00 - 20.15 |****                    0042:0042
  08.15 - 08.30 |***********             0125:0125          20.15 - 20.30 |                        0000:0000
  08.30 - 08.45 |******************      0214:0214          20.30 - 20.45 |*                       0005:0005
  08.45 - 09.00 |************************0287:0287          20.45 - 21.00 |                        0000:0000
  09.00 - 09.15 |*********               0107:0107          21.00 - 21.15 |                        0000:0000
  09.15 - 09.30 |********                0092:0092          21.15 - 21.30 |                        0000:0000
  09.30 - 09.45 |*********               0108:0108          21.30 - 21.45 |                        0000:0000
  09.45 - 10.00 |********                0091:0091          21.45 - 22.00 |                        0000:0000
  10.00 - 10.15 |****************        0182:0182          22.00 - 22.15 |                        0000:0000
  10.15 - 10.30 |********************    0238:0238          22.15 - 22.30 |                        0000:0000
  10.30 - 10.45 |******************      0202:0202          22.30 - 22.45 |                        0000:0000
  10.45 - 11.00 |************************0286:0286          22.45 - 23.00 |                        0000:0000
  11.00 - 11.15 |************************0294:0294          23.00 - 23.15 |                        0000:0000
  11.15 - 11.30 |************************0423:0423***       23.15 - 23.30 |                        0000:0000
  11.30 - 11.45 |************************0528:0528**********23.30 - 23.45 |                        0000:0000
  11.45 - 12.00 |******************      0218:0218          23.45 - 24.00 |                        0000:0000
              +----+----+----+----+----+----+----+----+----+----+            +----+----+----+----+----+----+----+----+----+----+
              0...60..120..180..240..300..360..420..480..540..600            0...60..120..180..240..300..360..420..480..540..600

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

DB2 SQL Command Activity Graph

The DB2 SQL Command Activity Graph is produced in the same format as the Thread Transit Time Graph described above, except that the horizontal axis represents the number SQL commands processed per minute (both average and peak average) processed during each 15-minute period throughout the day.

You can control the data used to construct the DB2 SQL Command Activity Graph through the INCLUDE/EXCLUDE facility. You can use the EXCLUDE facility to specify that data related to specific plan names can be excluded from the graph. (All plan data except the plans that are excluded will be reflected in the graph). Also, you can use the INCLUDE facility to specify that the graph reflect data limited to a specific set of plans.

Following is a sample of the DB2 SQL Commit Activity Graph:

```
DB2NAME:CPA1                                          DAY SHOWN: MONDAY                                          SYSID:308B
                                                       02/04/96-02/09/96
                                                 DB2 SQL COMMANDS PER MINUTE GRAPH

  00.00 - 00.15 |                       0000:0000          12.00 - 12.15 |***********              0192:0192
  00.15 - 00.30 |                       0000:0000          12.15 - 12.30 |                         0000:0000
  00.30 - 00.45 |                       0000:0000          12.30 - 12.45 |*                        0007:0007
  00.45 - 01.00 |                       0000:0000          12.45 - 13.00 |***                      0038:0038
  01.00 - 01.15 |                       0000:0000          13.00 - 13.15 |*****                    0075:0075
  01.15 - 01.30 |                       0000:0000          13.15 - 13.30 |***************          0255:0255
  01.30 - 01.45 |                       0000:0000          13.30 - 13.45 |************             0206:0206
  01.45 - 02.00 |                       0000:0000          13.45 - 14.00 |***************          0267:0267
  02.00 - 02.15 |                       0000:0000          14.00 - 14.15 |***************          0264:0264
  02.15 - 02.30 |                       0000:0000          14.15 - 14.30 |*****************        0299:0299
  02.30 - 02.45 |                       0000:0000          14.30 - 14.45 |***************          0264:0264
  02.45 - 03.00 |                       0000:0000          14.45 - 15.00 |**************           0236:0236
  03.00 - 03.15 |                       0000:0000          15.00 - 15.15 |**************           0238:0238
  03.15 - 03.30 |                       0000:0000          15.15 - 15.30 |*****************        0292:0292
  03.30 - 03.45 |                       0000:0000          15.30 - 15.45 |********************     0344:0344
  03.45 - 04.00 |                       0000:0000          15.45 - 16.00 |******************       0316:0316
  04.00 - 04.15 |                       0000:0000          16.00 - 16.15 |**********************   0396:0396
  04.15 - 04.30 |                       0000:0000          16.15 - 16.30 |**************           0248:0248
  04.30 - 04.45 |                       0000:0000          16.30 - 16.45 |*********************    0361:0361
  04.45 - 05.00 |                       0000:0000          16.45 - 17.00 |************************0660:0660****
  05.00 - 05.15 |                       0000:0000          17.00 - 17.15 |*********************** 0404:0404
  05.15 - 05.30 |                       0000:0000          17.15 - 17.30 |************             0213:0213
  05.30 - 05.45 |                       0000:0000          17.30 - 17.45 |*****                    0086:0086
  05.45 - 06.00 |                       0000:0000          17.45 - 18.00 |**************           0240:0240
             +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
             0...90..180..270..360..450..540..630..720..810..900          0...90..180..270..360..450..540..630..720..810..900


  06.00 - 06.15 |                       0000:0000          18.00 - 18.15 |***                      0039:0039
  06.15 - 06.30 |                       0000:0000          18.15 - 18.30 |                         0000:0000
  06.30 - 06.45 |                       0000:0000          18.30 - 18.45 |                         0000:0000
  06.45 - 07.00 |**                     0022:0022          18.45 - 19.00 |*                        0006:0006
  07.00 - 07.15 |****                   0061:0061          19.00 - 19.15 |*                        0001:0001
  07.15 - 07.30 |*                      0016:0016          19.15 - 19.30 |***                      0054:0054
  07.30 - 07.45 |                       0000:0000          19.30 - 19.45 |***                      0049:0049
  07.45 - 08.00 |                       0000:0000          19.45 - 20.00 |*******                  0109:0109
  08.00 - 08.15 |****                   0067:0067          20.00 - 20.15 |*****                    0073:0073
  08.15 - 08.30 |***********            0193:0193          20.15 - 20.30 |                         0000:0000
  08.30 - 08.45 |***********            0186:0186          20.30 - 20.45 |*                        0005:0005
  08.45 - 09.00 |*******************    0330:0330          20.45 - 21.00 |                         0000:0000
  09.00 - 09.15 |***********            0193:0193          21.00 - 21.15 |                         0000:0000
  09.15 - 09.30 |****************       0279:0279          21.15 - 21.30 |                         0000:0000
  09.30 - 09.45 |******                 0105:0105          21.30 - 21.45 |                         0000:0000
  09.45 - 10.00 |*************          0221:0221          21.45 - 22.00 |                         0000:0000
  10.00 - 10.15 |*******************    0330:0330          22.00 - 22.15 |                         0000:0000
  10.15 - 10.30 |****************       0280:0280          22.15 - 22.30 |                         0000:0000
  10.30 - 10.45 |***********            0182:0182          22.30 - 22.45 |                         0000:0000
  10.45 - 11.00 |*******************    0329:0329          22.45 - 23.00 |                         0000:0000
  11.00 - 11.15 |*****************      0298:0298          23.00 - 23.15 |                         0000:0000
  11.15 - 11.30 |************************0635:0635***      23.15 - 23.30 |                         0000:0000
  11.30 - 11.45 |************************0602:0602*        23.30 - 23.45 |                         0000:0000
  11.45 - 12.00 |**************         0250:0250          23.45 - 24.00 |                         0000:0000
             +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
             0...90..180..270..360..450..540..630..720..810..900          0...90..180..270..360..450..540..630..720..810..900

   LEGEND: (*) = AVERAGE   (-) = PEAK
```

DB2 Plan Profile

The DB2 Plan Profile graphically depicts the daily average values of selected characteristics of a specified plan operating under a specified SYSID. The characteristics that are reported are:

- Threads processed per day

  The number of threads processed per day represents the number of threads processed during the period specified by the BEGIN DATE and the END DATE divided by the number of days contained within the specified period.

- Transit time

  The average transit time for all threads processed during the specified time period.

- CPU time

  The average number of CPU seconds required to process the threads during the specified period.

- Commits per thread

  The average number of COMMITs per thread for all threads processed during the specified period.

- SQL Inserts, Selects, Updates, Deletes, and Fetches

  The average number of each type of principal SQL command issued per thread processed throughout the specified period.

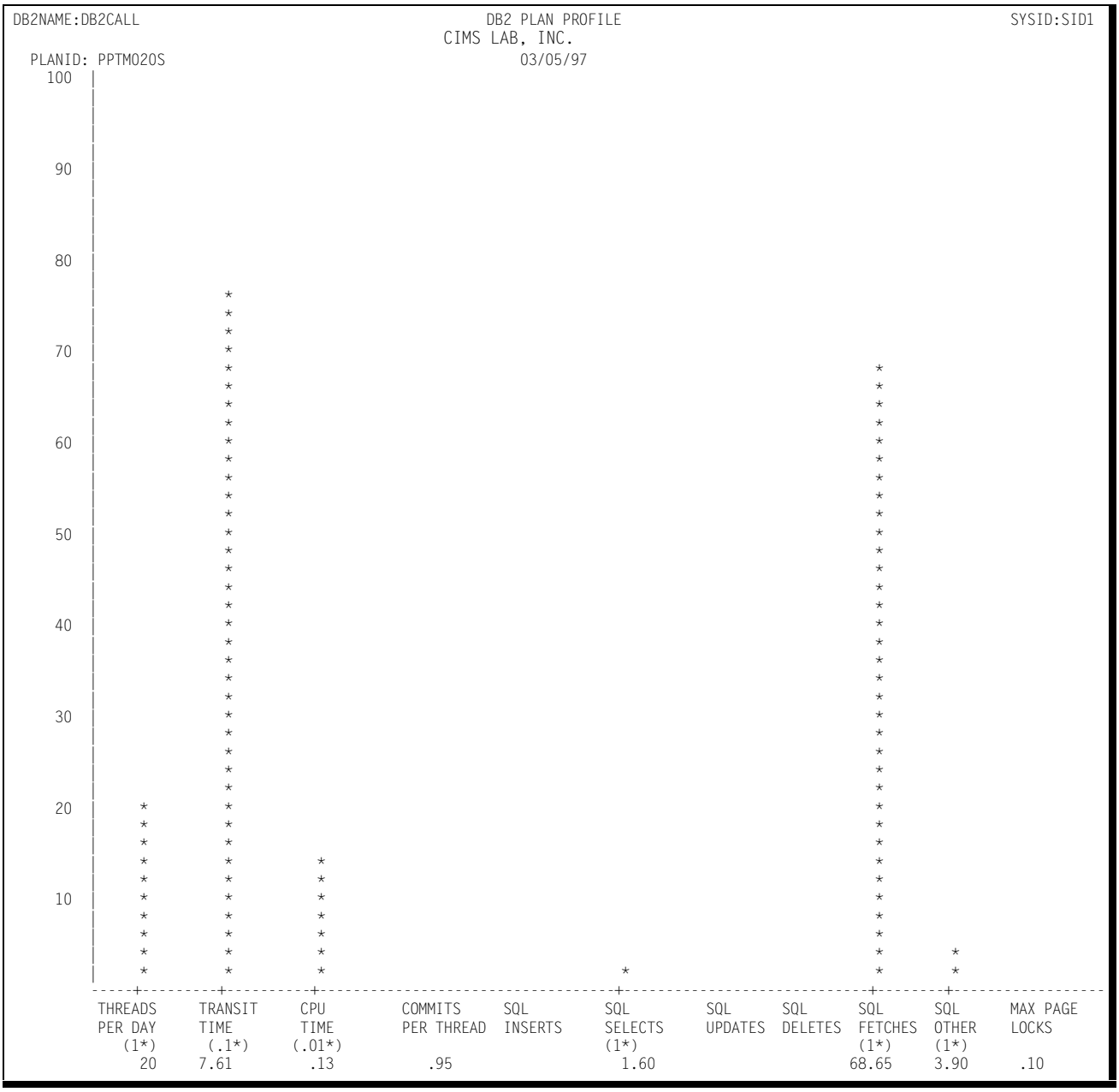
- SQL Other

  The average number of Other SQL commands (not specified above) issued during the processing of each thread during the specified period.

- Maximum Page Locks

  The maximum Page Locks held during the processing of each thread.

Following is a sample of the DB2 Plan Profilfe:



AUTH-ID Reports

DB2 AUTH-ID Summary Analysis Report

The DB2 AUTH-ID Summary Analysis Report contains key summary information required to determine the magnitude of the DB2 connected applications workload and how well the DB2 system is performing. The report provides the following information for the time period specified in the report request:

- The period measured by date and time

  The Summary Report can be produced for a single day or portion of a day or it can encompass any number of days, thereby allowing an evaluation of the overall long term and short term performance of the DB2 system.

- The average number of threads per minute that were processed during the prime shift
- The average number of commits per thread during the prime shift
- The average percent of threads that required a create thread during the prime shift
- The average number of SQL commands per thread during prime shift
- The average transit time for DB2 threads during the prime shift
- The average number of SQL INSERTS per minute during the prime shift
- The average number of SQL SELECTS per minute during the prime shift
- The average number of SQL UPDATES per minute during the prime shift
- The average number of SQL DELETES per minute during the prime shift
- The average number of SQL FETCHES per minute during the prime shift
- The average number of OTHER SQL calls per minute during the prime shift
- The average percent of the CPU utilized by each DB2 AUTH-ID by shift throughout the measured period
- The number of DB2 threads processed by shift for each AUTH-ID throughout the measured period

Following is a sample of the DB2 AUTH-ID Summary Analysis Report:

```
DB2NAME:CPA1                                  SUMMARY REPORT                                          SYSID:308B
  1. THE MEASURED PERIOD BEGINS AT 00:00 SUNDAY, FEBRUARY 4, AND CONTINUES THROUGH 23:59 FRIDAY, FEBRUARY 9.
  2. DURING PRIME SHIFT, THE NUMBER OF THREADS PER MINUTE AVERAGED: 6.72
  3. DURING PRIME SHIFT,  THE NUMBER OF COMMITS PER THREAD AVERAGED: .99
  4. DURING PRIME SHIFT,  100.00% OF THREADS REQUIRED A CREATE THREAD.
  5. DURING PRIME SHIFT,  THE NUMBER OF SQL COMMANDS PER THREAD AVERAGED: 29.42
  6. DURING PRIME SHIFT, TRANSIT TIME FOR DB2 THREADS AVERAGED: .61 SECONDS
  7. DURING PRIME SHIFT, THE NUMBER OF SQL INSERTS PER MINUTE AVERAGED: 4.17
  8. DURING PRIME SHIFT, THE NUMBER OF SQL SELECTS PER MINUTE AVERAGED: .11
  9. DURING PRIME SHIFT, THE NUMBER OF SQL UPDATES PER MINUTE AVERAGED: 1.41
 10. DURING PRIME SHIFT, THE NUMBER OF SQL DELETES PER MINUTE AVERAGED: .42
 11. DURING PRIME SHIFT, THE NUMBER OF SQL FETCHES PER MINUTE AVERAGED: 80.29
 12. DURING PRIME SHIFT, THE NUMBER OF OTHER SQL CALLS PER MINUTE AVERAGED: 111.52
 13. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT PERCENTAGE CPU BUSY TIME WITHIN SHIFT AVERAGED:
                          00:00 - 08:00                  08:00 - 18:00                  18:00 - 24:00
     DB2                          .00                            .14                            .01
 14. DURING THE MEASURED PERIOD A TOTAL OF 20,273 DB2 THREADS WERE PROCESSED.
                          00:00 - 08:00                  08:00 - 18:00                  18:00 - 24:00
     SMVS001                        181                         19,393                            614
     34710167                                                       78
     TUSR806                                                         4
     LSC0003                                                         2
     TUSR567                                                         1
                              ========                       ========                       ========
     TOTALS                         181                         19,478                            614
```

DB2 Transit Time Performance Report–by AUTH-ID

The DB2 Transit Time Performance Report shows, by shift, for a selected (INCLUDED/EXCLUDED) set of AUTH-IDs within a specified DB2 connect name, how the DB2 threads flowed through the system. The 25 most Active AUTH-IDs are listed individually with the percentages of the time that the threads were processed within a set of time bounds defined by the entries contained within the CPPR.PARMLIB member &sidDB2R. The AUTH-IDs that are not among the 25 most active are summarized under "OTHER" and reported as a single line on the report. The counts of each of the AUTH-IDs are also reported. The transit times are defined in seconds and tenths of seconds. Specific AUTH-IDs that might be of interest, but not reported individually (part of "OTHER") can be reported using INCLUDE facility, which allows you to specify which AUTH-IDs are to be reported. For information related to specifying the times in the CPPR.PARMLIB member &sidDB2R, please refer to the Installation Instructions in the *CIMS Capacity Planner Installation Guide*.

Following is an example of a DB2 Transit Time Performance Report:

CIMS LAB, INC.
02/04/96-02/09/96
DB2NAME:CPA1 DB2 TRANSIT TIME PERFORMANCE SYSID:308B
SHIFT SHOWN: 08:00 - 18:00

	0.2 SEC	0.5 SEC	1.0 SEC	2.0 SEC	4.0 SEC	>4.0 SEC	COUNT
SMVS001	5.66%	41.54%	50.61%	1.71%	.46%		19,393
34710167	98.71%	1.28%					78
TUSR806	100.00%						4
LSC0003	100.00%						2
TUSR567	100.00%						1
SUBTOTALS	6.06%	41.36%	50.39%	1.70%	.46%		19,478
TOTALS	6.06%	41.36%	50.39%	1.70%	.46%		19,478

DB2 AUTH-ID Statistics Report

The DB2 AUTH-ID Statistics Report shows, for a specified DB2 region, which AUTH-IDs were among the top 40 AUTH-IDs in terms of volume and resource consumption based upon the following categories:

- Most frequently executed

  The AUTH-ID and the number of threads executed are shown along with the percentage of all activity for each of the 40 most active AUTH-IDs.

- Transit Time

  The AUTH-ID and the total transit time is shown along with the percentage of all transit time for the AUTH-IDs requiring the most total transit time.

- CPU time

  The AUTH-ID and the total CPU time is shown along with the percentage of all CPU time for the AUTH-IDs requiring the most total CPU time.

- Selects

  The AUTH-ID and the total number of Selects issued is shown along with the percentage of all Selects for the AUTH-IDs issuing the most total Selects.

- Inserts

  The AUTH-ID and the total number of Inserts is shown along with the percentage of all Inserts for the AUTH-IDs requiring the most total Inserts.

- Updates

  The AUTH-ID and the total number of Updates is shown along with the percentage of all Updates for the AUTH-IDs requiring the most total Updates.

- Deletes

  The AUTH-ID and the total number of Deletes is shown along with the percentage of all Deletes for the AUTH-IDs requiring the most total Deletes.

- Fetches

  The AUTH-ID and the total number of Fetches is shown along with the percentage of all Fetches for the AUTH-IDs requiring the most total Fetches.

- Other

  The AUTH-ID and the total number of OTHER DB2 commands is shown along with the percentage of all OTHER commands for the AUTH-IDs issuing the most commands not itemized above.

In the event the activity for any given AUTH-ID is not reported among the top 40, the data is available through the use of the INCLUDE facility. Similarly, you can use the EXCLUDE facility to exclude selected AUTH-IDs from the report.

Following is a sample of the DB2 AUTH-ID Statistics Report:

```
DB2NAME:CPA1                              AUTH-ID STATISTICS REPORT                              SYSID:308B
                                                 CIMS LAB, INC.
                                               02/04/96-02/09/96
 THREADS              SMVS001   34710167   TUSR806   LSC0003   TUSR567
                        20,188         78         4         2         1
                        99.58%       .38%       .01%      .00%      .00%

 TRANSIT TIME         SMVS001   34710167   TUSR806   LSC0003   TUSR567
                       3:25:14   0:00:09   0:00:00   0:00:00   0:00:00
                        99.91%       .07%       .00%      .00%      .00%

 CPU TIME             SMVS001   34710167   LSC0003   TUSR806
                       0:26:26   0:00:00   0:00:00   0:00:00
                        99.96%       .03%       .00%      .00%
```

```
DB2NAME:CPA1                              AUTH-ID STATISTICS REPORT                              SYSID:308B
                                                 CIMS LAB, INC.
                                               02/04/96-02/09/96
 SELECTS              SMVS001
                           344
                        100.00%

 INSERTS              SMVS001
                        12,623
                        100.00%

 UPDATES              SMVS001
                         4,255
                        100.00%
```

```
DB2NAME:CPA1                              AUTH-ID STATISTICS REPORT                              SYSID:308B
                                                 CIMS LAB, INC.
                                               02/04/96-02/09/96
DELETES              SMVS001
                       1,283
                      100.00%

FETCHES              SMVS001  34710167   TUSR806   LSC0003   TUSR567
                      241,646        78         4         2         1
                       99.96%      .03%      .00%      .00%      .00%

OTHER                SMVS001  34710167   TUSR806   LSC0003   TUSR567
                      335,705       156         8         4         2
                       99.94%      .04%      .00%      .00%      .00%
```

DB2 Exception Report

The Exception Analysis shows, for each 15-minute period, for a specified DB2 Connect Name, all threads whose transit times exceeded the thresholds specified in the `CPPR.PARMLIB` member &sidXCPT.

DB2 Thread Transit Time Graph

The DB2 Thread Transit Time Graph shows, by day of the week, the average and peak average thread processing times for each 15-minute period throughout the day. The report page is broken into four sections—each covering a period of 6 hours. Within each section of the page, the time-of-day is represented by the vertical axis while the horizontal axis represents the average transit time (both average and peak average). In the middle of each line, both the average and peak average values are printed. The lines, in bar graph format, form the graphic representation of the transit time values. The peak average values are represented by dashes while the average values are represented by asterisks. In those cases where no dashes are present, they have been overlaid by asterisks because the peak values and the average values are either equal or very nearly so. The unit of measure represented by the values along horizontal axis is specified in the third line of the report title.

You can produce the DB2 Transit Time Graph for a single day's activity or for several days. When more than one day's activity is graphed, separate graphs are produced - one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

You can control the data used to construct the DB2 Transit Time Graph through the INCLUDE/EXCLUDE facility. You can use the EXCLUDE facility to specify that data related to specific plan Auth-ids can be excluded from the graph. (All Auth-id data except the Auth-ids that are excluded will be reflected in the graph). Also, you can use the INCLUDE facility to specify that the graph reflect data limited to a specific set of Auth-ids.

Following is a sample of the DB2 Thread Transit Time Graph:

```
DB2NAME:CPA1                                DAY SHOWN: MONDAY                                SYSID:308B
                                             02/04/96-02/09/96
                                  DB2 THREAD TRANSIT TIME GRAPH: .1 SECONDS

 00.00 - 00.15 |                    0000:0000      12.00 - 12.15 |*                   0002:0002
 00.15 - 00.30 |                    0000:0000      12.15 - 12.30 |                    0000:0000
 00.30 - 00.45 |                    0000:0000      12.30 - 12.45 |***                 0006:0006
 00.45 - 01.00 |                    0000:0000      12.45 - 13.00 |**                  0003:0003
 01.00 - 01.15 |                    0000:0000      13.00 - 13.15 |***                 0005:0005
 01.15 - 01.30 |                    0000:0000      13.15 - 13.30 |****                0007:0007
 01.30 - 01.45 |                    0000:0000      13.30 - 13.45 |**                  0003:0003
 01.45 - 02.00 |                    0000:0000      13.45 - 14.00 |***                 0005:0005
 02.00 - 02.15 |                    0000:0000      14.00 - 14.15 |***                 0006:0006
 02.15 - 02.30 |                    0000:0000      14.15 - 14.30 |****                0008:0008
 02.30 - 02.45 |                    0000:0000      14.30 - 14.45 |****                0007:0007
 02.45 - 03.00 |                    0000:0000      14.45 - 15.00 |**                  0004:0004
 03.00 - 03.15 |                    0000:0000      15.00 - 15.15 |***                 0005:0005
 03.15 - 03.30 |                    0000:0000      15.15 - 15.30 |**                  0004:0004
 03.30 - 03.45 |                    0000:0000      15.30 - 15.45 |**                  0004:0004
 03.45 - 04.00 |                    0000:0000      15.45 - 16.00 |**                  0004:0004
 04.00 - 04.15 |                    0000:0000      16.00 - 16.15 |***                 0005:0005
 04.15 - 04.30 |                    0000:0000      16.15 - 16.30 |***                 0005:0005
 04.30 - 04.45 |                    0000:0000      16.30 - 16.45 |***                 0006:0006
 04.45 - 05.00 |                    0000:0000      16.45 - 17.00 |***                 0005:0005
 05.00 - 05.15 |                    0000:0000      17.00 - 17.15 |***                 0006:0006
 05.15 - 05.30 |                    0000:0000      17.15 - 17.30 |***                 0006:0006
 05.30 - 05.45 |                    0000:0000      17.30 - 17.45 |**                  0003:0003
 05.45 - 06.00 |                    0000:0000      17.45 - 18.00 |*                   0001:0001
               +----+----+----+----+----+----+----+----+----+----+                   +----+----+----+----+----+----+----+----+----+----+
               0...10...20...30...40...50...60...70...80...90..100                  0...10...20...30...40...50...60...70...80...90..100

 06.00 - 06.15 |                    0000:0000      18.00 - 18.15 |*                   0002:0002
 06.15 - 06.30 |                    0000:0000      18.15 - 18.30 |                    0000:0000
 06.30 - 06.45 |                    0000:0000      18.30 - 18.45 |                    0000:0000
 06.45 - 07.00 |*                   0002:0002      18.45 - 19.00 |**                  0004:0004
 07.00 - 07.15 |**                  0003:0003      19.00 - 19.15 |*                   0001:0001
 07.15 - 07.30 |*                   0001:0001      19.15 - 19.30 |*                   0002:0002
 07.30 - 07.45 |                    0000:0000      19.30 - 19.45 |*                   0001:0001
 07.45 - 08.00 |                    0000:0000      19.45 - 20.00 |*                   0001:0001
 08.00 - 08.15 |**                  0004:0004      20.00 - 20.15 |*                   0001:0001
 08.15 - 08.30 |*                   0002:0002      20.15 - 20.30 |                    0000:0000
 08.30 - 08.45 |*                   0002:0002      20.30 - 20.45 |**                  0004:0004
 08.45 - 09.00 |**                  0003:0003      20.45 - 21.00 |                    0000:0000
 09.00 - 09.15 |***                 0006:0006      21.00 - 21.15 |                    0000:0000
 09.15 - 09.30 |****                0007:0007      21.15 - 21.30 |                    0000:0000
 09.30 - 09.45 |**                  0003:0003      21.30 - 21.45 |                    0000:0000
 09.45 - 10.00 |***                 0006:0006      21.45 - 22.00 |                    0000:0000
 10.00 - 10.15 |******              0011:0011      22.00 - 22.15 |                    0000:0000
 10.15 - 10.30 |****                0008:0008      22.15 - 22.30 |                    0000:0000
 10.30 - 10.45 |*****               0009:0009      22.30 - 22.45 |                    0000:0000
 10.45 - 11.00 |****                0007:0007      22.45 - 23.00 |                    0000:0000
 11.00 - 11.15 |***                 0005:0005      23.00 - 23.15 |                    0000:0000
 11.15 - 11.30 |***                 0006:0006      23.15 - 23.30 |                    0000:0000
 11.30 - 11.45 |**                  0004:0004      23.30 - 23.45 |                    0000:0000
 11.45 - 12.00 |**                  0003:0003      23.45 - 24.00 |                    0000:0000
               +----+----+----+----+----+----+----+----+----+----+                   +----+----+----+----+----+----+----+----+----+----+
               0...10...20...30...40...50...60...70...80...90..100                  0...10...20...30...40...50...60...70...80...90..100

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

DB2 Commit Activity Graph

The DB2 Commit Activity Graph is produced in the same format as the as the Thread Transit Time Graph described above, except that the horizontal axis represents the number of commits per minute (both average and peak average) processed during each 15-minute period throughout the day.

You can control the data used to construct the DB2 Commit Activity Graph through the INCLUDE/EXCLUDE facility. You can use the EXCLUDE facility to specify thatdata related to specific plan Auth-ids can be excluded from the graph. (All Auth-id data except the Auth-ids that are excluded will be reflected in the graph). Also, you can use the INCLUDE facility to specify that the graph reflect data limited to a specific set of Auth-ids.

Following is a sample of the DB2 Commit Activity Graph:

```
DB2NAME:CPA1                                DAY SHOWN: MONDAY                                SYSID:308B
                                             02/04/96-02/09/96
                                          DB2 COMMIT ACTIVITY GRAPH

  00.00 - 00.15 |                        0000:0000          12.00 - 12.15 |****************      0191:0191
  00.15 - 00.30 |                        0000:0000          12.15 - 12.30 |                       0000:0000
  00.30 - 00.45 |                        0000:0000          12.30 - 12.45 |*                      0007:0007
  00.45 - 01.00 |                        0000:0000          12.45 - 13.00 |****                   0039:0039
  01.00 - 01.15 |                        0000:0000          13.00 - 13.15 |***                    0033:0033
  01.15 - 01.30 |                        0000:0000          13.15 - 13.30 |*********              0107:0107
  01.30 - 01.45 |                        0000:0000          13.30 - 13.45 |********               0089:0089
  01.45 - 02.00 |                        0000:0000          13.45 - 14.00 |**********             0119:0119
  02.00 - 02.15 |                        0000:0000          14.00 - 14.15 |**********             0112:0112
  02.15 - 02.30 |                        0000:0000          14.15 - 14.30 |***********            0132:0132
  02.30 - 02.45 |                        0000:0000          14.30 - 14.45 |*****************      0187:0187
  02.45 - 03.00 |                        0000:0000          14.45 - 15.00 |**************         0167:0167
  03.00 - 03.15 |                        0000:0000          15.00 - 15.15 |**********             0116:0116
  03.15 - 03.30 |                        0000:0000          15.15 - 15.30 |******************     0198:0198
  03.30 - 03.45 |                        0000:0000          15.30 - 15.45 |******************     0194:0194
  03.45 - 04.00 |                        0000:0000          15.45 - 16.00 |******************     0194:0194
  04.00 - 04.15 |                        0000:0000          16.00 - 16.15 |******************     0202:0202
  04.15 - 04.30 |                        0000:0000          16.15 - 16.30 |***********            0128:0128
  04.30 - 04.45 |                        0000:0000          16.30 - 16.45 |*************          0145:0145
  04.45 - 05.00 |                        0000:0000          16.45 - 17.00 |********************   0239:0239
  05.00 - 05.15 |                        0000:0000          17.00 - 17.15 |*************          0154:0154
  05.15 - 05.30 |                        0000:0000          17.15 - 17.30 |*******                0079:0079
  05.30 - 05.45 |                        0000:0000          17.30 - 17.45 |******                 0071:0071
  05.45 - 06.00 |                        0000:0000          17.45 - 18.00 |********************   0235:0235
            +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
            0...60..120..180..240..300..360..420..480..540..600                0...60..120..180..240..300..360..420..480..540..600

  06.00 - 06.15 |                        0000:0000          18.00 - 18.15 |**                     0023:0023
  06.15 - 06.30 |                        0000:0000          18.15 - 18.30 |                       0000:0000
  06.30 - 06.45 |                        0000:0000          18.30 - 18.45 |                       0000:0000
  06.45 - 07.00 |**                      0022:0022          18.45 - 19.00 |*                      0007:0007
  07.00 - 07.15 |***                     0035:0035          19.00 - 19.15 |*                      0001:0001
  07.15 - 07.30 |**                      0024:0024          19.15 - 19.30 |****                   0039:0039
  07.30 - 07.45 |                        0000:0000          19.30 - 19.45 |****                   0048:0048
  07.45 - 08.00 |                        0000:0000          19.45 - 20.00 |*******                0074:0074
  08.00 - 08.15 |**                      0023:0023          20.00 - 20.15 |****                   0042:0042
  08.15 - 08.30 |***********             0125:0125          20.15 - 20.30 |                       0000:0000
  08.30 - 08.45 |******************      0214:0214          20.30 - 20.45 |*                      0005:0005
  08.45 - 09.00 |************************0287:0287          20.45 - 21.00 |                       0000:0000
  09.00 - 09.15 |*********               0107:0107          21.00 - 21.15 |                       0000:0000
  09.15 - 09.30 |********                0092:0092          21.15 - 21.30 |                       0000:0000
  09.30 - 09.45 |*********               0108:0108          21.30 - 21.45 |                       0000:0000
  09.45 - 10.00 |********                0091:0091          21.45 - 22.00 |                       0000:0000
  10.00 - 10.15 |****************        0182:0182          22.00 - 22.15 |                       0000:0000
  10.15 - 10.30 |********************    0238:0238          22.15 - 22.30 |                       0000:0000
  10.30 - 10.45 |*****************       0202:0202          22.30 - 22.45 |                       0000:0000
  10.45 - 11.00 |************************0286:0286          22.45 - 23.00 |                       0000:0000
  11.00 - 11.15 |************************0294:0294          23.00 - 23.15 |                       0000:0000
  11.15 - 11.30 |************************0423:0423***       23.15 - 23.30 |                       0000:0000
  11.30 - 11.45 |************************0528:0528**********  23.30 - 23.45 |                       0000:0000
  11.45 - 12.00 |******************      0218:0218          23.45 - 24.00 |                       0000:0000
            +----+----+----+----+----+----+----+----+----+----+                +----+----+----+----+----+----+----+----+----+----+
            0...60..120..180..240..300..360..420..480..540..600                0...60..120..180..240..300..360..420..480..540..600

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

DB2 SQL Command Activity Graph

The DB2 SQL Command Activity Graph is produced in the same format as the as the Thread Transit Time Graph described above, except that the horizontal axis represents the number SQL commands processed per minute (both average and peak average) processed during each 15-minute period throughout the day.

You can control the data used to construct the DB2 SQL Command Activity Graph through the INCLUDE/EXCLUDE facility. You can use the EXCLUDE facility to specify that data related to specific plan Auth-ids is excluded from the graph. (All Auth-id data except the Auth-ids that are excluded will be reflected in the graph). Also, you can use the INCLUDE facility to specify that the graph reflect data limited to a specific set of Auth-ids

Following is a sample of the DB2 SQL Command Activity Graph:

```
DB2NAME:CPA1                                  DAY SHOWN: MONDAY                                  SYSID:308B
                                                02/04/96-02/09/96
                                          DB2 SQL COMMANDS PER MINUTE GRAPH

  00.00 - 00.15 |                        0000:0000          12.00 - 12.15 |***********             0192:0192
  00.15 - 00.30 |                        0000:0000          12.15 - 12.30 |                        0000:0000
  00.30 - 00.45 |                        0000:0000          12.30 - 12.45 |*                       0007:0007
  00.45 - 01.00 |                        0000:0000          12.45 - 13.00 |***                     0038:0038
  01.00 - 01.15 |                        0000:0000          13.00 - 13.15 |*****                   0075:0075
  01.15 - 01.30 |                        0000:0000          13.15 - 13.30 |****************        0255:0255
  01.30 - 01.45 |                        0000:0000          13.30 - 13.45 |*************           0206:0206
  01.45 - 02.00 |                        0000:0000          13.45 - 14.00 |*****************       0267:0267
  02.00 - 02.15 |                        0000:0000          14.00 - 14.15 |*****************       0264:0264
  02.15 - 02.30 |                        0000:0000          14.15 - 14.30 |******************      0299:0299
  02.30 - 02.45 |                        0000:0000          14.30 - 14.45 |*****************       0264:0264
  02.45 - 03.00 |                        0000:0000          14.45 - 15.00 |***************         0236:0236
  03.00 - 03.15 |                        0000:0000          15.00 - 15.15 |***************         0238:0238
  03.15 - 03.30 |                        0000:0000          15.15 - 15.30 |******************      0292:0292
  03.30 - 03.45 |                        0000:0000          15.30 - 15.45 |*********************   0344:0344
  03.45 - 04.00 |                        0000:0000          15.45 - 16.00 |******************      0316:0316
  04.00 - 04.15 |                        0000:0000          16.00 - 16.15 |************************0396:0396
  04.15 - 04.30 |                        0000:0000          16.15 - 16.30 |*****************       0248:0248
  04.30 - 04.45 |                        0000:0000          16.30 - 16.45 |********************** 0361:0361
  04.45 - 05.00 |                        0000:0000          16.45 - 17.00 |************************0660:0660*********
  05.00 - 05.15 |                        0000:0000          17.00 - 17.15 |************************0404:0404
  05.15 - 05.30 |                        0000:0000          17.15 - 17.30 |**************          0213:0213
  05.30 - 05.45 |                        0000:0000          17.30 - 17.45 |******                  0086:0086
  05.45 - 06.00 |                        0000:0000          17.45 - 18.00 |***************         0240:0240
            +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
            0...80..160..240..320..400..480..560..640..720..800              0...80..160..240..320..400..480..560..640..720..800


  06.00 - 06.15 |                        0000:0000          18.00 - 18.15 |***                     0039:0039
  06.15 - 06.30 |                        0000:0000          18.15 - 18.30 |                        0000:0000
  06.30 - 06.45 |                        0000:0000          18.30 - 18.45 |                        0000:0000
  06.45 - 07.00 |**                      0022:0022          18.45 - 19.00 |*                       0006:0006
  07.00 - 07.15 |****                    0061:0061          19.00 - 19.15 |*                       0001:0001
  07.15 - 07.30 |*                       0016:0016          19.15 - 19.30 |****                    0054:0054
  07.30 - 07.45 |                        0000:0000          19.30 - 19.45 |****                    0049:0049
  07.45 - 08.00 |                        0000:0000          19.45 - 20.00 |*******                 0109:0109
  08.00 - 08.15 |*****                   0067:0067          20.00 - 20.15 |*****                   0073:0073
  08.15 - 08.30 |*************           0193:0193          20.15 - 20.30 |                        0000:0000
  08.30 - 08.45 |************            0186:0186          20.30 - 20.45 |*                       0005:0005
  08.45 - 09.00 |**********************  0330:0330          20.45 - 21.00 |                        0000:0000
  09.00 - 09.15 |*************           0193:0193          21.00 - 21.15 |                        0000:0000
  09.15 - 09.30 |******************      0279:0279          21.15 - 21.30 |                        0000:0000
  09.30 - 09.45 |*******                 0105:0105          21.30 - 21.45 |                        0000:0000
  09.45 - 10.00 |**************          0221:0221          21.45 - 22.00 |                        0000:0000
  10.00 - 10.15 |**********************  0330:0330          22.00 - 22.15 |                        0000:0000
  10.15 - 10.30 |******************      0280:0280          22.15 - 22.30 |                        0000:0000
  10.30 - 10.45 |************            0182:0182          22.30 - 22.45 |                        0000:0000
  10.45 - 11.00 |**********************  0329:0329          22.45 - 23.00 |                        0000:0000
  11.00 - 11.15 |******************      0298:0298          23.00 - 23.15 |                        0000:0000
  11.15 - 11.30 |************************0635:0635*******   23.15 - 23.30 |                        0000:0000
  11.30 - 11.45 |************************0602:0602*****     23.30 - 23.45 |                        0000:0000
  11.45 - 12.00 |****************        0250:0250          23.45 - 24.00 |                        0000:0000
            +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
            0...80..160..240..320..400..480..560..640..720..800              0...80..160..240..320..400..480..560..640..720..800

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

DB2 AUTH-ID Profile

The DB2 AUTH-ID Profile graphically depicts the daily average values of selected characteristics of a specified AUTH-ID operating under a specified SYSID. The characteristics that are reported are:

- Threads processed per day

  The number of threads processed per day represents the number of threads processed during the period specified by the BEGIN DATE and the END DATE divided by the number of days contained within the specified period.

- Transit time

  The average transit time for all threads processed during the specified time period.

- CPU time

  The average number of CPU seconds required to process the threads during the specified period.

- Commits per thread

  The average number of COMMITs per thread for all threads processed during the specified period.

- SQL Inserts, Selects, Updates, Deletes, and Fetches

  The average number of each type of principal SQL command issued per thread processed throughout the specified period.

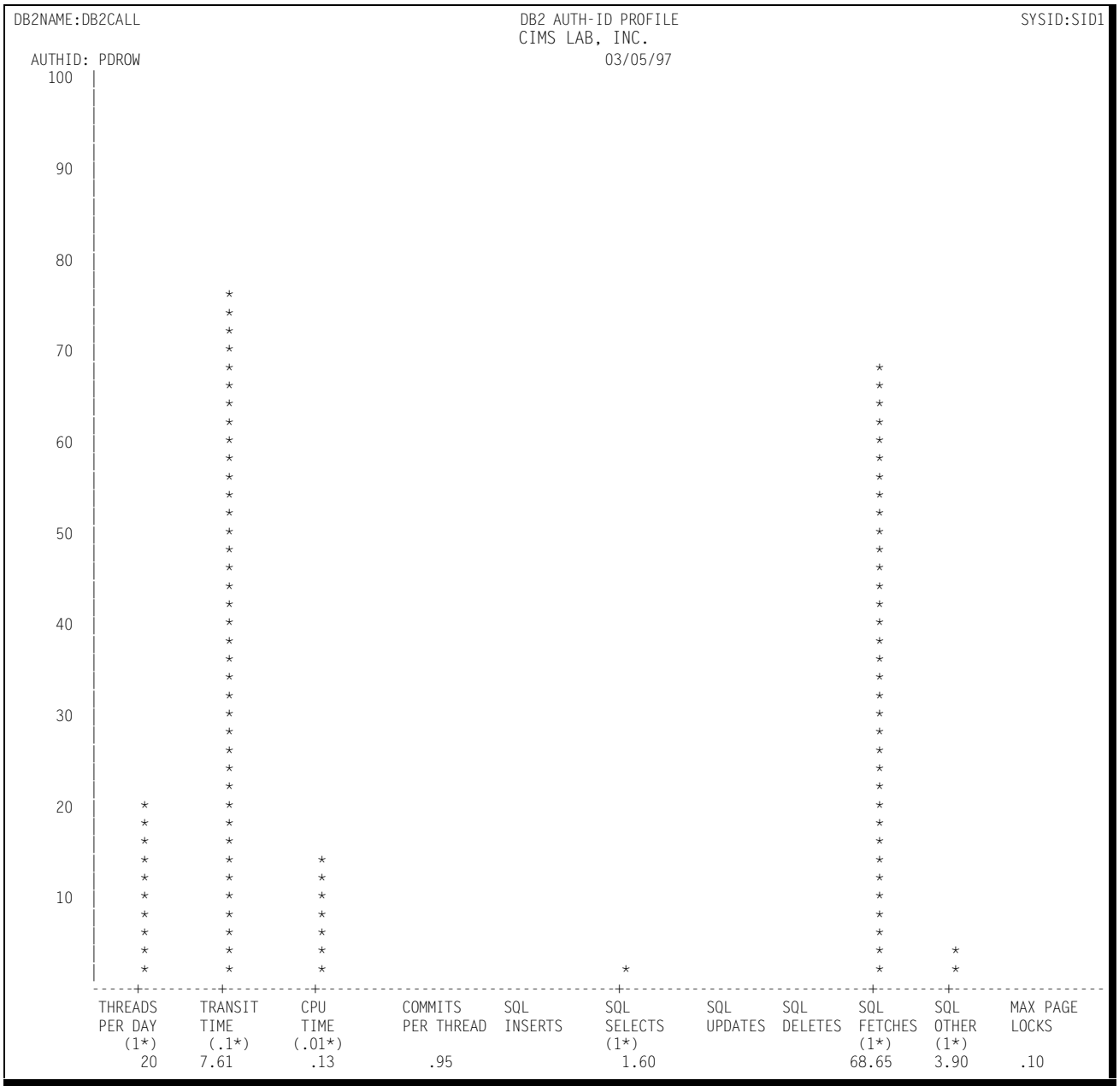
- SQL Other

  The average number of Other SQL commands (not specified above) issued during the processing of each thread during the specified period.

- Maximum Page Locks

  The maximum number of Page Locks held by this AUTH-ID during thread processing.

Following is a sample of the DB2 AUTH-ID Profile:



DB2 Ad Hoc Reports

The DB2 Subsystem gives you the option of producing three separate Ad Hoc reports during the data reduction process. The Ad Hoc reports contain detail data that you can summarize or discard as you maintain the CIMS Capacity Planner Performance Data Base.

The Ad Hoc reports are generated by the data reduction module of the DB2 subsystem (SSA1DB2W). The Ad Hoc reports should be generated on an as-needed basis and it is therefore likely that by the time the need is determined, the DB2 data has already been reduced and stored in the Performance Data Base. In such a case, it is imperative that the data not be stored into the Performance Data Base a second time. The possibility of updating the Performance Data Base a second time can be eliminated by specifying DD DUMMY for both the INDEX and the ONLINE DD statements.

Three separate DB2 Ad Hoc reports are available:

DB2 System Wide Ad Hoc Report

The DB2 System Wide Ad Hoc Report is selected by including a report request in the SYSIN Parameters in the DB2 Data Reduction JCL. For example, by specifying the following in the SYSIN file:

DB2 SYSTEM WIDE AD HOC REPORT=YES

DB2 SUBSYSTEM NAME=DB2

BEGIN DATE=06/02/97

BEGIN TIME=08.00.00

END DATE=06/07/97

END TIME=10.00.00

A system Wide Ad Hoc report would be produced for the DB2 Subsystem named DB2 for the period beginning on June 2nd at 8:00 AM and ending on June 7th at 10:00 AM.

For each record selected, the following data will be included in the report for each input record selected for inclusion in the report:

- The DB2 Subsystem name
- The Date from the time-stamp
- The time from the time-stamp
- The number of threads processed
- The number of commits processed
- The number of threads created
- The number of SQL commands processed
- The number of GET PAGEs
- The number of READ I/Os
- The number of UPDATE PAGEs
- The number of UPDATE I/Os

The JCL required to invoke the Ad Hoc reports is illustrated under the DB2 Data Reduction discussion.

Following is a sample of the DB2 System Wide Ad Hoc Report:

DB2SSID	DATE	TIME	# THREADS	# COMMITS	CRT THREADS	CPU SEC	SQL COUNT	GET PAGES	READ I/O	UPDTE PAGES	UPDATE I/O
T23A	03/05	10:58:47	222		104	46.45	6,122	305,859	4,511	12,388	2,857
D51C	03/05	11:01:38	23		16	10.67	208	1,220	223	43	20
DA1G	03/05	11:01:51	503		276	31.66	878	815,401	10,334	66,344	12,882
DA1G	03/05	11:06:13	23		9	.81	19	13,685	68	2,292	618
D23A	03/05	11:06:28	12,262	4	6,904	139.31	575,271	5,985,576	580,515	96,880	27,272
D31B	03/05	11:07:03	117		65	3.78	37,812	221,944	5,021	5,877	283
D41E	03/05	11:10:11	12		11	.70	71	313	68	9	2
DA1G	03/05	11:11:50	524		278	31.87	831	833,139	10,390	69,218	13,766
T23A	03/05	11:13:46				.10			2		
R DB2CALL			158								
R UTILITY			24								
R TSO			4								
R SERVER			4								

DB2 Plan Name Ad Hoc Report

The report is selected by specifying a DB2 Connect Name through the use of the DB2NAME parameter and a DB2 AD HOC Plan Name through the use of the DB2 AD HOC PLAN NAME parameter. Both of these parameters, along with the specified date and time period are specified in the SYSIN file. For example,

```
//SYSIN DD *
DB2NAME=CICSPROD
DB2 AD HOC PLAN NAME=XYZ*
BEGIN DATE=06/02/97
BEGIN TIME=08.00.00
END DATE=06/07/97
BEGIN TIME=10.00.00
```

would result in a DB2 PLAN Ad Hoc Report being produced for the DB2 Connect Name CICSPROD for all Plans beginning with the characters XYX and would include data for all records cut within the period beginning on June 2nd at 8:00 AM and ending on June 7th at 10.00.00 AM.

The Data contained in both the Plan Name and AUTH-ID Ad Hoc reports are:

- The SMF System ID
- The DB2 Connect Name
- The DB2 Plan Name
- The DB2 AUTH-ID
- The date the record was written
- The time the record was written

- The number of commits processed (this thread)
- The number of SQL commands processed (this thread)
- The CPU time required (this thread)
- The transit time (this thread)

Following is a sample of the DB2 Plan Name/AUTH-ID Ad Hoc Report:

SYSSID	DB2 NAME	PLANNAME	USERNAME	DATE IN	TIME IN	# COMMITS	SQL COMMANDS	CPU SECONDS	ELAPSED TIME
SID1	DB2CALL	PTDDP5CD	PDKJK	03/05	09:12:00	1	2	.01	00:00:03.857
SID1	DB2CALL	PPTM02OS	PDROW	03/05	09:11:00		23	.06	00:00:31.437
SID1	DB2CALL	DSNUTIL	PDPANI	03/05	09:12:00	1		.05	00:00:09.512
SID1	UTILITY	DSNUTIL	PDKJK	03/05	09:12:00	1		9.20	00:00:17.697
SID1	DB2CALL	PL013ORD	PDKJH	03/05	09:12:00	1	25	.05	00:00:46.339
SID1	DB2CALL	RDPPP5CC	PDCLP	03/05	09:12:00	4	18	.16	00:00:08.153
SID1	UTILITY	DSNUTIL	PDKJK	03/05	09:13:00	1		.06	00:00:00.076
SID1	DB2CALL	RDPSP5CC	PDCLP	03/05	09:13:00	1		.01	00:00:00.320
SID1	DB2CALL	DSNUTIL	PDPANI	03/05	09:12:00			.32	00:00:17.112
SID1	UTILITY	DSNUTIL	PDKJK	03/05	09:08:00	19		11.26	00:05:22.822
SID1	DB2CALL	RDPPP5CC	PDCLP	03/05	09:13:00	1	1	.01	00:00:02.854
SID1	UTILITY	DSNUTIL	PDCJCA	03/05	09:08:00	11		.29	00:04:46.671
SID1	DB2CALL	UTGLP5CD	DCSCOTB	03/05	09:13:00	1		.37	00:00:06.645
SID1	DB2CALL	UTGLP5CD	DCSCOT	03/05	09:13:00	1	2	.02	00:00:00.307
SID1	DB2CALL	UTGLP5CD	PDTIM	03/05	09:07:00	1		.10	00:06:51.315
SID1	DB2CALL	RQPAP5CD	PDRWAC	03/05	09:13:00	1		.00	00:00:00.044
SID1	DB2CALL	RQPAP5CD	PDRWAC	03/05	09:13:00	1		.00	00:00:00.005
SID1	DB2CALL	PL013ORD	PDKJH	03/05	09:13:00	9	329	.89	00:01:05.370
SID1	UTILITY	DSNUTIL	PDPANI	03/05	09:09:00	11		2.06	00:04:33.293
SID1	DB2CALL	PTDDP5CD	PDKJK	03/05	09:14:00	1	2	.03	00:00:02.030
SID1	UTILITY	DSNUTIL	PDPANI	03/05	08:55:00	11		45.73	00:18:57.323
SID1	DB2CALL	PDNMP5CD	PDTODD	03/05	09:14:00	2	11	.02	00:00:00.122
R DB2CALL	158								
R UTILITY	24								
R TSO	4								
R SERVER	4								

DB2 AUTH-ID Ad Hoc Report

The contents of the AUTH-ID Ad Hoc Report are identical to the Plan Name AD Hoc report except that the data are reported by AUTH-ID. Please see **DB2 Plan Name Ad Hoc Report,** on page 4-253 above for a description of the report. The report is selected by specifying a DB2 Connect Name through the use of the DB2NAME parameter and a DB2 AUTH-ID through the use of the DB2 AD HOC AUTH-ID parameter. Both of these parameters, along with the specified date and time period are specified in the SYSIN file. For example,

```
//SYSIN DD *
DB2NAME=CICSPROD
DB2 AD HOC AUTH-ID=Q10*
BEGIN DATE=06/02/97
BEGIN TIME=08.00.00
END DATE=06/07/97
BEGIN TIME=10.00.00
```

would result in a DB2 Plan Ad Hoc Report being produced for the DB2 Connect Name CICSPROD for all plans whose name begins with the characters Q10 and would include data for all records cut within the period beginning on June 2nd at 8:00 AM and ending on June 7th at 10.00.00 AM.

DB2 Trends Reports

The CIMS Capacity Planner approach to DB2 Trends Analysis centers on isolating a number of capacity and performance related elements and providing either a summary or graphic comparison of the values of those elements over time. Two separate Trends Analysis Summary programs are available, one for DB2 Subsystems (SSA1DB2T) and the other for DB2 Connect Names (SSA1DB2U). Two Trends Analysis Graph Interface programs are also available, one for DB2 Subsystems (SSA1DB2G) and one for DB2 Connect Names (SSA1DB2H).

The elements that are compared are as follows:

- CPU Utilization Statistics
- The number of threads executed per minute computed as an average during Prime shift
- The number of commits executed per minute computed as an average during Prime shift
- The number of SQL commands executed per minute computed as an average during Prime shift
- The average number of EXCPs per second executed by DB2 during Prime shift (Subsystem only)
- The average thread transit time during prime shift (Connect name only)

The above information is gathered and presented to you in two ways:

- In summary report format, showing the values of each of the elements cited above both during a baseline period and a secondary period with a comparison of the baseline and secondary periods, with the slope of each comparison indicated at the right side of the report.
- In data suitable for graphing using the Harvard Graphics Program once the data points have been down-loaded to an IBM compatible Personal Computer capable of running Harvard Graphics. The manner in which the data is down-loaded is left up to you. The data points are written into a partitioned data set (HGDLIB) to await down-loading.

Following are samples of the DB2 Connect Name and Subsystem Trends Analysis Reports:

```
DB2NAME:CPA1                                  T R E N D S  A N A L Y S I S
   1. THIS ANALYSIS COMPARED THE PERIODS 02/05/90-02/06/90 AND 02/07/90-02/09/90 FOR THE SYSTEM NAMED 308B
   2. A COMPARISON OF CPU BUSY PERCENTAGES SHOWS:
                          02/05 - 02/06                   02/07 - 02/09                              TREND
      CPU                          .22                             .09                             59.09%-
   3. THE AVERAGE NUMBER OF DB2 THREADS PROCESSED DURING PRIME SHIFT WAS:
                                                                                                      TREND
                                   466                             357                             23.39%-
   4. THE AVERAGE NUMBER OF DB2 COMMITS PROCESSED DURING PRIME SHIFT WAS:
                                                                                                      TREND
                                   466                             355                             23.81%-
   5. THE AVERAGE NUMBER OF SQL INSERTS PROCESSED DURING PRIME SHIFT WAS:
                                                                                                      TREND
                                   251                             270                              7.56%+
   6. THE AVERAGE NUMBER OF SQL SELECTS PROCESSED DURING PRIME SHIFT WAS:
                                                                                                      TREND
                                     9                               5                             44.44%-
   7. THE AVERAGE NUMBER OF SQL UPDATES PROCESSED DURING PRIME SHIFT WAS:
                                                                                                      TREND
                                   101                              71                             29.70%-
   8. THE AVERAGE NUMBER OF SQL DELETES PROCESSED DURING PRIME SHIFT WAS:
                                                                                                      TREND
                                    30                              24                             20.00%-
   9. THE AVERAGE NUMBER OF SQL FETCHES PROCESSED DURING PRIME SHIFT WAS:
                                                                                                      TREND
                                 5,237                           4,956                              5.36%-
  10. THE AVERAGE NUMBER OF OTHER SQL CALLS PROCESSED DURING PRIME SHIFT WAS:
                                                                                                      TREND
                                 6,764                           7,146                              5.64%+
  11. THE AVERAGE THREAD TRANSIT TIME DURING PRIME SHIFT WAS:
                                                                                                      TREND
                                   .63                             .66                              4.76%+
```

```
DB2 ID:DB2P                                    T R E N D S  A N A L Y S I S
   1. THIS ANALYSIS COMPARED THE PERIODS 02/05/90-02/06/90 AND 02/07/90-02/09/90 FOR THE SYSTEM NAMED 308B
   2. THE VALUES INCLUDED IN THIS REPORT REPRESENT A PRIME SHIFT WHICH RUNS FROM 08:00 TO 18:00
   3. THE LUNCH BREAK RUNNING FROM 11:00 TO 13:00 WAS ELIMINATED FROM THE REPORT.
   4. A COMPARISON OF CPU BUSY PERCENTAGES SHOWS:
                           02/05 - 02/06                    02/07 - 02/09                          TREND
      SSAS                          .01                              .01                           .00%+
      DBAS                          .02                              .01                         50.00%-
      ILRM                          .00                              .00                           .00%+
   5. THE AVERAGE NUMBER OF DB2 THREADS PROCESSED DURING PRIME SHIFT WAS:
                                                                                                   TREND
                                    457                              375                         17.94%-
   6. THE AVERAGE NUMBER OF DB2 COMMITS PROCESSED DURING PRIME SHIFT WAS:
                                                                                                   TREND
                                    417                              347                         16.78%-
   7. THE AVERAGE NUMBER OF SQL INSERTS PROCESSED DURING PRIME SHIFT WAS:
                                                                                                   TREND
                                    234                              267                         14.10%+
   8. THE AVERAGE NUMBER OF SQL SELECTS PROCESSED DURING PRIME SHIFT WAS:
                                                                                                   TREND
                                  5,949                              999                         83.20%-
   9. THE AVERAGE NUMBER OF SQL UPDATES PROCESSED DURING PRIME SHIFT WAS:
                                                                                                   TREND
                                     93                               73                         21.50%-
  10. THE AVERAGE NUMBER OF SQL DELETES PROCESSED DURING PRIME SHIFT WAS:
                                                                                                   TREND
                                     29                               23                         20.68%-
  11. THE AVERAGE NUMBER OF SQL FETCHES PROCESSED DURING PRIME SHIFT WAS:
                                                                                                   TREND
                                 72,912                           67,279                          7.72%-
  12. THE AVERAGE NUMBER OF OTHER SQL CALLS PROCESSED DURING PRIME SHIFT WAS:
                                                                                                   TREND
                                 34,099                           12,636                         62.94%-
  13. THE AVERAGE NUMBER OF EXCPS PER SECOND DURING PRIME SHIFT WAS:
                                                                                                   TREND
                                   2.96                             1.86                         37.16%-
```

Generic Subsystem Reports

The following discussion enumerates the various CIMS Capacity Planner Generic subsystem reports and describes the contents of each report.

Ad Hoc Reports

The Ad Hoc reports are generated during the data reduction phase. The records containing data to be included in the Ad Hoc reports are selected based upon the element key contained in the record matching a GENERIC ELEMENT KEY you specified through one or more GENERIC ELEMENT KEY= parameters contained in the //SYSIN data stream. The Ad Hoc report contains a row of column headings, followed by subsequent rows of data containing the key field, the date and time stamps from the input record, and up to eight additional fields defined by OUTPUT ELEMENT CELLS. While more than eight OUTPUT ELEMENT CELLS can be specified, only the first eight are included in the Ad Hoc report.

The GENERIC ELEMENT KEY can contain up to 8 characters. The Wildcard format of the GENERIC ELEMENT KEY is supported in which all records whose element keys begin with a specified set of characters are to be selected. The Wildcard format lets you specify a common Root followed immediately by an asterisk. This format of the GENERIC ELEMENT KEY is interpreted to mean that any record containing a element key beginning with the characters preceding the asterisk will be selected. For example, if the keys in the records to be selected contain a job name and you only want to select those records where the job name begins with the characters ACCT, then GENERIC ELEMENT KEY=ACCT* would be specified.

Following is a sample of the Generic Ad Hoc report:

ADABAS COMMAND LOG AD HOC REPORT

USER KEY	DATE	RECORD TIME	DURATION	ASSO_IO	DATA_IO	WORK_IO	OTHER_IO	CMD_COUNT	CID_NAME	JOB_NAME
N2	04/30	11:21:32.52	0:00:00.07	3	1			1	DLASFKP	
N2	04/30	11:21:32.52	0:00:00.15	8	1			1	DLASFKP	
N2	04/30	11:21:32.52	0:00:00.10	6	1			1	DLASFKP	
N2	04/30	11:21:32.52	0:00:00.08	4	1			1	DLASFKP	
N2	04/30	11:21:33.57	0:00:00.00					1	DLASFKP	
N2	04/30	11:21:33.57	0:00:00.10	4	1			1	DLASFKP	
N2	04/30	11:21:33.57	0:00:00.04	1				1	DLASFKP	
N2	04/30	11:21:33.57	0:00:00.14	2				1	DLASFKP	
N2	04/30	11:21:33.57	0:00:00.00					1	DLASFKP	
N2	04/30	11:21:34.61	0:00:01.21	40	8	1		1	DLASFKP	
N2	04/30	11:21:34.61	0:00:00.14	3	1			1	DLASFKP	
N2	04/30	11:21:35.66	0:00:00.11	4	1			1	DLASFKP	
N2	04/30	11:21:35.66	0:00:00.09	5	1			1	DLASFKP	
N2	04/30	11:21:36.71	0:00:00.21	3	1			1	DLASFKP	
N2	04/30	11:21:36.71	0:00:00.17	7	1			1	DLASFKP	
N2	04/30	11:21:37.76	0:00:00.26	9	1			1	DLASFKP	
N2	04/30	11:21:37.76	0:00:00.14	5	1			1	DLASFKP	
N2	04/30	11:21:37.76	0:00:00.15	5	1			1	DLASFKP	
N2	04/30	11:21:38.81	0:00:00.88	32	7	1		1	DLASFKP	
N2	04/30	11:21:38.81	0:00:00.63	22	1			1	DLASFKP	
N2	04/30	11:21:39.86	0:00:00.13	5	1			1	DLASFKP	
N2	04/30	11:21:39.86	0:00:00.07	2	1			1	DLASFKP	
N2	04/30	11:21:39.86	0:00:00.06	3		1		1	DLASFKP	
N2	04/30	11:21:39.86	0:00:00.20	7				1	DLASFKP	
N2	04/30	11:21:39.86	0:00:00.06	2				1	DLASFKP	
N2	04/30	11:21:41.95	0:00:00.81	34	7			1	DLASFKP	
N2	04/30	11:21:41.95	0:00:00.08	4	1			1	DLASFKP	
N2	04/30	11:21:41.95	0:00:00.11	5	1			1	DLASFKP	
N2	04/30	11:21:41.95	0:00:00.10	2	1			1	DLASFKP	
N2	04/30	11:21:41.95	0:00:00.35	21	6	1		1	DLASFKP	
N2	04/30	11:21:41.95	0:00:00.04	1	1			1	DLASFKP	
N2	04/30	11:21:43.00	0:00:00.13	4	1			1	DLASFKP	
N2	04/30	11:21:43.00	0:00:00.23	8	1			1	DLASFKP	
N2	04/30	11:21:45.10	0:00:00.58	30	7	1		1	DLASFKP	
N2	04/30	11:21:45.10	0:00:00.03	2				1	DLASFKP	
N2	04/30	11:21:45.10	0:00:00.09	5	1			1	DLASFKP	
N2	04/30	11:21:45.10	0:00:00.17	6	1			1	DLASFKP	
N2	04/30	11:21:45.10	0:00:00.45	19	1			1	DLASFKP	
N2	04/30	11:21:46.15	0:00:00.81	37	7	1		1	DLASFKP	
N2	04/30	11:21:47.20	0:00:00.15	6	1			1	DLASFKP	
N2	04/30	11:21:47.20	0:00:00.07	3	1			1	DLASFKP	
N2	04/30	11:21:48.25	0:00:00.96	17	1	1		1	DLASFKP	
N2	04/30	11:21:48.25	0:00:00.00	1				1	DLASFKP	
N2	04/30	11:21:50.34	0:00:00.05	1	1			1	DLASFKP	
N2	04/30	11:21:50.34	0:00:00.09	3	1			1	DLASFKP	
N2	04/30	11:21:50.34	0:00:00.04			1		1	DLASFKP	
N2	04/30	11:21:50.34	0:00:00.08	4	1			1	DLASFKP	
N2	04/30	11:21:51.39	0:00:00.88	37	6	1		1	DLASFKP	
N2	04/30	11:21:51.39	0:00:00.07	4	1			1	DLASFKP	
N2	04/30	11:21:52.44	0:00:00.20	6	1			1	DLASFKP	
N2	04/30	11:21:53.49	0:00:01.04	39	7	1		1	DLASFKP	

Reports Generated From Tables

The Generic Subsystem provides several generic report formats that require little specification on your part. Their formats parallel standard CIMS Capacity Planner pre-programmed reports. The tables themselves contain self-describing dictionary data, so it

is not necessary to define the makeup of either the User Tables or the standard CIMS Capacity Planner Tables to the batch reporting program (SSA1GENR). The available report types defined to the batch reporting program are:

Statistics Report

The Generic Subsystem Statistics report shows, for a keyed file, the top 40 elements in each selected category. The category can consist of a single user table cell or a value derived by applying an algorithm against a set of user table cells and/or literals. For example, presume that the user table consists of several elements whose key is a CICS USERID. Presume further that each USERID is associated with the following values in a cell set (one cell set for each hour in a 24 hour period):

- A cumulative volume of transactions
- The cumulative response time of the transactions
- A cumulative volume of EXCPs
- A cumulative value of Page operations
- The high water mark in storage for any given element

The statistics report could be used to determine the top 40 USERIDs in one or more of the above categories.

Following is a sample of the Generic Statistics Report:

```
SELECTED ELEMENT STATISTICS REPORT                                                            SYSID:PT31
                                                     CIMS LAB, INC.
                                                        12/29/96
    TOTAL_MIN            Q31MSTR   ALTCOMM  MSTJCL00     XCFAS       WLM       VLF       SMS       SMF      RACF       MMS
                        1,389.00  1,278.00  1,272.00  1,271.00  1,271.00  1,271.00  1,271.00  1,271.00  1,271.00  1,271.00
                           1.27%     1.17%     1.16%     1.16%     1.16%     1.16%     1.16%     1.16%     1.16%     1.16%

                             LLA      JES2   JESXCF   IXGLOGR     IOSAS   DUMPSRV      DFRM   CATALOG   ANTMAIN  ZEKEPROD
                        1,271.00  1,271.00  1,271.00  1,271.00  1,271.00  1,271.00  1,271.00  1,271.00  1,271.00  1,270.00
                           1.16%     1.16%     1.16%     1.16%     1.16%     1.16%     1.16%     1.16%     1.16%     1.16%

                            ZACK    XDCCDF      VTAM       TSO     TCPIP  SQARECUT      SDSF    RMFGAT       RMF  PTX0002
                        1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00
                           1.16%     1.16%     1.16%     1.16%     1.16%     1.16%     1.16%     1.16%     1.16%     1.16%

                         PTX0001   PTXPROD       OAM   MXGTMNT  LOGROUTE  ISGECMON   IPC2410     DFHSM  BX31TEST      ASCH
                        1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00
                           1.16%     1.16%     1.16%     1.16%     1.16%     1.16%     1.16%     1.16%     1.16%     1.16%

     HIGH_MIN           ZEKEPROD      ZACK    XDCCDF     XCFAS       WLM      VTAM       VLF  T41BMSTR  T41BIRLM  T41BDIST
                           60.00     60.00     60.00     60.00     60.00     60.00     60.00     60.00     60.00     60.00


                         T41BDBM1 T41ASPAS  T41AMSTR  T41AIRLM  T41ADIST  T41ADBM1  T31MSTR   T31IRLM   T31DIST   T31DBM1
                           60.00     60.00     60.00     60.00     60.00     60.00     60.00     60.00     60.00     60.00


                             TSO    TSHOYT    TSBAEB     TSBAE     TCPIP  SQARECUT       SMS       SMF      SDSF    RMFGAT
                           60.00     60.00     60.00     60.00     60.00     60.00     60.00     60.00     60.00     60.00


                             RMF      RACF  Q41CSPAS  Q41CMSTR  Q41CIRLM  Q41CDIST  Q41CDBM1   Q31MSTR   Q31IRLM   Q31DIST
                           60.00     60.00     60.00     60.00     60.00     60.00     60.00     60.00     60.00     60.00


     AVG_MINS            Q31MSTR   ALTCOMM  MSTJCL00     XCFAS       WLM       VLF       SMS       SMF      RACF       MMS
                        1,389.00  1,278.00  1,272.00  1,271.00  1,271.00  1,271.00  1,271.00  1,271.00  1,271.00  1,271.00


                             LLA      JES2   JESXCF   IXGLOGR     IOSAS   DUMPSRV      DFRM   CATALOG   ANTMAIN  ZEKEPROD
                        1,271.00  1,271.00  1,271.00  1,271.00  1,271.00  1,271.00  1,271.00  1,271.00  1,271.00  1,270.00


                            ZACK    XDCCDF      VTAM       TSO     TCPIP  SQARECUT      SDSF    RMFGAT       RMF  PTX0002
                        1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00


                         PTX0001   PTXPROD       OAM   MXGTMNT  LOGROUTE  ISGECMON   IPC2410     DFHSM  BX31TEST      ASCH
                        1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00  1,270.00
```

Daily Overview

The Generic Daily Overview shows, for each hour of the day for each day specified in the date range, the cumulative values as specified in the OUTPUT ELEMENT CELL key phrase(s) in the input stream. Because INCLUDE or EXCLUDE processing applies, it is possible to see the actual values for a specified element for a particular hour of a particular day in this report.

Following is a sample of the Generic Daily Overview report:

GENERIC DAILY OVERVIEW SYSID:PT31

CIMS LAB, INC.
12/29/96

DAY	HOUR	TOTAL_MIN	HIGH_MIN	AVG_MINS	LOW_MINS	TOTAL_HEX	COUNTER
12/29	0	9.00	9.00	9.00	9.00	00000384	1
	1	60.00	60.00	60.00	60.00	00001770	1
	2	975.00	60.00	9.75	7.00	00017CDC	1
	3	4,047.00	60.00	36.13	2.00	00062CDC	1
	4	3,098.00	60.00	59.57	38.00	0004BA28	1
	5	3,513.00	60.00	59.54	54.00	00055C44	1
	6	3,540.00	60.00	60.00	60.00	000566D0	1
	7	3,741.00	60.00	56.68	6.00	0005B554	1
	8	3,840.00	60.00	58.18	12.00	0005DC00	1
	9	3,600.00	60.00	60.00	60.00	00057E40	1
	10	3,644.00	60.00	58.77	3.00	00058F70	1
	11	3,687.00	60.00	58.52	6.00	0005A03C	1
	12	5,405.00	60.00	43.24	2.00	00083F54	1
	13	7,094.00	60.00	59.61	30.00	000AD318	1
	14	7,050.00	60.00	59.74	30.00	000AC1E8	1
	15	7,069.00	60.00	59.90	51.00	000AC954	1
	16	6,960.00	60.00	60.00	60.00	000A9EC0	1
	17	7,053.00	60.00	58.28	4.00	000AC314	1
	18	7,170.00	60.00	59.25	4.00	000AF0C8	1
	19	7,188.00	60.00	59.40	24.00	000AF7D0	1
	20	7,239.00	60.00	57.91	8.00	000B0BBC	1
	21	7,326.00	60.00	58.14	6.00	000B2DB8	1
	22	7,212.00	60.00	58.16	4.00	000B0130	1
	23	7,080.00	60.00	60.00	60.00	000ACDA0	1
TOTALS		117,600.00	60.00	53.32	2.00	00B37180	1

Activity Report (All Elements)

The Activity Report contains all specified elements, normally in alphabetical order by key. You can use the INCLUDE/EXCLUDE facility to limit the population of keys in this particular report.

Although the report is normally produced in Element Key ascending sort order (for example, JOBNAME), you can alter this order through the use of one of the following two key phrases:

ASCENDING SORT COLUMN=nn

or

DESCENDING SORT COLUMN=nn

where the "nn" is the OUTPUT ELEMENT CELL number as specified in the TABLEDEF input stream. This causes the sort to be ordered, either in ascending or in descending sequence, based on the values in column "nn".

Following is a sample of the Generic Activity report:

CIMS LAB, INC.
12/29/96

USER KEY	TOTAL_MIN	HIGH_MIN	AVG_MINS	LOW_MINS	TOTAL_HEX	COUNTER
D42ADBM1	721.00	60.00	51.50	8.00	000119A4	14
D42ADIST	721.00	60.00	51.50	8.00	000119A4	14
D42ADOWN	2.00	2.00	2.00	2.00	000000C8	1
D42AIRLM	723.00	60.00	51.64	9.00	00011A6C	14
D42AMSTR	723.00	60.00	51.64	9.00	00011A6C	14
D42ASPAS	717.00	60.00	51.21	8.00	00011814	14
FTPSERVE	1,269.00	60.00	57.68	9.00	0001EFB4	22
IOSAS	1,271.00	60.00	57.77	11.00	0001F07C	22
IPC2410	1,270.00	60.00	57.73	10.00	0001F018	22
ISB31AI1	8.00	8.00	8.00	8.00	00000320	1
ISD41BI1	17.00	17.00	17.00	17.00	000006A4	1
ISD42AI1	17.00	17.00	17.00	17.00	000006A4	1
ISGECMON	1,270.00	60.00	57.73	10.00	0001F018	22
IST41AI1	10.00	10.00	10.00	10.00	000003E8	1
IST41BI1	15.00	15.00	15.00	15.00	000005DC	1
IXGLOGR	1,271.00	60.00	57.77	11.00	0001F07C	22
JESXCF	1,271.00	60.00	57.77	11.00	0001F07C	22
JES2	1,271.00	60.00	57.77	11.00	0001F07C	22
LKEDPLUS	36.00	24.00	18.00	12.00	00000E10	2
LLA	1,271.00	60.00	57.77	11.00	0001F07C	22
LOGROUTE	1,270.00	60.00	57.73	10.00	0001F018	22
MMS	1,271.00	60.00	57.77	11.00	0001F07C	22
MSTJCL00	1,272.00	60.00	57.82	12.00	0001F0E0	22
MXGTMNT	1,270.00	60.00	57.73	10.00	0001F018	22
OAM	1,270.00	60.00	57.73	10.00	0001F018	22
PDBTK	80.00	50.00	40.00	30.00	00001F40	2
PDBTKAAS	6.00	6.00	6.00	6.00	00000258	1
PDBTKAP	80.00	60.00	40.00	20.00	00001F40	2
PDDRISA	27.00	27.00	27.00	27.00	00000A8C	1
PDDRISB	25.00	25.00	25.00	25.00	000009C4	1
PDDRISC	24.00	24.00	24.00	24.00	00000960	1
PDDRISEM	36.00	36.00	36.00	36.00	00000E10	1
PDDRISET	4.00	4.00	4.00	4.00	00000190	1
PDGREG	24.00	24.00	24.00	24.00	00000960	1
PDGREGA	22.00	22.00	22.00	22.00	00000898	1
PDPARK	91.00	56.00	45.50	35.00	0000238C	2
PDPARKB	91.00	55.00	45.50	36.00	0000238C	2
PDPOMP	16.00	16.00	16.00	16.00	00000640	1
PDRNOW	208.00	60.00	52.00	32.00	00005140	4
PDSST	3.00	3.00	3.00	3.00	0000012C	1
PDWITA	596.00	60.00	54.18	18.00	0000E8D0	11
PDWITAB	112.00	30.00	18.67	6.00	00002BC0	6
PDWITAZ	4.00	4.00	4.00	4.00	00000190	1
PORTMAP	1,269.00	60.00	57.68	9.00	0001EFB4	22
PRMLCM02	31.00	31.00	31.00	31.00	00000C1C	1
PRMLCM03	4.00	4.00	4.00	4.00	00000190	1
PTXPROD	1,270.00	60.00	57.73	10.00	0001F018	22
PTXPRODM	1,136.00	60.00	59.79	56.00	0001BBC0	19
PTXTES2	1,135.00	60.00	59.74	55.00	0001BB5C	19
PTX0001	1,270.00	60.00	57.73	10.00	0001F018	22
PTX0002	1,270.00	60.00	57.73	10.00	0001F018	22
PTX0003	1,134.00	60.00	59.68	54.00	0001BAF8	19

Accounting Reports

The following discussion enumerates the various CIMS Capacity Planner Accounting reports and describes the contents of each report.

Shift Turnover Report

The shift turnover report is produced from a new table, Table 065, which is created during Workload data reduction (SSA1WKLD). This table contains information regarding the resources that were used by shift during a specific 24 hour day, and compares those values to the average daily work day values for the previous week, and to the average daily work day values for the previous month.

The items listed in the Shift Turnover Report are:

Available Time.	This report line shows the amount of time (HH:MM) in the shift
Processor Active.	This report line shows the amount of time (HH:MM) during the shift that the processor was active .
Execution Time.	This report line shows the cumulative Elapsed time (HH:MM) from Step Start to Step End for all Batch Job Steps during a specific shift. This value does not include Initiation time.
Throughput.	This report line shows the cumulative Elapsed time (HH:MM) from Batch Job initiation through Batch Job termination for all Batch Jobs during a specific shift.
Initiation Ratio.	This report line shows the percentage of time spent processing Jobs as opposed to the time spent in Initiation. It is derived by dividing Throughput into Execution Time. An initiation ratio of .98 would imply that Jobs spent 2% of their elapsed time in initiation.
Multiprogram Factor.	This indicates the average number of Jobs active during a specific shift. It is derived by dividing Throughput by Processor Active time.
Number of IPLs.	This report line shows the total number of times the system was IPLed during a specific shift.
Number of Runs.	This line shows the number of Batch Jobs that were started during a specific shift.
Prob Prog CPU Time.	This report line shows the total amount of CPU time (HH:MM) used by all Batch Jobs during a specific shift.
System CPU Time.	This report line shows the total amount of CPU time (HH:MM) used by the System (Started Tasks, MVS overhead, TSO). It represents the difference between Processor Active and System Wait time (CPU Active Time) minus Prob Prog CPU time.

System Wait Time.	This report line shows the cumulative amount of time (HH:MM) during a specific shift that any processor was waiting for work.
PCT CPU Time.	This report line shows the percentage of time during a specific shift that the CPU was actually processing work. It is derived by dividing the CPU Active Time by the Processor Active Time.
System Pages / Min.	This report line shows the auxiliary paging activity (pages out plus pages in) per minute for all Batch Jobs processed during a specific shift.
TSO LOGONs.	This report line shows, for a specific shift, the total number of actual Logons that occurred.
TSO Connect Time.	This report line shows the total Elapsed Time (HH:MM) for all TSO sessions during a specific shift.
PCT of Throughput.	This report line shows, for a specific shift, the percentage of Batch work that was processed. It is derived by dividing the sum of the Elapsed Times (Throughput) for all shifts into the Elapsed Times (Throughput) for each shift.
ABENDs.	This report line shows, for a specific shift, the total number of Batch Jobs that terminated abnormally.
ABEND Time.	This report line shows, for a specific shift, the total amount of Elapsed time that was lost due to ABENDs .
PCT Execution Time.	This report line shows, for a specific shift, the percentage of Elapsed Time that was lost due to ABENDs.
Specific Tape Mounts.	This report line shows, for a specific shift, the total number of tape mounts issued that were referred to by Volume Serial Number.
Non-SPC Tape Mounts.	This report line shows, for a specific shift, the total number of tape mounts issued for Scratch Tapes.
Printed Pages.	This report line shows, for a specific shift, the total number of lines printed by all JES printers attached to the processor.

The report is produced by the SSA1SHAQ program. Sample JCL to produce the report is contained in the distribution CNTL library member named DACTSHAQ.

Following is a sample of the Accounting Shift Turnover Report:

SYSTEM: PT31 DATA CENTER SHIFT TURNOVER REPORT SYSID:PT31
CIMS LAB, INC.
01/02/97

DESCRIPTION	0000 - 0800	0800 - 1800	1800 - 2400	-- TOTALS --	PRIOR WEEK AVG	PRIOR MONTH AVG
AVAILABLE TIME	8.00	10.00	6.00	24.00		
PROCESSOR ACTIVE	8:00	10:00	6:00	24:00	21:00	6:46
EXECUTION TIME	95:04	192:32	110:01	397:37	83:07	163:42
THROUGHPUT	95:16	196:00	112:03	403:19	83:11	166:22
INITIATION RATIO	.99	.98	.98	.98	.99	.98
MULTIPROGRAM FACTOR	11.90	19.60	18.67	16.80	3.96	24.58
NUMBER OF IPLS	.00	.00	.00	.00	.00	.14
NUMBER OF RUNS	221.00	1246.00	381.00	1848.00	50.00	416.32
PROB PROG CPU TIME	4:11	18:47	8:14	31:12	4:42	10:17
SYSTEM CPU TIME	5:00	14:40	5:38	25:18	3:50	5:37
SYSTEM WAIT TIME	38:49	26:34	22:08	87:31	117:29	24:44
PCT CPU TIME	19.13 %	55.73 %	38.51 %	39.23 %	6.77 %	39.13 %
SYSTEM PAGES / MIN	36.30	1710.12	81.01	751.65	2.90	233.29
TSO LOGONS	76.00	413.00	69.00	558.00	20.00	138.19
TSO CONNECT TIME	107:10	1251:03	123:26	1481:39	53:29	406:56
PCT OF THROUGHPUT	23.62 %	48.59 %	27.78 %			
BATCH ABENDS	4.00	62.00	13.00	79.00	11.00	34.88
BATCH ABEND TIME	32:26	50:50	28:48	112:04	59:16	42:07
PCT EXECUTION TIME	34.11 %	26.40 %	26.17 %	28.18 %	71.30 %	25.72 %
SPECIFIC TAPE MOUNTS	34.00	233.00	13.00	280.00	6.00	95.61
NON/SPC TAPE MOUNTS	11.00	1.00	8.00	20.00	7.00	8.93
PRINTER PAGES						

Batch Window Summary Analysis

This report shows, for a specific Batch Window as indicated in the //INCLUDE stream, the following values:

Average Window Size	The time, in Hours, Minutes and seconds, from Batch Window open to close
Earliest Window Open	The earliest wall clock time (hh:mm:ss) the Batch Window opened
Latest Window Close	The latest time (hh:mm:ss) the Batch Window closed
Window Elapsed Time	The cumulative elapsed times (hh:mm:ss) for all jobs in the Batch Window
Window INIT Gap	The average amount of time (hh:mm:ss) the tasks in the Batch Window spent in Initiation
Total Idle Gaps all Windows	The total number of times ***NO*** jobs included in this Batch Window were executing while the Batch Window was open
Average Window Idle Gap Time	The time (hh:mm:ss) during which no jobs were executing

Cumulative Idle Gap Time	For all Batch Windows that occurred during the measured period, the total time (hh:mm:ss) during which NO jobs were executing
Average Window CPU Time	The total amount of CPU time (hh:mm:ss) for all tasks in an average Batch Window during the period
Average Window DASD EXCPs	The total number of DASD I/O operations for all tasks included in the Batch Window during an average Batch Window for the period
Maximum Concurrent Tasks	For all Batch Windows in the period, the highest number of concurrently executing tasks included in the Batch Window
Average Overall M/P Factor	The average number of tasks included in the Batch Window that were executing concurrently
Maximum Concurrent Tape Units	For all Batch Windows in the period, the highest number of concurrently allocated Tape Drives for all tasks included in the Batch Window
Average Tape Data set Accesses	The average number of Tape data sets that were opened by Tasks included in the Batch Window during the entire measured period
Tape Drive Early Idle Time	The time (hh:mm:ss) during which a Tape Drive was allocated, but had not yet been used to read or write to a data set
Tape Drive Late Idle Time	The time (hh:mm:ss) after the last close was issued for a data set on a Tape Drive until the task terminated
Tape Drive Window Active Time	The cumulative elapsed time (hh:mm:ss) during which a Tape Drive was allocated to a task included in the Batch Window and a data set on the Tape was open but had not yet been closed for the last time. Each Tape Drive counts for its full elapsed time.
Tape Drive Window Allocated Time	The cumulative elapsed time (hh:mm:ss) during which a Tape Drive was allocated to a task included in the Batch Window. Each Tape Drive counts for its full elapsed time.

Batch Window Event Chronology

This is a listing of the events that took place during the Batch Window. Each event is associated with one of the JOBs named in the &SID.BWnn member of CIMS Capacity Planner PARMLIB. The list can be filtered through the use of the JOBNAME parameter in the SYSIN stream. If a JOBNAME is specified, only events associated with jobs whose names match the JOBNAME parameter are shown. Wildcards (*) are allowed.

The following list identifies the events that are tracked during the period a Batch Window is open:

Batch Window Open	The time (hh:mm:ss) when the Opening JOB as identified by the &SID.BWnn member of CIMS Capacity Planner PARMLIB started.
Batch Window Close	The time (hh:mm:ss) when the Closing JOB as identified by the &sid.BWnn member of CIMS Capacity Planner PARMLIB terminated
JOB Step Start	The time (hh:mm:ss) when the a task associated with a JOB identified by the &SID.BWnn member of CIMS Capacity Planner PARMLIB went into initiation
Program Start	The time (hh:mm:ss) when a program associated with a JOB identified by the &sid.BWnn member of CIMS Capacity Planner PARMLIB started.
Tape Drive Allocate	The time (hh:mm:ss) when a tape drive was allocated by a JOB identified by the &SID.BWnn member of CIMS Capacity Planner PARMLIB
Open Tape Data Set	The time (hh:mm:ss) when a data set on a tape associated with a JOB identified by the &sid.BWnn member of CIMS Capacity Planner PARMLIB was opened
Close Tape Data Set	The time (hh:mm:ss) when a data set on a tape associated with a JOB identified by the &SID.BWnn member of CIMS Capacity Planner PARMLIB was closed
Unallocate Tape Drive	The time (hh:mm:ss) when a Tape Drive owned by a JOB identified by the &sid.BWnn member of CIMS Capacity Planner PARMLIB was released
JOB Step End	The time (hh:mm:ss) when a task associated with a JOB identified by the &SID.BWnn member of CIMS Capacity Planner PARMLIB terminated.
JOB Step ABEND	The time (hh:mm:ss) when a task associated with a JOB identified by the &sid.BWnn member of CIMS Capacity Planner PARMLIB terminated abnormally

Following is a sample of the Batch Window Event Chronology Report:

WINDOW: 001 BATCH WINDOW EVENT CHRONOLOGY SYSID:WJXA

CIMS LAB, INC.

12/18/95

EVENT DATE	EVENT TIME	EVENT DESCRIPTION	JOB NAME	STEPNAME	CPU TIME HHH:MM:SS.XX	DASD I/O COUNT	DASD CONNECT HHH:MM:SS.XX
		BATCH WINDOW OPENED	OP210005				
12/18	21:07:09	BATCH JOBSTEP START	OP210005	STEP01			
12/18	21:18:25	BATCH JOBSTEP START	PO$INDX	BSORT			
12/18	21:18:25	BATCH PROGRAM START	PO$INDX	BSORT			
12/18	21:19:02	BATCH JOBSTEP ENDED	PO$INDX		00:00:09.46	31	00:01:44.55
12/18	21:19:02	BATCH JOBSTEP START	PO$INDX	PO161			
12/18	21:19:02	BATCH PROGRAM START	PO$INDX	PO161			
12/18	21:24:14	BATCH JOBSTEP ENDED	PO$INDX		00:00:29.74	52,279	00:03:09.77
12/18	21:24:14	BATCH JOBSTEP START	PO$INDX	DELETE			
12/18	21:24:14	BATCH PROGRAM START	PO$INDX	DELETE			
12/18	21:24:17	BATCH JOBSTEP ENDED	PO$INDX		00:00:00.50		
12/18	21:24:17	BATCH JOBSTEP START	PO$INDX	DEFINE			
12/18	21:24:17	BATCH PROGRAM START	PO$INDX	DEFINE			
12/18	21:24:21	BATCH JOBSTEP ENDED	PO$INDX		00:00:00.52		
12/18	21:24:21	BATCH JOBSTEP START	PO$INDX	REPRO			
12/18	21:24:21	BATCH PROGRAM START	PO$INDX	REPRO			
12/18	21:28:22	BATCH JOBSTEP ENDED	PO$INDX		00:00:27.76	48,133	00:02:45.09
12/18	21:28:22	BATCH JOBSTEP START	PO$INDX	COMPLJOB			
12/18	21:28:22	BATCH PROGRAM START	PO$INDX	COMPLJOB			
12/18	21:28:24	BATCH JOBSTEP ENDED	PO$INDX		00:00:00.40	3	00:00:00.04
12/18	21:28:24	BATCH JOBSTEP START	PO$INDX	RQ108			
12/18	21:28:24	BATCH PROGRAM START	PO$INDX	RQ108			
12/18	21:30:08	BATCH JOBSTEP START	OS991001	STEP01			
12/18	21:30:09	BATCH PROGRAM START	OS991001	STEP01			
12/18	21:30:12	BATCH JOBSTEP START	PE720058	STEP01			
12/18	21:30:13	BATCH JOBSTEP ENDED	OS991001		00:00:02.24	3	00:00:00.13
12/18	21:30:13	BATCH JOBSTEP START	OS991001	STEP01			
12/18	21:30:13	BATCH PROGRAM START	OS991001	STEP01			
12/18	21:30:14	BATCH PROGRAM START	PE720058	STEP01			
12/18	21:30:17	BATCH JOBSTEP ENDED	PE720058		00:00:02.06	3	00:00:00.18
12/18	21:30:17	BATCH JOBSTEP START	PE720058	STEP01			
12/18	21:30:18	BATCH PROGRAM START	PE720058	STEP01			
12/18	21:31:02	BATCH JOBSTEP ENDED	PE720058		00:00:04.63	2,067	00:00:37.12
12/18	21:31:02	BATCH JOBSTEP START	PE720058	STEP01			
12/18	21:31:02	BATCH PROGRAM START	PE720058	STEP01			
12/18	21:31:09	BATCH JOBSTEP ENDED	PE720058		00:00:01.03	3	00:00:00.34
12/18	21:31:09	BATCH JOBSTEP START	PE720058	JSTEP04			
12/18	21:31:09	BATCH PROGRAM START	PE720058	JSTEP04			
12/18	21:31:13	BATCH JOBSTEP ENDED	PE720058		00:00:00.84	24	00:00:01.03
12/18	21:31:13	BATCH JOBSTEP START	PE720058	JSTEP05			
12/18	21:31:13	BATCH PROGRAM START	PE720058	JSTEP05			
12/18	21:31:46	BATCH JOBSTEP ENDED	OS991001		00:00:21.25	4,428	00:01:12.84
12/18	21:33:35	BATCH JOBSTEP ENDED	PE720058		00:00:07.33	4,128	00:01:39.81
12/18	21:34:12	BATCH JOBSTEP ENDED	PO$INDX		00:00:30.17	15,811	00:04:33.21
12/18	21:34:12	BATCH JOBSTEP START	PO$INDX	LSORT			
12/18	21:34:12	BATCH PROGRAM START	PO$INDX	LSORT			
12/18	21:34:16	BATCH JOBSTEP ENDED	PO$INDX		00:00:00.76	2	00:00:04.20
12/18	21:34:16	BATCH JOBSTEP START	PO$INDX	RQ113BN			
12/18	21:34:16	BATCH PROGRAM START	PO$INDX	RQ113BN			
12/18	21:34:48	BATCH JOBSTEP ENDED	PO$INDX		00:00:02.71	1,620	00:00:20.81
12/18	21:34:56	BATCH JOBSTEP START	APVCHPRT	LSORT			
12/18	21:34:58	BATCH PROGRAM START	APVCHPRT	LSORT			
12/18	21:35:01	BATCH JOBSTEP ENDED	APVCHPRT		00:00:02.29	1	00:00:00.48
12/18	21:35:02	BATCH JOBSTEP START	APVCHPRT	AP400			
12/18	21:35:02	BATCH PROGRAM START	APVCHPRT	AP400			
12/18	21:35:07	BATCH JOBSTEP ENDED	APVCHPRT		00:00:00.94	4	00:00:00.13

```
12/18   21:35:07  BATCH JOBSTEP START   APVCHPRT  BACKUP
12/18   21:35:07  BATCH PROGRAM START   APVCHPRT  BACKUP
12/18   21:35:09  BATCH JOBSTEP ENDED   APVCHPRT            00:00:00.54              2   00:00:00.02
12/18   21:35:09  BATCH JOBSTEP START   APVCHPRT  DUMMY01
12/18   21:35:09  BATCH PROGRAM START   APVCHPRT  DUMMY01
12/18   21:35:10  BATCH JOBSTEP ENDED   APVCHPRT            00:00:00.24              1   00:00:00.01
12/18   21:35:10  BATCH JOBSTEP START   APVCHPRT  DELDEF
12/18   21:35:10  BATCH PROGRAM START   APVCHPRT  DELDEF
12/18   21:35:14  BATCH JOBSTEP ENDED   APVCHPRT            00:00:00.79              3   00:00:00.21
12/18   21:35:14  BATCH JOBSTEP START   APVCHPRT  REPR001
12/18   21:35:14  BATCH PROGRAM START   APVCHPRT  REPR001
12/18   21:35:17  BATCH JOBSTEP ENDED   APVCHPRT            00:00:00.53             12   00:00:01.11
12/18   21:35:31  BATCH JOBSTEP START   RQ109RUN  RQ108
12/18   21:35:33  BATCH PROGRAM START   RQ109RUN  RQ108
12/18   21:39:30  BATCH JOBSTEP START   RM884001  STEP01
12/18   21:39:31  BATCH PROGRAM START   RM884001  STEP01
12/18   21:41:03  BATCH JOBSTEP ENDED   RQ109RUN            00:00:30.10         15,811   00:04:33.37
12/18   21:41:03  BATCH JOBSTEP START   RQ109RUN  LSORT
12/18   21:41:04  BATCH PROGRAM START   RQ109RUN  LSORT
12/18   21:41:08  BATCH JOBSTEP ENDED   RQ109RUN            00:00:00.73              2   00:00:04.20
12/18   21:41:08  BATCH JOBSTEP START   RQ109RUN  RQ109BN
12/18   21:41:08  BATCH PROGRAM START   RQ109RUN  RQ109BN
12/18   21:41:12  BATCH JOBSTEP ENDED   RQ109RUN            00:00:00.77            161   00:00:02.03
12/18   21:41:12  BATCH JOBSTEP START   RQ109RUN  LSORT
12/18   21:41:13  BATCH PROGRAM START   RQ109RUN  LSORT
12/18   21:41:15  BATCH JOBSTEP ENDED   RQ109RUN            00:00:00.69              2   00:00:04.20
12/18   21:41:15  BATCH JOBSTEP START   RQ109RUN  RQ109CN
12/18   21:41:16  BATCH PROGRAM START   RQ109RUN  RQ109CN
12/18   21:41:19  BATCH JOBSTEP ENDED   RQ109RUN            00:00:00.94            161   00:00:02.11
12/18   21:41:19  BATCH JOBSTEP START   RQ109RUN  LSORT
12/18   21:41:20  BATCH PROGRAM START   RQ109RUN  LSORT
12/18   21:41:22  BATCH JOBSTEP ENDED   RQ109RUN            00:00:00.68              2   00:00:04.19
12/18   21:41:22  BATCH JOBSTEP START   RQ109RUN  RQ109JN
12/18   21:41:22  BATCH PROGRAM START   RQ109RUN  RQ109JN
12/18   21:41:26  BATCH JOBSTEP ENDED   RQ109RUN            00:00:00.93            161   00:00:02.09
12/18   21:41:26  BATCH JOBSTEP START   RQ109RUN  LSORT
12/18   21:41:27  BATCH PROGRAM START   RQ109RUN  LSORT
12/18   21:41:31  BATCH JOBSTEP ENDED   RQ109RUN            00:00:00.68              2   00:00:04.20
12/18   21:41:31  BATCH JOBSTEP START   RQ109RUN  RQ109PN
12/18   21:41:31  BATCH PROGRAM START   RQ109RUN  RQ109PN
12/18   21:41:34  BATCH JOBSTEP ENDED   RQ109RUN            00:00:00.94            161   00:00:01.99
12/18   21:41:35  BATCH PROGRAM START   RQ109RUN  LSORT
12/18   21:41:37  BATCH JOBSTEP ENDED   RQ109RUN            00:00:00.69              2   00:00:04.20
```

Batch Window Tape Drive Chronology

This is a listing of events associated with Tape Drives that took place during the Batch Window. A separate listing is provided for each Tape Drive that was allocated at any time to one of the JOBs named in the &SID.BWnn member of the CIMS Capacity Planner PARMLIB.

The list can be filtered through the use of the JOBNAME parameter in the SYSIN stream. If a JOBNAME is specified, only Tape Drive events associated with jobs whose names match the JOBNAME parameter are shown. Wildcards (*) are allowed.

The following list identifies the events that are tracked during the period a Batch Window is open:

Batch Window Open	The time (hh:mm:ss) when the Opening JOB as identified by the &SID.BWnn member of CIMS Capacity Planner PARMLIB started.
Batch Window Close	The time (hh:mm:ss) when the Closing JOB as identified by the &sid.BWnn member of CIMS Capacity Planner PARMLIB terminated
Tape Drive Allocate	The time (hh:mm:ss) when a tape drive was allocated by a JOB identified by the &SID.BWnn member of CIMS Capacity Planner PARMLIB
Open Tape Data Set	The time (hh:mm:ss) when a data set on a tape associated with a JOB identified by the &sid.BWnn member of CIMS Capacity Planner PARMLIB was opened
Close Tape Data Set	The time (hh:mm:ss) when a data set on a tape associated with a JOB identified by the &SID.BWnn member of CIMS Capacity Planner PARMLIB was closed
Unallocate Tape Drive	The time (hh:mm:ss) when a Tape Drive owned by a JOB identified by the &sid.BWnn member of CIMS Capacity Planner PARMLIB was released

Following is a sample of the Batch Window Tape Drive Chronology Report:

```
WINDOW: 001                          BATCH WINDOW TAPE DRIVE CHRONOLOGY                    SYSID:WJXA
                                                CIMS LAB, INC.
                                                  12/18/95
  12/18   21:07:09  BATCH WINDOW OPENED   OP210005
  12/18   22:35:25  TAPE DRIVE ALLOCATED  OS991058  05D1
  12/18   22:35:46  TAPE DATASET OPENED   OS991058  05D1
  12/18   22:35:46  TAPE DATASET OPENED   OS991058  05D1
  12/18   22:35:46  TAPE DATASET OPENED   OS991058  05D1
  12/18   22:41:13  TAPE DATASET CLOSED   OS991058  05D1
  12/18   22:46:41  TAPE DATASET CLOSED   OS991058  05D1
  12/18   22:53:15  TAPE DATASET CLOSED   OS991058  05D1
  12/18   22:53:47  TAPE DRIVE RELEASED   OS991058  05D1
```

Key Capacity Factors Analysis (SSA1OPA1)

This report shows, for a specific Time period as indicated in the //SYSIN stream, the following values:

CPU Percent Busy	the average Prime Shift percentage of utilization of the CPU.
DASD Rate	the average Prime Shift value of the total number of DASD I/O Operations per second

JOB MAX	the maximum number of Batch Jobs executing concurrently during Prime Shift
JOB AVG	the average number of Batch Jobs executing concurrently during Prime Shift
TSO MAX	the maximum number of TSO users logged on concurrently during Prime Shift
TSO AVG	the average number of TSO users logged on concurrently during Prime Shift
STC MAX	the maximum number of Started Tasks active concurrently during Prime Shift
STC AVG	the average number of Started Tasks active concurrently during Prime Shift
Swap Rate	the average number of Swaps per second that took place during Prime Shift
Demand Paging	the average number of Demand Paging operations per second that occurred during Prime Shift
Service Rate	the average number of Service Units per second that were accumulated by all active Address Spaces (in millions)
Transaction Rate	the average number of ended transactions per second during Prime Shift for all Address Spaces

The Prime Shift average value for each capacity factor is shown for each day of the week included in the report. The values are presented in columns, beginning with Monday's data. A sample of the report is shown below.

SYSTEM: WJXA KEY CAPACITY FACTORS WEEKLY REPORT SYSID:WJXA
TIME: 07 - 18 XYZ CORPORATE DATA CENTER
10/24/95-11/03/95

RESOURCE	MON	TUE	WED	THU	FRI	AVG	POSSIBLE RANGE
CPU BUSY	53.28	46.23	47.49	53.07	50.66	50.14	00.00 TO 100.00% OF TIME PROCESSOR BUSY
DASD RATE	96.82	82.81	77.83	83.36	91.61	86.48	00.00 TO 999.99 ACTIVITY PER SECOND
JOB MAX	10.00	10.00	10.00	16.00	20.00	13.20	0 TO 999 MAX # OF BATCH JOBS ACTIVE
JOB AVG	7.36	7.50	7.50	8.45	11.36	8.43	0 TO 999 AVG # OF BATCH JOBS ACTIVE
TSO MAX	20.00	23.00	25.00	22.00	21.00	22.20	0 TO 999 MAX # OF TSO SESSIONS ACTIVE
TSO AVG	14.27	17.04	16.54	16.59	16.09	16.10	0 TO 999 AVG # OF TSO SESSIONS ACTIVE
STC MAX	62.00	64.00	64.00	66.00	66.00	64.40	0 TO 999 MAX # OF STARTED TASKS ACTIVE
STC AVG	60.18	61.36	59.77	58.63	60.45	60.07	0 TO 999 AVG # OF STARTED TASKS ACTIVE
SWAP RATE	.51	.37	.40	.46	.38	.42	0 TO 9.99 SWAPS PER SECOND
DEMAND PAGING	2.88	2.51	2.26	2.70	2.68	2.60	0 TO 999.99 DEMAND PAGES PER SECOND
SERVICE RATE	1.71	1.33	1.48	1.59	1.34	1.49	0 TO 9.99 MILLION SERV UNITS PER SECOND
TRANS RATE	.41	.27	.30	.36	.28	.32	0 TO 9.99 TRANSACTIONS ENDED PER SECOND

Selected Key Capacity Factors Analysis (SSA1OPA2)

Any two of the thirteen Key Capacity Factors can be selected for this report. The report shows detailed hourly values for the two factors for each day included in the date range. Selection is done by means of the FILTER keyword in the SYSIN for the report. The values that can be selected are:

FILTER=nn,nn

where

01=CPU % Busy

02=DASD I/O Operations per second

03=Maximum Jobs Executing Concurrently

04=Average Jobs Executing Concurrently

05=Maximum TSO Users Active Concurrently

06=Average TSO Users Active Concurrently

07=Maximum Started Tasks Executing Concurrently

08=Average Started Tasks Executing Concurrently

09=Swaps per Second

10=Demand Paging Rate per Second

11=Service Units (Million) per Second

12=Ended Transactions per Second

13=Tape I/O Operations per Second

The default is

FILTER=01,10 (CPU/Demand Paging)

A sample of the report is shown below.

SYSTEM: WJXA — KEY CAPACITY FACTORS HOURLY REPORT — SYSID:WJXA
TIME: 07 - 18 — XYZ CORPORATE DATA CENTER — 10/24/95-11/03/95

DAY>	MON		TUE		WED		THU		FRI		SAT		SUN	
DATE>	10/30		10/24		10/25		10/26		10/27		10/28		10/29	
HOUR	CPU BUSY	DEMAND PAGING	CPU BUSY	DEMAND PAGING	CPU BUSY	DEMAND PAGING	CPU BUSY	DEMAND PAGING	CPU BUSY	DEMAND PAGING	CPU BUSY	DEMAND PAGING	CPU BUSY	DEMAND PAGING
00-0	14.40	.10	60.65	.00	61.99	1.20	37.55	.68	41.76	.94	61.20	.67	14.41	.03
01-0	30.00	.04	45.16	.00	30.11	.19	30.87	.23	37.60	.41	30.86	.31	14.16	.00
02-0	14.18	.00	44.46	.42	27.53	.30	24.03	.24	58.60	.46	32.42	.40	14.15	.00
03-0	15.08	.00	43.92	.21	28.28	.22	28.98	.18	64.06	.46	54.82	.79	14.17	.00
04-0	19.37	.02	43.19	.36	39.56	.44	32.12	.34	67.96	1.44	41.34	.80	14.16	.00
05-0	25.15	.20	52.69	.88	29.99	.64	49.98	1.06	47.42	2.15	57.41	1.07	14.22	.00
06-0	40.23	.71	50.83	1.29	37.43	1.10	67.09	4.62	65.79	4.37	34.07	.31	14.44	.00
07-0	47.98	2.20	51.57	1.94	34.30	.97	63.50	5.67	46.65	2.68	31.91	.11	15.82	.00
08-0	69.43	3.55	60.64	3.87	41.88	1.90	60.92	3.26	48.37	2.97	28.69	.12	18.49	.15
09-0	55.71	4.15	59.80	3.29	43.55	2.61	50.44	3.62	47.04	3.28	57.91	.54	20.31	.49
10-0	65.19	5.69	49.88	5.14	49.93	3.58	54.84	3.51	64.49	2.90	56.04	.12	25.39	1.09
11-0	77.60	3.79	51.66	4.12	63.16	4.32	57.59	3.68	70.06	4.59	56.29	.01	19.25	1.30
12-0	52.31	2.72	41.28	2.41	58.15	2.91	43.21	1.68	69.46	4.77	47.97	.17	26.21	.81
13-0	37.82	1.56	38.48	1.97	48.47	3.03	65.71	3.11	54.63	3.09	22.17	.11	32.19	.19
14-0	43.95	2.82	45.01	1.81	51.13	2.48	47.65	2.39	33.38	1.63	37.57	.18	20.56	.12
15-0	40.10	1.24	39.71	1.52	42.79	1.22	38.41	1.07	37.84	1.54	27.37	.23	22.30	.04
16-0	55.26	3.03	42.41	1.09	54.09	1.31	53.76	1.00	48.43	1.49	98.97	.41	24.84	.02
17-0	40.77	.99	28.13	.50	34.99	.56	47.81	.72	37.00	.61	98.52	.09	20.82	.01
18-0	38.05	.42	24.60	.25	32.85	.37	38.53	1.24	39.9	.49	83.48	.12	19.21	.02
19-0	22.71	.14	31.20	.13	23.94	.17	46.64	2.14	27.23	.24	33.90	.05	16.06	.00
20-0	61.42	.24	68.44	.45	41.11	.12	64.54	.89	63.61	.21	14.22	.00	16.61	.00
21-0	86.81	.51	88.69	.71	80.44	.51	89.59	1.14	92.70	.40	14.19	.00	19.90	.00
22-0	74.08	.63	82.51	.76	70.07	.52	86.76	1.59	78.87	1.11	14.21	.00	14.17	.00
23-0	81.04	.73	77.53	.52	75.22	.66	59.08	.51	87.81	.67	14.15	.00	15.76	.01
AVGS	46.19	1.47	50.93	1.40	45.87	1.30	51.65	1.85	55.44	1.78	43.73	.27	18.65	.17
07-0	47.98	2.20	51.57	1.94	34.30	.97	63.50	5.67	46.65	2.68	31.91	.11	15.82	.00
08-0	69.43	3.55	60.64	3.87	41.88	1.90	60.92	3.26	48.37	2.97	28.69	.12	18.49	.15
09-0	55.71	4.15	59.80	3.29	43.55	2.61	50.44	3.62	47.04	3.28	57.91	.54	20.31	.49
10-0	65.19	5.69	49.88	5.14	49.93	3.58	54.84	3.51	64.49	2.90	56.04	.12	25.39	1.09
11-0	77.60	3.79	51.66	4.12	63.16	4.32	57.59	3.68	70.06	4.59	56.29	.01	19.25	1.30
12-0	52.31	2.72	41.28	2.41	58.15	2.91	43.21	1.68	69.46	4.77	47.97	.17	26.21	.81
13-0	37.82	1.56	38.48	1.97	48.47	3.03	65.71	3.11	54.63	3.09	22.17	.11	32.19	.19
14-0	43.95	2.82	45.01	1.81	51.13	2.48	47.65	2.39	33.38	1.63	37.57	.18	20.56	.12
15-0	40.10	1.24	39.71	1.52	42.79	1.22	38.41	1.07	37.84	1.54	27.37	.23	22.30	.04
16-0	55.26	3.03	42.41	1.09	54.09	1.31	53.76	1.00	48.43	1.49	98.97	.41	24.84	.02
17-0	40.77	.99	28.13	.50	34.99	.56	47.81	.72	37.00	.61	98.52	.09	20.82	.01
AVGS	53.28	2.88	46.23	2.51	47.49	2.26	53.07	2.70	50.66	2.68	51.21	.19	22.38	.38

Application Profile Report (SSA1ACSR)

This report shows, for each listed Application in the table pointed to by the //ACCOUNT DD statement, for a specific Time period as indicated in the //SYSIN stream, the following values:

JOBNAME	The name of the Job
Number of Runs	The number of times during the period the Job was executed
Number of ABENDs	The number of times during the period the Job terminated abnormally
Average Start Time	The average start time (Hour : Minute based on a 24 hour clock) the Job started
Average CPU Time	The average amount of CPU time used by the Job (Minutes : Seconds)
Average Elapsed Time	The average amount of elapsed time for the Job (Hours : Minutes)
Total CPU Time	The total CPU time used by all executions of the Job during the period (Minutes : Seconds)
Total Elapsed Time	The total elapsed time for all executions of the Job during the period (Hours : Minutes)
Non-specific Tape Mounts	The total number of non-specific tape mounts associated with this Job
Specific Tape Mounts	The total number of specific tape mounts associated with this Job
DASD I/O	The total number of DASD I/O Operations associated with this Job
Tape I/O	The total number of Tape I/O Operations associated with this Job
Pages Printed Category 1	The total number of pages printed in the SYSOUT classes associated with category 1
Pages Printed Category 2	The total number of pages printed in the SYSOUT classes associated with category 2
Pages Printed Category 3	The total number of pages printed in the SYSOUT classes associated with category 3
Pages Printed Category 4	The total number of pages printed in the SYSOUT classes associated with category 4

A sample of the report is shown below.

CIMS Capacity Planner APPLICATION PROFILE PAGE 003
ORDERED BY JOBNAME WITHIN APPLICATION
FOR 02/10/96-03/02/96

APPLICATION: BACKUPS

JOBNAME	# OF RUNS	# OF ABENDS	AVERAGE START TIME	AVERAGE CPU TIME (MMM:SS)	AVERAGE ELAPSED (HHH:MM)	TOTAL CPU TIME (MMM:SS)	TOTAL ELAPSED (HHH:MM)	TAPE MOUNTS NON SPEC.	TAPE MOUNTS SPEC.	DASD I/O (*1000)	TAPE I/O (*1000)	PAGES PRINTED M/FICHE	PAGES PRINTED LASER	PAGES PRINTED FANFOLD	PAGES PRINTED OTHER
BACKDEPT	3		11:51	1:20	:03	4:02	:09	3		11	85				
BKUPACTU	1	1	12:14	:01	:17	:01	:17								
BLMRBKUP	3		9:24	:16	:02	:50	:08	3	3		64				
BLMRDMP	1		8:03	:43	:03	:43	:03			12				371	
BLMRRPT	3		8:18	1:34	:07	4:44	:23			159				136	
BMLOADER	2		9:13	:12	:02	:25	:04			8				18	
BMLPRINT	14		11:17	:01	:00	:25	:00								
BMPROC10	2		9:40	:11	:01	:23	:02			6				357	
BMUPDATE	1		5:59	:43	:07	:43	:07			17				97	
BMUTEXTR	1		10:09	:05	:01	:05	:01								
BM225A	1		13:49	:02	:00	:02	:00								
BM226X	7		8:03	:03	:00	:21	:04			2					
BM278RUN	2		6:35	:07	:00	:15	:01			10					
BM323B	11		9:00	:02	:00	:24	:01			2					
BM391RUN	3		22:12	:21	:03	1:03	:11		3	9	2			1,281	
BOMLD8	8	1	14:33	:17	:01	2:18	:15			53					
BS955008	4	3	9:34	:10	:00	:40	:01			5					
BS95501A	2		18:58	:04	:00	:09	:00							84	
BS95502	2		9:14	:14	:01	:28	:02			8					
BS955030	1		11:45	1:14	:07	1:14	:07			20					
BS955043	4		6:10	:30	:03	2:02	:12			30				1,028	
BS95506	4		11:03	:11	:03	:45	:14			11					
BS95530Q	1		11:58	2:12	:11	2:12	:11			25				3,560	
BS95543Q	3		8:35	:40	:04	2:02	:13			33				1,312	
B9550432	1		6:39	:02	:00	:02	:00								
TOTALS:	85	5				26:18	2:59	6	6	421	151			8,244	
% OF ALL:	2.46	4.50				.45	.31	.98	1.56	.71	1.30	.00	.00	14.21	.00

Model 204 Workload Analysis and Performance Reports

The following discussion enumerates the various CIMS Capacity Planner Model 204 reports and describes the contents of each report.

Model 204 Summary Analysis Report

The Summary Analysis Report contains key summary information required to determine the magnitude of the Model 204 workload and how well the Model 204 system is performing. The report provides the following information for the time period specified in the report request:

- The period measured by date and time

  The Summary Report can be produced for a single day or portion of a day or it can encompass any number of days, thereby allowing an evaluation of the overall long term and short term performance of the Model 204 system.

- The peak number of concurrent active terminals (high watermark)

A terminal is considered active during each 15-minute period throughout the day only if at least one transaction is submitted. If a terminal is logged on throughout three shifts, but transactions are only submitted during two 15 minute periods, the terminal is considered to be active for only 30 minutes.

- The average number of Model 204 transactions processed per minute during the prime shift
- The average number of Model 204-related EXCPs per second during the prime shift
- The average transaction elapsed time (in seconds) during the prime shift
- The average terminal response time (in seconds) during the prime shift
- The average ratio of transactions submitted during the early shift compared to the prime shift
- The average ratio of transactions submitted during the late shift compared to the prime shift
- The average ratio of terminals active during the early shift compared to the prime shift
- The average ratio of terminals active on the late shift compared to the prime shift
- The average percentage of the CPU time consumed by Model 204 and the Model 204 applications during each shift within the measured period
- The average number of transactions processed by shift for the measured period

The 25 most frequently executed transactions are listed individually. All remaining transactions are reported collectively under the title of "OTHER". The total number of transactions are reported by shift.

Following is a sample of the Model 204 Summary Analysis Report:

```
SUMMARY REPORT                                                SYSID:CW01
  1. THE MEASURED PERIOD BEGINS AT 00:00 MONDAY, DECEMBER 30, AND CONTINUES THROUGH 23:59 MONDAY, JANUARY 6.
  2. DURING THE MEASURED PERIOD M204 USAGE PEAKED AT  5 TERMINALS ACTIVE CONCURRENTLY
  3. DURING PRIME SHIFT, THE NUMBER OF TRANSACTIONS PER MINUTE AVERAGED: 14.05
  4. DURING PRIME SHIFT, THE NUMBER OF EXCPS PER SECOND AVERAGED: 32.47
  5. DURING PRIME SHIFT, TRANSACTION ELAPSED TIME FOR M204 AVERAGED: 1.31 SECONDS
  6. DURING PRIME SHIFT, TERMINAL RESPONSE TIME FOR M204 AVERAGED: 2.69 SECONDS
  7. DURING THE MEASURED PERIOD THE RATIO OF EARLY-TO-PRIME SHIFT TRANSACTIONS WAS: .00
  8. DURING THE MEASURED PERIOD THE RATIO OF LATE-TO-PRIME SHIFT TRANSACTIONS WAS: .00
  9. DURING THE MEASURED PERIOD THE RATIO OF EARLY-TO-PRIME SHIFT TERMINALS WAS: .00
 10. DURING THE MEASURED PERIOD THE RATIO OF LATE-TO-PRIME SHIFT TERMINALS WAS: .00
 11. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT PERCENTAGE CPU BUSY TIME WITHIN SHIFT AVERAGED:
                         00:00 - 07:00          07:00 - 19:00          19:00 - 24:00
     XACTN                         .00                   7.39                    .00
     M204                          .00                    .00                    .00
     TOTALS                        .00                   7.39                    .00
 12. DURING THE MEASURED PERIOD A TOTAL OF 8,434 M204 TRANSACTIONS WERE PROCESSED.
                         00:00 - 07:00          07:00 - 19:00          19:00 - 24:00
     HFDKSS                                            2,346
     JXW                                               1,940
     HFDRMV                                            1,483
     HFDEGL                                            1,411
     HFDDH                                             1,073
     SUPERKLU                                            130
     TSI                                                  51
                            ========              ========               ========
     TOTALS                                            8,434
```

Model 204 Response Performance Report

This report shows, by shift, for a single day or a range of days, how the Model 204 transactions flowed through the system for a specified Model 204 region. The User IDs for the 25 users who most frequently executed Model 204 transactions are listed individually, by shift, with an indication of what percentage of the response times fell within certain pre-defined time-frames. Users that are not among the 25 most active are grouped together and reported under "OTHER". A Totals line is accumulated and written to indicate how all users performed as a group.

This is a key report in measuring how well your performance goals are being met within the CPU by the Model 204 system and the application programs.

Following is a sample of the Model 204 Response Performance Report:

CIMS LAB, INC.
12/30/96-01/06/97
M204 RESPONSE PERFORMANCE SYSID:CW01
SHIFT SHOWN: 07:00 - 19:00

	< .5 SEC	.5-1 SEC	1-2 SEC	2-4 SEC	4-6 SEC	> 6 SEC	
HFDKSS	40.32%	46.20%	13.46%				2,346
JXW	33.47%	57.85%	5.63%	.87%		2.16%	1,936
HFDRMV	83.61%	11.86%	1.88%	2.62%			1,483
HFDEGL	64.13%	19.84%				16.01%	1,411
HFDDH	73.99%	23.20%	2.79%				1,073
SUPERKLU	100.00%						130
TSI	50.98%	49.01%					51
SUBTOTALS	55.62%	34.80%	5.72%	.66%		3.17%	8,430
TOTALS	55.62%	34.80%	5.72%	.66%		3.17%	8,430

Model 204 Transaction Statistics Report

This report shows, for a specified Model 204 region, which Users were among the top 40 in the following categories:

- Most transactions executed

  The User IDs and the transaction counts of the 40 most active Users are listed along with their respective percentages of the total Model 204 transaction workload. The Users are listed in descending order by transaction volume.

- Most cumulative elapsed time

  The User IDs and the total amount of elapsed (residence) time for each of 40 Users experiencing the highest residency time are listed along with their respective percentages of the total Model 204 transaction residence time. The Users are listed in descending residency time order.

- Most cumulative CPU time

  The User IDs and the total amount of CPU time consumed for each of the 40 Users that consumed the most CPU time are listed along with their respective percentages of the total Model 204 CPU time. The Users are listed in descending CPU time order.

- Most records added

  The User IDs and the number of records added are listed for each of the 40 Users issuing the most record addition calls along with their respective percentages of all Model 204 record addition activity. The Users are listed in descending order by the number of records added.

- Most records deleted

  The User IDs and the number of records deleted are listed for each of the 40 Users issuing the most record deletion calls along with their respective percentages of all Model 204 record deletion activity. The Users are listed in descending order by the number of records deleted.

- Most records sorted

  The User IDs and the number of records sorted are listed for each of the 40 Users causing the most records to be sorted along with their respective percentages of all Model 204 record sorting activity. The Users are listed in descending order by the number of records sorted.

- Server size

  The User IDs and the size of the server are listed for each of the 40 Users requiring the most storage. The transactions are listed in descending order by the amount of storage required.

- Server reads

  The User IDs, the number of server reads, and their relative percentage of all server reads are listed for the 40 Users requiring the highest number of server reads. The Users are listed in descending order by the number of server reads.

- Server writes

  The User IDs, the number of server writes, and their relative percentage of all server writes are listed for the 40 Users requiring the highest number of server writes. The Users are listed in descending order by the number of server writes required.

- Model 204 EXCPs

  The User IDs and the number of EXCPs are listed for the 40 Users that require the highest number of EXCPs along with their respective percentages of all EXCPs related to Model 204 processing. The listing is produced in descending order by the number of EXCPs.

- Directed lines

  The User IDs and the number of directed lines are listed for the 40 users requiring the highest number of directed lines along with their respective percentages of all directed lines. The listing is produced in descending order by the number of directed lines.

- Terminal lines

  The User IDs and the number of terminal lines are listed for the 40 users requiring the highest number of terminal lines along with their respective percentages of all terminal lines. The listing is produced in descending order by the number of terminal lines.

- Find requests

  The User IDs and the number of find requests are listed for the 40 users issuing the highest number of find requests along with their respective percentages of all find requests. The listing is produced in descending order by the number of find requests.

- Direct searches

  The User IDs and the number of direct searches are listed for the 40 users requiring the highest number of direct searches along with their respective percentages of all direct searches. The listing is produced in descending order by the number of direct searches.

- Record reads

  The User IDs and the number of record reads are listed for the 40 users requiring the highest number of record reads along with their respective percentages of all direct searches. The listing is produced in descending order by the number of record reads.

USERIDs are excluded from the Transaction Statistics Report through the use of the EXCLUDE facility (see JCL). Similarly, users that would not normally be included are included through the use of the INCLUDE facility (JCL).

Whenever any of the reported statistics for a transaction exceed six digits (1 million or more), the numbers are expressed in thousands and suffixed with the character "K".

Following is a sample of the Model 204 Transaction Statistics Report:

```
                                  TRANSACTION STATISTICS REPORT                                  SYSID:CW01
                                           CIMS LAB, INC.
                                        12/30/96-01/06/97
TRANSACTION COUNT      HFDKSS       JXW     HFDRMV    HFDEGL     HFDDH  SUPERKLU       TSI
                        2,346     1,940      1,483     1,411     1,073       130        51
                       27.81%    23.00%     17.58%    16.72%    12.72%     1.54%      .60%

ELAPSED TIME             JXW    HFDEGL     HFDKSS    HFDRMV     HFDDH       TSI  SUPERKLU
                       1:41:10  1:14:07    0:25:02   0:12:17   0:06:13   0:00:15   0:00:01
                       46.16%   33.81%     11.42%     5.60%     2.84%      .12%      .01%

CPU TIME                 JXW    HFDEGL     HFDRMV    HFDKSS     HFDDH       TSI  SUPERKLU
                       0:22:12  0:07:40    0:07:12   0:04:13   0:02:59   0:00:02   0:00:00
                       50.08%   17.28%     16.26%     9.51%     6.75%      .08%      .00%
```

```
                                  TRANSACTION STATISTICS REPORT                                  SYSID:CW01
                                           CIMS LAB, INC.
                                        12/30/96-01/06/97
RECORDS ADDED          HFDEGL     HFDRMV       JXW     HFDDH
                        10,331      9,802     6,539       597
                        37.88%     35.94%    23.97%     2.18%

RECORDS DELETED        HFDEGL        JXW     HFDRMV     HFDDH
                        10,291        433       127         1
                        94.83%      3.99%     1.17%      .00%

RECORDS SORTED         HFDKSS     HFDRMV       JXW     HFDDH    HFDEGL
                        98,252     46,994    23,181    17,537     9,829
                        50.18%     24.00%    11.83%     8.95%     5.02%
```

```
                                    TRANSACTION STATISTICS REPORT                    SYSID:CW01
                                             CIMS LAB, INC.
                                          12/30/96-01/06/97
SERVER SIZE(K)          HFDEGL    HFDRMV     HFDDH       JXW    HFDKSS       TSI  SUPERKLU
                           227       224       209       178        63        55         7


SERVER READS         (NO DETAIL AVAILABLE)


SERVER WRITES        (NO DETAIL AVAILABLE)
```

```
                                    TRANSACTION STATISTICS REPORT                    SYSID:CW01
                                             CIMS LAB, INC.
                                          12/30/96-01/06/97
M204 EXCPS                JXW    HFDEGL    HFDKSS    HFDRMV     HFDDH       TSI  SUPERKLU
                      241,336   203,935    76,757    40,524    21,779       235        26
                       41.28%    34.88%    13.13%     6.93%     3.72%      .04%      .00%

DIRECTED LINES            TSI       JXW    HFDEGL    HFDRMV     HFDDH
                       13,042     5,049     3,951     2,313       948
                       51.54%    19.95%    15.61%     9.14%     3.74%

TERMINAL LINES            JXW    HFDEGL    HFDRMV    HFDKSS     HFDDH       TSI
                        4,956     4,836     3,269     2,513     1,243       399
                       28.78%    28.09%    18.98%    14.59%     7.22%     2.31%
```

```
                                    TRANSACTION STATISTICS REPORT                    SYSID:CW01
                                             CIMS LAB, INC.
                                          12/30/96-01/06/97
FIND REQUESTS             JXW    HFDRMV    HFDEGL    HFDKSS     HFDDH  SUPERKLU       TSI
                      456,779   138,566    98,585    59,922    41,280       104        98
                       57.43%    17.42%    12.39%     7.53%     5.19%      .01%      .01%

DIRECT SEARCHES           JXW    HFDEGL    HFDRMV     HFDDH
                      489,741   115,467     5,939        43
                       80.12%    18.89%      .97%      .00%

RECORD READS              JXW    HFDKSS    HFDRMV    HFDEGL     HFDDH       TSI  SUPERKLU
                        1,155K  251,349   215,567   120,201    72,959       290       143
                       63.63%    13.83%    11.86%     6.61%     4.01%      .01%      .00%
```

Model 204 Terminal Statistics Report

This report shows which Model 204 terminals were among the top 40 in the following categories:

- Most Active

  The User ID and the amount of time active (hours:minutes) are reported along with their respective percentages of the combined active time for all Model 204 terminals for the 40 most active terminals. A terminal is considered active within any given 15 minute period only if transactions are received from the terminal. A terminal that is signed-on, but does not submit any transactions is not considered to be active. The list is produced in descending order by the amount of time active.

- Most Transactions Executed

  The User ID and the number of transactions submitted are reported for the 40 terminals submitting the most transactions along with their respective percentages of the total number of transactions submitted during the measured period. The listing is produced in descending order by the number of transactions submitted.

  Any counts that exceed 6 digits are expressed in thousands by suffixing the number with the character "K".

Data pertaining to selected Users are excluded from the report through the use of the EXCLUDE facility (see JCL). Similarly, terminals that do not qualify as among the top 40 can be included in the report through the use of the INCLUDE facility (see JCL).

Following is a sample of the Model 204 Terminal Statistics Report:

```
                                    TERMINAL STATISTICS REPORT                                  SYSID:CW01
                                          CIMS LAB, INC.
                                        12/30/96-01/06/97
ACTIVE TIME                 JXW    HFDRMV     HFDDH    HFDEGL    HFDKSS       TSI
                        7:45:00   5:30:00   4:30:00   3:45:00   3:45:00   0:45:00
                         16.14%    11.45%     9.37%     7.81%     7.81%     1.56%

TRANSACTION COUNT        HFDKSS       JXW    HFDEGL    HFDRMV     HFDDH       TSI
                            727       483       403       382       292        13
                         31.60%    21.00%    17.52%    16.60%    12.69%      .56%
```

Model 204 Exception Analysis

The Model 204 Exception Analysis Report shows, for each 15 minute period, for a specified Model 204 region, all User IDs whose response times exceeded the pre-defined thresholds specified in the CIMS Capacity Planner Parmlib member &sidXCPT. The Parmlib member &sidXCPT contains a number of threshold values for the installation. This member is used to identify the performance thresholds for the various components of the overall environment.

Following is a sample of the Model 204 Exception Analysis Report:

```
                                          M204 EXCEPTION ANALYSIS                    SYSID:CW01
                                               CIMS LAB, INC.
                                             12/30/96-01/06/97
07/24 14.00 - 14.15 : XACTN  JXW     (6.37)
                      TERM   JXW     (6.37)
07/24 14.30 - 14.45 : XACTN  HFDEGL  (29.75)
07/24 14.45 - 15.00 : XACTN  HFDEGL  (14.98) JXW     (123.45)
                      TERM   HFDEGL  (85.19) JXW     (164.57)
07/24 15.15 - 15.30 : XACTN  JXW     (77.34)
                      TERM   JXW     (96.65)
07/24 17.15 - 17.30 : XACTN  JXW     (158.64)
07/25 12.00 - 12.15 : XACTN  HFDEGL  (17.15)
                      TERM   HFDEGL  (171.05)
07/25 12.30 - 12.45 : XACTN  HFDEGL  (10.79)
                      TERM   HFDEGL  (91.01)
07/25 14.30 - 14.45 : XACTN  JXW     (38.81)









   XACTN=AVERAGE ELAPSED TIME FOR A GIVEN TRANSACTION
   TERM=AVERAGE RESPONSE TIME FOR A GIVEN TERMINAL
```

Model 204 Transaction Activity List

The Model 204 Transaction Activity List shows daily average values for each individual M204 transaction in terms of the following:.

- Transaction Count (average number of transactions per day)
- Average Response per transaction
- Total daily CPU time per transaction per day
- Total M204 I/O calls per transaction per day
- Total records added per transaction per day
- Total records sorted per transaction per day
- Total records deleted per transaction per day
- Total daily average I/O to a terminal per transaction

Following is a sample of the Model 204 Transaction Activity List:

M204 TRANSACTION ACTIVITY LIST SYSID:CW01
CIMS LAB, INC.
12/30/96-01/06/97

XACTN ID	XACTN COUNT	AVG RESPONSE	CPU TIME	M204 EXCPS	RCDS ADDED	RCDS SORTED	RCDS DELETED	TERMINAL I/O
HFDDH	536	.34	89.84	10,889	298	8,768		621
HFDEGL	705	3.15	229.98	101,967	5,165	4,914	5,145	2,418
HFDKSS	2,346	.64	253.02	76,757		98,252		2,513
HFDRMV	741	.49	216.38	20,262	4,901	23,497	63	1,634
JXW	970	3.12	666.32	120,668	3,269	11,590	216	2,478
KC..	12		.05	1				
SUPERKLU	65	.01	.10	13				
TSI	25	.31	1.08	117				199

Model 204 Ad Hoc Report

The CIMS Capacity Planner Model 204 Subsystem supports the production of an Ad Hoc report from the original data before portions of the detail data are summarized or discarded. The Ad Hoc report is produced by the Data Reduction program - SSA1M20W.

To specify that the report is to be produced, you merely specify the report parameters in the Data Reduction Job stream as part of the SYSIN data set. The parameters that apply to the Ad Hoc report are:

M204 ACCOUNT NAME=

M204 USERID=

The Model 204 Ad Hoc report contains the following information for each record selected for inclusion in the report.

- The Model 204 Last ID(Transaction Identifier)
- The time that the transaction completed execution

- The User ID
- The Account Name
- The Model 204 Procedure Name
- The elapsed time for the transaction
- The CPU time used
- The Model 204 I/O count
- The counts of records added and deleted
- The server size
- The number server reads and writes
- The number terminal lines read and written

In addition to selecting records for inclusion into the Ad Hoc report by specific Account and User IDs, groups of both accounts and users are selected through the use of the wild card character "*".

For example, all accounts with the characters "TR" are selected by specifying MODEL 204 ACCOUNT NAME=TR*. Similarly, all User IDs beginning with "L422" are selected by specifying MODEL 204 USERID=L422*. This convention is extended to include all records by specifying MODEL 204 ACCOUNT NAME=*. M204 USERID=* would result in the selection of all User IDs. If both the account and User names of "*" were specified, all records would be selected.

The selection of records for inclusion into the Ad Hoc report can be further restricted by specifying date and/or time ranges by using the BEGIN DATE=, END DATE=, BEGIN TIME=, and END TIME= parameters.

Model 204 Workload and Performance Graphs

The Model 204 Subsystem produces a variety of bar graphs that depict the workload and the performance of the Model 204 system.

Model 204 Transaction Response Graph

The Transaction Response Graph shows, by day of the week, the average and peak average Model 204 transaction response times for each 15-minute period throughout the day. The report page is broken into four sections—each covering a period of 6 hours. Within each section of the page, the time-of-day is represented by the vertical axis while the horizontal axis represents the response time (both average and peak average). In the middle of each line, both the average and peak values are printed. The lines, in bar graph format, form the graphic representation of the values. The peak values are represented by dashes while the average values are represented by asterisks. In those cases where no dashes are present, they have been overlaid by asterisks because the peak values and the average values are either equal or very nearly so.

The Transaction Response Graph is produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced - one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

Following is a sample of the Model 204 Transaction Response Graph:

```
DAY SHOWN: THURSDAY                                        SYSID:CW01
                                                      07/24/96-07/25/96
                                          M204 TRANSACTION RESPONSE GRAPH: .01 SECONDS

  00.00 - 00.15 |                     0000:0000           12.00 - 12.15 |***********************1715:1715****************
  00.15 - 00.30 |                      0000:0000            12.15 - 12.30 |****                    0036:0036
  00.30 - 00.45 |                     0000:0000           12.30 - 12.45 |***********************1079:1079****************
  00.45 - 01.00 |                      0000:0000            12.45 - 13.00 |                        0000:0000
  01.00 - 01.15 |                      0000:0000            13.00 - 13.15 |                        0000:0000
  01.15 - 01.30 |                      0000:0000            13.15 - 13.30 |                        0000:0000
  01.30 - 01.45 |                      0000:0000            13.30 - 13.45 |*******                 0070:0070
  01.45 - 02.00 |                      0000:0000            13.45 - 14.00 |**                      0016:0016
  02.00 - 02.15 |                      0000:0000            14.00 - 14.15 |*****                   0043:0043
  02.15 - 02.30 |                      0000:0000            14.15 - 14.30 |                        0000:0000
  02.30 - 02.45 |                     0000:0000           14.30 - 14.45 |***********************2540:2540****************
  02.45 - 03.00 |                      0000:0000            14.45 - 15.00 |*****                   0046:0046
  03.00 - 03.15 |                      0000:0000            15.00 - 15.15 |*****                   0041:0041
  03.15 - 03.30 |                      0000:0000            15.15 - 15.30 |****                    0036:0036
  03.30 - 03.45 |                      0000:0000            15.30 - 15.45 |                        0000:0000
  03.45 - 04.00 |                      0000:0000            15.45 - 16.00 |                        0000:0000
  04.00 - 04.15 |                      0000:0000            16.00 - 16.15 |                        0000:0000
  04.15 - 04.30 |                      0000:0000            16.15 - 16.30 |                        0000:0000
  04.30 - 04.45 |                      0000:0000            16.30 - 16.45 |                        0000:0000
  04.45 - 05.00 |                      0000:0000            16.45 - 17.00 |                        0000:0000
  05.00 - 05.15 |                      0000:0000            17.00 - 17.15 |                        0000:0000
  05.15 - 05.30 |                      0000:0000            17.15 - 17.30 |                        0000:0000
  05.30 - 05.45 |                      0000:0000            17.30 - 17.45 |                        0000:0000
  05.45 - 06.00 |                      0000:0000            17.45 - 18.00 |                        0000:0000
               +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
               0...50..100..150..200..250..300..350..400..450..500          0...50..100..150..200..250..300..350..400..450..500

  06.00 - 06.15 |                      0000:0000            18.00 - 18.15 |                        0000:0000
  06.15 - 06.30 |                      0000:0000            18.15 - 18.30 |                        0000:0000
  06.30 - 06.45 |                      0000:0000            18.30 - 18.45 |                        0000:0000
  06.45 - 07.00 |                      0000:0000            18.45 - 19.00 |                        0000:0000
  07.00 - 07.15 |                      0000:0000            19.00 - 19.15 |                        0000:0000
  07.15 - 07.30 |                      0000:0000            19.15 - 19.30 |                        0000:0000
  07.30 - 07.45 |                      0000:0000            19.30 - 19.45 |                        0000:0000
  07.45 - 08.00 |                      0000:0000            19.45 - 20.00 |                        0000:0000
  08.00 - 08.15 |                      0000:0000            20.00 - 20.15 |                        0000:0000
  08.15 - 08.30 |                      0000:0000            20.15 - 20.30 |                        0000:0000
  08.30 - 08.45 |                      0000:0000            20.30 - 20.45 |                        0000:0000
  08.45 - 09.00 |                      0000:0000            20.45 - 21.00 |                        0000:0000
  09.00 - 09.15 |********              0072:0072            21.00 - 21.15 |                        0000:0000
  09.15 - 09.30 |*****                 0047:0047            21.15 - 21.30 |                        0000:0000
  09.30 - 09.45 |**                    0014:0014            21.30 - 21.45 |                        0000:0000
  09.45 - 10.00 |********              0080:0080            21.45 - 22.00 |                        0000:0000
  10.00 - 10.15 |******                0060:0060            22.00 - 22.15 |                        0000:0000
  10.15 - 10.30 |***                   0025:0025            22.15 - 22.30 |                        0000:0000
  10.30 - 10.45 |*******               0067:0067            22.30 - 22.45 |                        0000:0000
  10.45 - 11.00 |****                  0040:0040            22.45 - 23.00 |                        0000:0000
  11.00 - 11.15 |***                   0025:0025            23.00 - 23.15 |                        0000:0000
  11.15 - 11.30 |***                   0030:0030            23.15 - 23.30 |                        0000:0000
  11.30 - 11.45 |********              0077:0077            23.30 - 23.45 |                        0000:0000
  11.45 - 12.00 |********              0072:0072            23.45 - 24.00 |                        0000:0000
               +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
               0...50..100..150..200..250..300..350..400..450..500          0...50..100..150..200..250..300..350..400..450..500

   LEGEND: (*) = AVERAGE  (-) = PEAK
```

Model 204 Terminal Response Graph

The Terminal Response Graph shows, by day of the week, the average and peak average Model 204 terminal response times for each 15-minute period throughout the day. The report page is broken into four sections—each covering a period of 6 hours. Within each section of the page, the time-of-day is represented by the vertical axis while the horizontal axis represents the response time (both peak and average). In the middle of each line, both the average and peak values are printed. The lines, in bar graph format, form the graphic representation of the values. The peak values are represented by dashes while the average values are represented by asterisks. In those cases where no dashes are present, they have been overlaid by asterisks because the peak and average values are either equal or very nearly so.

The Terminal Response Graph is produced for a single day's activity or several days. When more than one day's activity is graphed, separate graphs are produced - one for each day of the week (e.g. Monday, Tuesday, etc.). Multiple days' activity is included on a single graph only when multiple occurrences of a given weekday fall within the measured period defined by the BEGIN DATE and the END DATE (see parameters).

The Terminal Response Graph differs from the Transaction Response Graph in two ways:

- Not all transaction responses are directed at terminals
- Through the judicious use of the EXCLUDE facility, it is possible to exclude all printers, monitors, and responses to long running transactions from the graph.

Following is a sample of the Model 204 Terminal Response Graph:

```
DAY SHOWN: THURSDAY                                    SYSID:CW01
                                                    07/24/96-07/25/96
                                          M204 TERMINAL RESPONSE GRAPH: .01 SECONDS

 00.00 - 00.15 |                    0000:0000          12.00 - 12.15 |************************7105:7105*****************
 00.15 - 00.30 |                      0000:0000            12.15 - 12.30 |*******                 0064:0064
 00.30 - 00.45 |                    0000:0000          12.30 - 12.45 |************************9101:9101*****************
 00.45 - 01.00 |                      0000:0000            12.45 - 13.00 |                        0000:0000
 01.00 - 01.15 |                      0000:0000            13.00 - 13.15 |                        0000:0000
 01.15 - 01.30 |                      0000:0000            13.15 - 13.30 |                        0000:0000
 01.30 - 01.45 |                      0000:0000            13.30 - 13.45 |************************0424:0424**********
 01.45 - 02.00 |                      0000:0000            13.45 - 14.00 |*************           0122:0122
 02.00 - 02.15 |                      0000:0000            14.00 - 14.15 |***********             0106:0106
 02.15 - 02.30 |                      0000:0000            14.15 - 14.30 |                        0000:0000
 02.30 - 02.45 |                      0000:0000            14.30 - 14.45 |************            0113:0113
 02.45 - 03.00 |                      0000:0000            14.45 - 15.00 |**********              0096:0096
 03.00 - 03.15 |                      0000:0000            15.00 - 15.15 |****************        0155:0155
 03.15 - 03.30 |                      0000:0000            15.15 - 15.30 |**********************  0215:0215
 03.30 - 03.45 |                      0000:0000            15.30 - 15.45 |                        0000:0000
 03.45 - 04.00 |                      0000:0000            15.45 - 16.00 |                        0000:0000
 04.00 - 04.15 |                      0000:0000            16.00 - 16.15 |                        0000:0000
 04.15 - 04.30 |                      0000:0000            16.15 - 16.30 |                        0000:0000
 04.30 - 04.45 |                      0000:0000            16.30 - 16.45 |                        0000:0000
 04.45 - 05.00 |                      0000:0000            16.45 - 17.00 |                        0000:0000
 05.00 - 05.15 |                      0000:0000            17.00 - 17.15 |                        0000:0000
 05.15 - 05.30 |                      0000:0000            17.15 - 17.30 |                        0000:0000
 05.30 - 05.45 |                      0000:0000            17.30 - 17.45 |                        0000:0000
 05.45 - 06.00 |                      0000:0000            17.45 - 18.00 |                        0000:0000
               +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
               0...50..100..150..200..250..300..350..400..450..500          0...50..100..150..200..250..300..350..400..450..500


 06.00 - 06.15 |                      0000:0000            18.00 - 18.15 |                        0000:0000
 06.15 - 06.30 |                      0000:0000            18.15 - 18.30 |                        0000:0000
 06.30 - 06.45 |                      0000:0000            18.30 - 18.45 |                        0000:0000
 06.45 - 07.00 |                      0000:0000            18.45 - 19.00 |                        0000:0000
 07.00 - 07.15 |                      0000:0000            19.00 - 19.15 |                        0000:0000
 07.15 - 07.30 |                      0000:0000            19.15 - 19.30 |                        0000:0000
 07.30 - 07.45 |                      0000:0000            19.30 - 19.45 |                        0000:0000
 07.45 - 08.00 |                      0000:0000            19.45 - 20.00 |                        0000:0000
 08.00 - 08.15 |                      0000:0000            20.00 - 20.15 |                        0000:0000
 08.15 - 08.30 |                      0000:0000            20.15 - 20.30 |                        0000:0000
 08.30 - 08.45 |                      0000:0000            20.30 - 20.45 |                        0000:0000
 08.45 - 09.00 |                      0000:0000            20.45 - 21.00 |                        0000:0000
 09.00 - 09.15 |********************** 0222:0222          21.00 - 21.15 |                        0000:0000
 09.15 - 09.30 |*******                 0066:0066          21.15 - 21.30 |                        0000:0000
 09.30 - 09.45 |*****                   0046:0046          21.30 - 21.45 |                        0000:0000
 09.45 - 10.00 |************************0402:0402********  21.45 - 22.00 |                        0000:0000
 10.00 - 10.15 |************************0350:0350**        22.00 - 22.15 |                        0000:0000
 10.15 - 10.30 |*************           0122:0122          22.15 - 22.30 |                        0000:0000
 10.30 - 10.45 |***********             0096:0096          22.30 - 22.45 |                        0000:0000
 10.45 - 11.00 |*******                 0067:0067          22.45 - 23.00 |                        0000:0000
 11.00 - 11.15 |********                0074:0074          23.00 - 23.15 |                        0000:0000
 11.15 - 11.30 |*********               0081:0081          23.15 - 23.30 |                        0000:0000
 11.30 - 11.45 |*****************       0161:0161          23.30 - 23.45 |                        0000:0000
 11.45 - 12.00 |**********              0093:0093          23.45 - 24.00 |                        0000:0000
               +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
               0...50..100..150..200..250..300..350..400..450..500          0...50..100..150..200..250..300..350..400..450..500

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Model 204 Transaction Activity Graph

The Transaction Activity Graph is organized in the same format as the Transaction and Terminal Response Graphs described above. It shows, by day of the week, the average and peak average number of transactions submitted from all the Model 204 terminals during each 15-minute period throughout the day. The horizontal value represents the number of transactions submitted per minute.

Following is a sample of the Model 204 Transaction Activity Graph:

```
DAY SHOWN: THURSDAY                                           SYSID:CW01
                                                        07/24/96-07/25/96
                                          M204 TRANSACTION ACTIVITY GRAPH: AVERAGE/MINUTE

  00.00 - 00.15 |                      0000:0000         12.00 - 12.15 |**                  0003:0003
  00.15 - 00.30 |                      0000:0000         12.15 - 12.30 |**                  0004:0004
  00.30 - 00.45 |                      0000:0000         12.30 - 12.45 |***                 0005:0005
  00.45 - 01.00 |                      0000:0000         12.45 - 13.00 |                    0000:0000
  01.00 - 01.15 |                      0000:0000         13.00 - 13.15 |                    0000:0000
  01.15 - 01.30 |                      0000:0000         13.15 - 13.30 |                    0000:0000
  01.30 - 01.45 |                      0000:0000         13.30 - 13.45 |***                 0005:0005
  01.45 - 02.00 |                      0000:0000         13.45 - 14.00 |                    0000:0000
  02.00 - 02.15 |                      0000:0000         14.00 - 14.15 |****                0008:0008
  02.15 - 02.30 |                      0000:0000         14.15 - 14.30 |                    0000:0000
  02.30 - 02.45 |                      0000:0000         14.30 - 14.45 |*                   0002:0002
  02.45 - 03.00 |                      0000:0000         14.45 - 15.00 |***                 0005:0005
  03.00 - 03.15 |                      0000:0000         15.00 - 15.15 |******              0011:0011
  03.15 - 03.30 |                      0000:0000         15.15 - 15.30 |*******             0013:0013
  03.30 - 03.45 |                      0000:0000         15.30 - 15.45 |                    0000:0000
  03.45 - 04.00 |                      0000:0000         15.45 - 16.00 |                    0000:0000
  04.00 - 04.15 |                      0000:0000         16.00 - 16.15 |                    0000:0000
  04.15 - 04.30 |                      0000:0000         16.15 - 16.30 |                    0000:0000
  04.30 - 04.45 |                      0000:0000         16.30 - 16.45 |                    0000:0000
  04.45 - 05.00 |                      0000:0000         16.45 - 17.00 |                    0000:0000
  05.00 - 05.15 |                      0000:0000         17.00 - 17.15 |                    0000:0000
  05.15 - 05.30 |                      0000:0000         17.15 - 17.30 |                    0000:0000
  05.30 - 05.45 |                      0000:0000         17.30 - 17.45 |                    0000:0000
  05.45 - 06.00 |                      0000:0000         17.45 - 18.00 |                    0000:0000
              +----+----+----+----+----+----+----+----+----+----+         +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100         0...10...20...30...40...50...60...70...80...90..100


  06.00 - 06.15 |                      0000:0000         18.00 - 18.15 |                    0000:0000
  06.15 - 06.30 |                      0000:0000         18.15 - 18.30 |                    0000:0000
  06.30 - 06.45 |                      0000:0000         18.30 - 18.45 |                    0000:0000
  06.45 - 07.00 |                      0000:0000         18.45 - 19.00 |                    0000:0000
  07.00 - 07.15 |                      0000:0000         19.00 - 19.15 |                    0000:0000
  07.15 - 07.30 |                      0000:0000         19.15 - 19.30 |                    0000:0000
  07.30 - 07.45 |                      0000:0000         19.30 - 19.45 |                    0000:0000
  07.45 - 08.00 |                      0000:0000         19.45 - 20.00 |                    0000:0000
  08.00 - 08.15 |                      0000:0000         20.00 - 20.15 |                    0000:0000
  08.15 - 08.30 |                      0000:0000         20.15 - 20.30 |                    0000:0000
  08.30 - 08.45 |****                  0007:0007         20.30 - 20.45 |                    0000:0000
  08.45 - 09.00 |                      0000:0000         20.45 - 21.00 |                    0000:0000
  09.00 - 09.15 |**                    0003:0003         21.00 - 21.15 |                    0000:0000
  09.15 - 09.30 |*                     0002:0002         21.15 - 21.30 |                    0000:0000
  09.30 - 09.45 |***************       0029:0029         21.30 - 21.45 |                    0000:0000
  09.45 - 10.00 |**********            0019:0019         21.45 - 22.00 |                    0000:0000
  10.00 - 10.15 |**************        0028:0028         22.00 - 22.15 |                    0000:0000
  10.15 - 10.30 |*                     0002:0002         22.15 - 22.30 |                    0000:0000
  10.30 - 10.45 |*                     0001:0001         22.30 - 22.45 |                    0000:0000
  10.45 - 11.00 |*****                 0009:0009         22.45 - 23.00 |                    0000:0000
  11.00 - 11.15 |****                  0008:0008         23.00 - 23.15 |                    0000:0000
  11.15 - 11.30 |**                    0003:0003         23.15 - 23.30 |                    0000:0000
  11.30 - 11.45 |***                   0005:0005         23.30 - 23.45 |                    0000:0000
  11.45 - 12.00 |**                    0004:0004         23.45 - 24.00 |                    0000:0000
              +----+----+----+----+----+----+----+----+----+----+         +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100         0...10...20...30...40...50...60...70...80...90..100

   LEGEND: (*) = AVERAGE  (-) = PEAK
```

Model 204 Terminal Activity Graph

The Model 204 Terminal Activity Graph shows, by day of the week, the number of terminals during each 15-minute period throughout the day. Both the peak and the average values are reported. The values along the horizontal axis represent the number of active terminals.

Following is a sample of the Model 204 Terminal Activity Graph:

```
DAY SHOWN: THURSDAY                                  SYSID:CW01
                                                  07/24/96-07/25/96
                                              M204 TERMINAL ACTIVITY GRAPH

 00.00 - 00.15 |                    0000:0000     12.00 - 12.15 |*                   0001:0001
 00.15 - 00.30 |                    0000:0000     12.15 - 12.30 |*                   0001:0001
 00.30 - 00.45 |                    0000:0000     12.30 - 12.45 |*                   0001:0001
 00.45 - 01.00 |                    0000:0000     12.45 - 13.00 |                    0000:0000
 01.00 - 01.15 |                    0000:0000     13.00 - 13.15 |                    0000:0000
 01.15 - 01.30 |                    0000:0000     13.15 - 13.30 |                    0000:0000
 01.30 - 01.45 |                    0000:0000     13.30 - 13.45 |*                   0001:0001
 01.45 - 02.00 |                    0000:0000     13.45 - 14.00 |*                   0001:0001
 02.00 - 02.15 |                    0000:0000     14.00 - 14.15 |*                   0002:0002
 02.15 - 02.30 |                    0000:0000     14.15 - 14.30 |                    0000:0000
 02.30 - 02.45 |                    0000:0000     14.30 - 14.45 |*                   0002:0002
 02.45 - 03.00 |                    0000:0000     14.45 - 15.00 |**                  0003:0003
 03.00 - 03.15 |                    0000:0000     15.00 - 15.15 |**                  0003:0003
 03.15 - 03.30 |                    0000:0000     15.15 - 15.30 |**                  0003:0003
 03.30 - 03.45 |                    0000:0000     15.30 - 15.45 |                    0000:0000
 03.45 - 04.00 |                    0000:0000     15.45 - 16.00 |                    0000:0000
 04.00 - 04.15 |                    0000:0000     16.00 - 16.15 |                    0000:0000
 04.15 - 04.30 |                    0000:0000     16.15 - 16.30 |                    0000:0000
 04.30 - 04.45 |                    0000:0000     16.30 - 16.45 |                    0000:0000
 04.45 - 05.00 |                    0000:0000     16.45 - 17.00 |                    0000:0000
 05.00 - 05.15 |                    0000:0000     17.00 - 17.15 |                    0000:0000
 05.15 - 05.30 |                    0000:0000     17.15 - 17.30 |                    0000:0000
 05.30 - 05.45 |                    0000:0000     17.30 - 17.45 |                    0000:0000
 05.45 - 06.00 |                    0000:0000     17.45 - 18.00 |                    0000:0000
           +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
           0...10...20...30...40...50...60...70...80...90..100          0...10...20...30...40...50...60...70...80...90..100

 06.00 - 06.15 |                    0000:0000     18.00 - 18.15 |                    0000:0000
 06.15 - 06.30 |                    0000:0000     18.15 - 18.30 |                    0000:0000
 06.30 - 06.45 |                    0000:0000     18.30 - 18.45 |                    0000:0000
 06.45 - 07.00 |                    0000:0000     18.45 - 19.00 |                    0000:0000
 07.00 - 07.15 |                    0000:0000     19.00 - 19.15 |                    0000:0000
 07.15 - 07.30 |                    0000:0000     19.15 - 19.30 |                    0000:0000
 07.30 - 07.45 |                    0000:0000     19.30 - 19.45 |                    0000:0000
 07.45 - 08.00 |                    0000:0000     19.45 - 20.00 |                    0000:0000
 08.00 - 08.15 |                    0000:0000     20.00 - 20.15 |                    0000:0000
 08.15 - 08.30 |                    0000:0000     20.15 - 20.30 |                    0000:0000
 08.30 - 08.45 |                    0000:0000     20.30 - 20.45 |                    0000:0000
 08.45 - 09.00 |                    0000:0000     20.45 - 21.00 |                    0000:0000
 09.00 - 09.15 |*                   0001:0001     21.00 - 21.15 |                    0000:0000
 09.15 - 09.30 |*                   0001:0001     21.15 - 21.30 |                    0000:0000
 09.30 - 09.45 |**                  0003:0003     21.30 - 21.45 |                    0000:0000
 09.45 - 10.00 |*                   0002:0002     21.45 - 22.00 |                    0000:0000
 10.00 - 10.15 |**                  0003:0003     22.00 - 22.15 |                    0000:0000
 10.15 - 10.30 |*                   0001:0001     22.15 - 22.30 |                    0000:0000
 10.30 - 10.45 |*                   0001:0001     22.30 - 22.45 |                    0000:0000
 10.45 - 11.00 |*                   0002:0002     22.45 - 23.00 |                    0000:0000
 11.00 - 11.15 |*                   0002:0002     23.00 - 23.15 |                    0000:0000
 11.15 - 11.30 |**                  0003:0003     23.15 - 23.30 |                    0000:0000
 11.30 - 11.45 |*                   0002:0002     23.30 - 23.45 |                    0000:0000
 11.45 - 12.00 |*                   0002:0002     23.45 - 24.00 |                    0000:0000
           +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
           0...10...20...30...40...50...60...70...80...90..100          0...10...20...30...40...50...60...70...80...90..100

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Model 204 CPU Activity Graph

The Model 204 CPU Activity Graph shows, by day of the week, the percentage of the CPU processing capacity that was expended in processing Model 204 transactions for a specified Model 204 region. The average and peak average percentage values are reported in 15 minute intervals throughout the day. As is the case with the other graphs, the measured period is specified to include anywhere from a day to several months.

Following is a sample of the Model 204 CPU Activity Graph:

```
DAY SHOWN: THURSDAY                                    SYSID:CW01
                                                   07/24/96-07/25/96
                                          M204 CPU ACTIVITY GRAPH: PERCENT BUSY

  00.00 - 00.15 |                        0000:0000      12.00 - 12.15 |*****                   0009:0009
  00.15 - 00.30 |                        0000:0000      12.15 - 12.30 |                        0000:0000
  00.30 - 00.45 |                        0000:0000      12.30 - 12.45 |*****                   0009:0009
  00.45 - 01.00 |                        0000:0000      12.45 - 13.00 |                        0000:0000
  01.00 - 01.15 |                        0000:0000      13.00 - 13.15 |                        0000:0000
  01.15 - 01.30 |                        0000:0000      13.15 - 13.30 |                        0000:0000
  01.30 - 01.45 |                        0000:0000      13.30 - 13.45 |*                       0002:0002
  01.45 - 02.00 |                        0000:0000      13.45 - 14.00 |                        0000:0000
  02.00 - 02.15 |                        0000:0000      14.00 - 14.15 |*                       0002:0002
  02.15 - 02.30 |                        0000:0000      14.15 - 14.30 |                        0000:0000
  02.30 - 02.45 |                        0000:0000      14.30 - 14.45 |********************** 0045:0045
  02.45 - 03.00 |                        0000:0000      14.45 - 15.00 |                        0000:0000
  03.00 - 03.15 |                        0000:0000      15.00 - 15.15 |****                    0008:0008
  03.15 - 03.30 |                        0000:0000      15.15 - 15.30 |*****                   0010:0010
  03.30 - 03.45 |                        0000:0000      15.30 - 15.45 |                        0000:0000
  03.45 - 04.00 |                        0000:0000      15.45 - 16.00 |                        0000:0000
  04.00 - 04.15 |                        0000:0000      16.00 - 16.15 |                        0000:0000
  04.15 - 04.30 |                        0000:0000      16.15 - 16.30 |                        0000:0000
  04.30 - 04.45 |                        0000:0000      16.30 - 16.45 |                        0000:0000
  04.45 - 05.00 |                        0000:0000      16.45 - 17.00 |                        0000:0000
  05.00 - 05.15 |                        0000:0000      17.00 - 17.15 |                        0000:0000
  05.15 - 05.30 |                        0000:0000      17.15 - 17.30 |                        0000:0000
  05.30 - 05.45 |                        0000:0000      17.30 - 17.45 |                        0000:0000
  05.45 - 06.00 |                        0000:0000      17.45 - 18.00 |                        0000:0000
            +----+----+----+----+----+----+----+----+----+----+           +----+----+----+----+----+----+----+----+----+----+
            0...10...20...30...40...50...60...70...80...90..100          0...10...20...30...40...50...60...70...80...90..100

  06.00 - 06.15 |                        0000:0000      18.00 - 18.15 |                        0000:0000
  06.15 - 06.30 |                        0000:0000      18.15 - 18.30 |                        0000:0000
  06.30 - 06.45 |                        0000:0000      18.30 - 18.45 |                        0000:0000
  06.45 - 07.00 |                        0000:0000      18.45 - 19.00 |                        0000:0000
  07.00 - 07.15 |                        0000:0000      19.00 - 19.15 |                        0000:0000
  07.15 - 07.30 |                        0000:0000      19.15 - 19.30 |                        0000:0000
  07.30 - 07.45 |                        0000:0000      19.30 - 19.45 |                        0000:0000
  07.45 - 08.00 |                        0000:0000      19.45 - 20.00 |                        0000:0000
  08.00 - 08.15 |                        0000:0000      20.00 - 20.15 |                        0000:0000
  08.15 - 08.30 |                        0000:0000      20.15 - 20.30 |                        0000:0000
  08.30 - 08.45 |                        0000:0000      20.30 - 20.45 |                        0000:0000
  08.45 - 09.00 |                        0000:0000      20.45 - 21.00 |                        0000:0000
  09.00 - 09.15 |*                       0001:0001      21.00 - 21.15 |                        0000:0000
  09.15 - 09.30 |*                       0001:0001      21.15 - 21.30 |                        0000:0000
  09.30 - 09.45 |**                      0004:0004      21.30 - 21.45 |                        0000:0000
  09.45 - 10.00 |****                    0007:0007      21.45 - 22.00 |                        0000:0000
  10.00 - 10.15 |****                    0008:0008      22.00 - 22.15 |                        0000:0000
  10.15 - 10.30 |                        0000:0000      22.15 - 22.30 |                        0000:0000
  10.30 - 10.45 |                        0000:0000      22.30 - 22.45 |                        0000:0000
  10.45 - 11.00 |*                       0001:0001      22.45 - 23.00 |                        0000:0000
  11.00 - 11.15 |                        0000:0000      23.00 - 23.15 |                        0000:0000
  11.15 - 11.30 |                        0000:0000      23.15 - 23.30 |                        0000:0000
  11.30 - 11.45 |*                       0002:0002      23.30 - 23.45 |                        0000:0000
  11.45 - 12.00 |*                       0001:0001      23.45 - 24.00 |                        0000:0000
            +----+----+----+----+----+----+----+----+----+----+           +----+----+----+----+----+----+----+----+----+----+
            0...10...20...30...40...50...60...70...80...90..100          0...10...20...30...40...50...60...70...80...90..100

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Model 204 I/O Activity Graph

This graph shows, for a specified Model 204 Region, the average and peak average I/O rates for each 15 minute period throughout the day. The format of the I/O Activity Graph is identical to the graphs described above, except that the values along the horizontal axis represent the number of I/Os per second related to processing the Model 204 workload.

Following is a sample of the Model 204 I/O Activity Graph:

```
DAY SHOWN: THURSDAY                                    SYSID:CW01
                                                    07/24/96-07/25/96
                                          M204 I/O ACTIVITY GRAPH: EXCP/SECOND

  00.00 - 00.15 |                        0000:0000          12.00 - 12.15 |**********************0056:0056
  00.15 - 00.30 |                        0000:0000          12.15 - 12.30 |*                       0001:0001
  00.30 - 00.45 |                        0000:0000          12.30 - 12.45 |**********************0058:0058
  00.45 - 01.00 |                        0000:0000          12.45 - 13.00 |                        0000:0000
  01.00 - 01.15 |                        0000:0000          13.00 - 13.15 |                        0000:0000
  01.15 - 01.30 |                        0000:0000          13.15 - 13.30 |                        0000:0000
  01.30 - 01.45 |                        0000:0000          13.30 - 13.45 |*                       0001:0001
  01.45 - 02.00 |                        0000:0000          13.45 - 14.00 |                        0000:0000
  02.00 - 02.15 |                        0000:0000          14.00 - 14.15 |*                       0002:0002
  02.15 - 02.30 |                        0000:0000          14.15 - 14.30 |                        0000:0000
  02.30 - 02.45 |                        0000:0000          14.30 - 14.45 |****************        0031:0031
  02.45 - 03.00 |                        0000:0000          14.45 - 15.00 |                        0000:0000
  03.00 - 03.15 |                        0000:0000          15.00 - 15.15 |************************0074:0074****
  03.15 - 03.30 |                        0000:0000          15.15 - 15.30 |************************0077:0077******
  03.30 - 03.45 |                        0000:0000          15.30 - 15.45 |                        0000:0000
  03.45 - 04.00 |                        0000:0000          15.45 - 16.00 |                        0000:0000
  04.00 - 04.15 |                        0000:0000          16.00 - 16.15 |                        0000:0000
  04.15 - 04.30 |                        0000:0000          16.15 - 16.30 |                        0000:0000
  04.30 - 04.45 |                        0000:0000          16.30 - 16.45 |                        0000:0000
  04.45 - 05.00 |                        0000:0000          16.45 - 17.00 |                        0000:0000
  05.00 - 05.15 |                        0000:0000          17.00 - 17.15 |                        0000:0000
  05.15 - 05.30 |                        0000:0000          17.15 - 17.30 |                        0000:0000
  05.30 - 05.45 |                        0000:0000          17.30 - 17.45 |                        0000:0000
  05.45 - 06.00 |                        0000:0000          17.45 - 18.00 |                        0000:0000
              +----+----+----+----+----+----+----+----+----+----+           +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100          0...10...20...30...40...50...60...70...80...90..100

  06.00 - 06.15 |                        0000:0000          18.00 - 18.15 |                        0000:0000
  06.15 - 06.30 |                        0000:0000          18.15 - 18.30 |                        0000:0000
  06.30 - 06.45 |                        0000:0000          18.30 - 18.45 |                        0000:0000
  06.45 - 07.00 |                        0000:0000          18.45 - 19.00 |                        0000:0000
  07.00 - 07.15 |                        0000:0000          19.00 - 19.15 |                        0000:0000
  07.15 - 07.30 |                        0000:0000          19.15 - 19.30 |                        0000:0000
  07.30 - 07.45 |                        0000:0000          19.30 - 19.45 |                        0000:0000
  07.45 - 08.00 |                        0000:0000          19.45 - 20.00 |                        0000:0000
  08.00 - 08.15 |                        0000:0000          20.00 - 20.15 |                        0000:0000
  08.15 - 08.30 |                        0000:0000          20.15 - 20.30 |                        0000:0000
  08.30 - 08.45 |                        0000:0000          20.30 - 20.45 |                        0000:0000
  08.45 - 09.00 |                        0000:0000          20.45 - 21.00 |                        0000:0000
  09.00 - 09.15 |                        0000:0000          21.00 - 21.15 |                        0000:0000
  09.15 - 09.30 |                        0000:0000          21.15 - 21.30 |                        0000:0000
  09.30 - 09.45 |**                      0003:0003          21.30 - 21.45 |                        0000:0000
  09.45 - 10.00 |******                  0011:0011          21.45 - 22.00 |                        0000:0000
  10.00 - 10.15 |********                0016:0016          22.00 - 22.15 |                        0000:0000
  10.15 - 10.30 |                        0000:0000          22.15 - 22.30 |                        0000:0000
  10.30 - 10.45 |                        0000:0000          22.30 - 22.45 |                        0000:0000
  10.45 - 11.00 |*                       0001:0001          22.45 - 23.00 |                        0000:0000
  11.00 - 11.15 |*                       0001:0001          23.00 - 23.15 |                        0000:0000
  11.15 - 11.30 |                        0000:0000          23.15 - 23.30 |                        0000:0000
  11.30 - 11.45 |**                      0003:0003          23.30 - 23.45 |                        0000:0000
  11.45 - 12.00 |*                       0002:0002          23.45 - 24.00 |                        0000:0000
              +----+----+----+----+----+----+----+----+----+----+           +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100          0...10...20...30...40...50...60...70...80...90..100

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

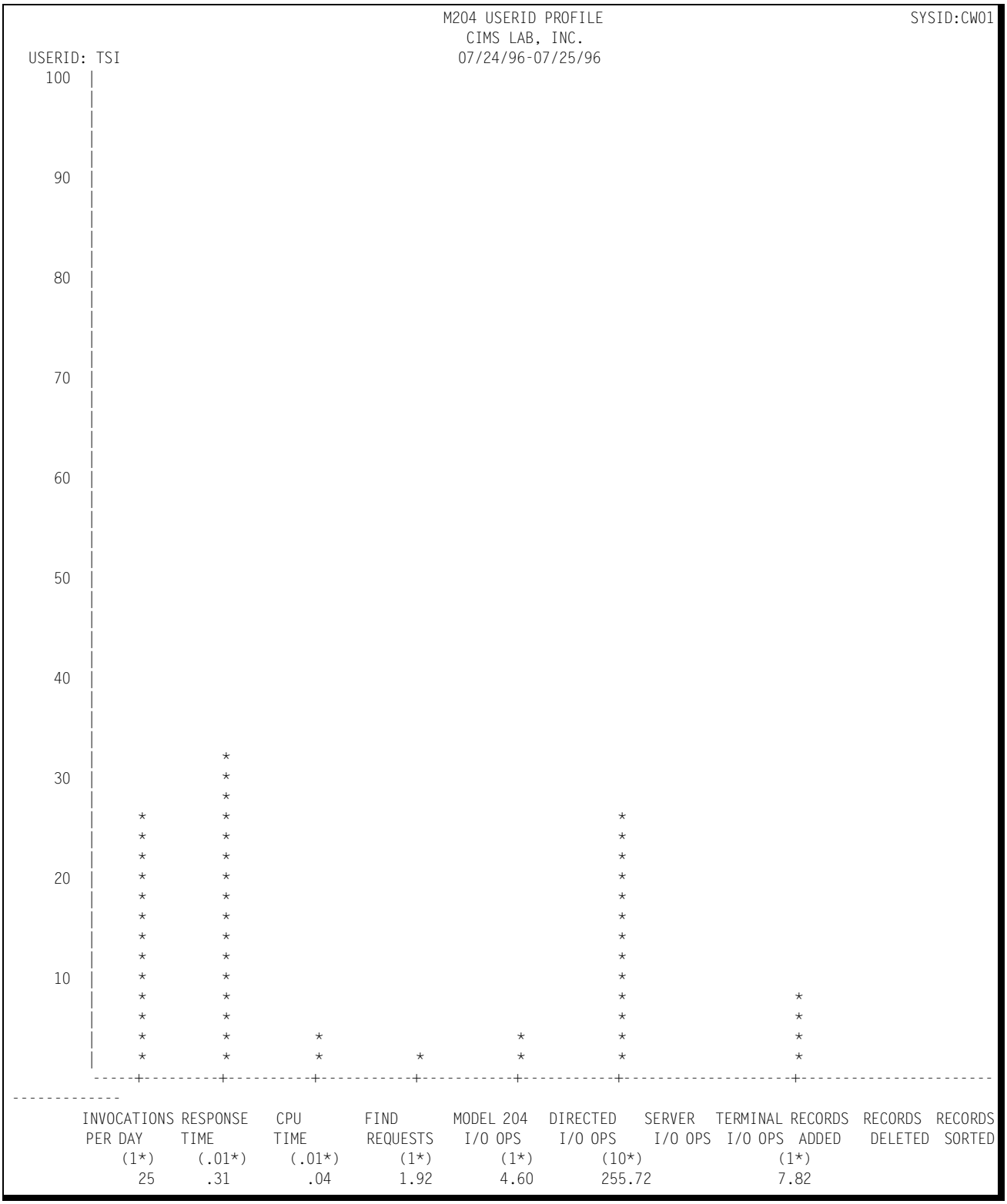
Model 204 User ID Profile

The User ID Profile report shows how a specified Model 204 User ID behaved for the following categories:

- How many times per day, on average, it was invoked
- The average response time per transaction
- The average CPU time per transaction

- The average number of adds, deletes, and sorts per transaction
- The average number of terminal I/Os per transaction
- The average number of Model 204 I/Os per transaction

Following is a sample of the Model 204 User ID Profile:



Model 204 Trends Analysis Report

The CIMS Capacity Planner approach to Trends Analysis centers on isolating a number of capacity and performance related elements and providing either a summary or graphic comparison of the values of those elements over time. The Model 204 elements that are selected for comparison are:

- CPU Utilization Statistics, including a breakdown in terms of Model 204 overhead and Task related CPU usage
- The number of transactions executed per minute computed as an average during Prime shift
- The average number of EXCPs per second during Prime shift
- The average response time during Prime shift
- The ratio of Early shift to Prime shift transactions
- The ratio of Late shift to Prime shift transactions
- The ratio of Early shift to Prime shift terminals
- The ratio of Late shift to Prime shift terminals

This information is gathered and presented to you in one of two ways:

- In summary report format, showing the values of each of the elements listed above during a baseline period and comparing them to a secondary period, with the slope of each comparison indicated at the right hand side of the report
- In data suitable for graphing with the Harvard Graphics Program once it has been down loaded to a Personal Computer. The manner in which the data is down loaded is left to you. It is stored at the mainframe, however, in a PDS with the DDNAME of HGDLIB.

Following is a sample of the Model 204 Trends Analysis Report:

```
                              T R E N D S   A N A L Y S I S                                SYSID:CW01
 1. THIS ANALYSIS COMPARED THE PERIODS 07/24/91 AND 07/25/91 FOR THE SYSTEM NAMED CW01
 2. THE VALUES INCLUDED IN THIS REPORT REPRESENT A PRIME SHIFT WHICH RUNS FROM 07:00 TO 19:00
 3. A COMPARISON OF CPU BUSY PERCENTAGES SHOWS:
                                07/24                          07/25                          TREND
    XACTN                        7.30                           3.75                         48.63%-
    M204                          .00                            .00                          .00%+
    TOTALS                       7.30                           3.75                         48.63%-
 4. THE AVERAGE NUMBER OF M204 USERS ACTIVE DURING PRIME SHIFT WAS:
                                                                                              TREND
                                    3                              1                         66.66%-
 5. THE AVERAGE RESPONSE TIME FOR M204 TRANSACTIONS DURING PRIME SHIFT WAS:
                                                                                              TREND

    WAIT                         .96                            .95                          1.04%-
    CPU                          .29                            .38                         31.03%+
    TOTALS                      1.25                           1.33                          6.40%+
 6. THE AVERAGE NUMBER OF M204 TRANSACTIONS PROCESSED DURING PRIME SHIFT WAS:
                                                                                              TREND
                                5,625                          2,805                        50.13%-
 7. THE AVERAGE NUMBER OF EXCPS PER SECOND DURING PRIME SHIFT WAS:
                                                                                              TREND
                               13.96                          15.97                         14.39%+
 8. FOR EACH OF THE TWO PERIODS THE RATIO OF EARLY-TO-PRIME SHIFT TRANSACTIONS WAS:
                                                                                              TREND
                                .00                            .00                          .00%+
 9. FOR EACH OF THE TWO PERIODS THE RATIO OF LATE-TO-PRIME SHIFT TRANSACTIONS WAS:
                                                                                              TREND
                                .00                            .00                          .00%+
10. FOR EACH OF THE TWO PERIODS THE RATIO OF EARLY-TO-PRIME SHIFT TERMINALS WAS:
                                                                                              TREND
                                .00                            .00                          .00%+
11. FOR EACH OF THE TWO PERIODS THE RATIO OF LATE-TO-PRIME SHIFT TERMINALS WAS:
                                                                                              TREND
                                .00                            .00                          .00%+
```

Tape Volume Activity Reports

Tape volume activity reports are produced either by the Tape subsystem data reduction program (SSA1TAPW) when data is reduced into the Online Performance Database or through the Tape Volume reporting program (SSA1TAVR). The following discussion enumerates the various CIMS Capacity Planner Tape reports and describes the contents of each report.

Tape Storage Allocation by Volume Type Report

This report shows, based on OWNERID, how many volumes of each type (Reel, 3480 Cartridge, 3480 Cartridge, 3590 Cartridge & VTS) are assigned for use and how much cumulative storage is owned by you. It also shows the percentage of storage that is unused and how much has been unreferenced for 60, 120 and 240 days.

Following is a sample of the Tape Storage by Ownerid Report:

TAPE STORAGE ALLOCATION BY VOLUME TYPE — CIMS LAB TESTING ENVIRONMENT
SMFSID=ALIJ — 11/01/2000

	* * SPACE ALLOCATED BY MEDIA TYPE * *									
Owner ID	Reel Volumes	3480 Volumes	3490 Volumes	3590 Volumes	VTS Volumes	Total Available (MB)	% of stg Unused	% Tape Storage Unreferenced Since: > 60 Days	>120 Days	>240 Days
AFS		13	19	15	1	183,000				
AFSDCA			1			1,600	97.68			
CSQARC1	1					200	98.00			
FDRABR			699	17	44	1,288,400	38.22	59.51	43.46	24.96
OPS		10	4	10	1	108,557	75.73	>99.00	15.62	6.40
PMF	1	6	22			32,400	56.13	50.00	4.93	
RSM			1	10		101,600				
SMF		1	5			8,200	90.70	97.56		
TMF	2		2			3,600	69.80	44.44		
UMF		1	5			8,200	88.71	>99.00	2.43	2.43

Tape Volume Summary Report

This report shows, for any given Tape Library, how many volumes of each type (Reel, 3480, 3490, 3590, and VTS Cartridge) are available, how many are designated as Scratch, Active and Inactive, how many volumes are less than 1% used, less than 5% used, less than 10% used, less than 25% used, less than 50% used, less than 75% used and over 75% used. And finally, how many volumes contain 1 dataset, 2 datasets, 3 datasets and more than 3 datasets.

Following is a sample of the Tape Volume Summary Report:

```
 1. THIS REPORT COVERS A TOTAL OF  859 VOLUMES AND A TOTAL OF 46 VTS VOLUMES
 2. INCLUDED IN THE INVENTORY WERE A TOTAL OF  12 SCRATCH VOLUMES
 3. INCLUDED IN THE INVENTORY WERE A TOTAL OF  9 REEL VOLUMES
 4. INCLUDED IN THE INVENTORY WERE A TOTAL OF  33 T3480 CARTRIDGE VOLUMES
 5. INCLUDED IN THE INVENTORY WERE A TOTAL OF  761 T3490 CARTRIDGE VOLUMES
 6. INCLUDED IN THE INVENTORY WERE A TOTAL OF  56 T3590 CARTRIDGE VOLUMES
 7. INCLUDED IN THE INVENTORY WERE A TOTAL OF  46 VTS VOLUMES
 8. A TOTAL OF  34 VOLUMES WERE LESS THAN 1 % USED
 9. A TOTAL OF  4 VOLUMES WERE LESS THAN 5 % USED
10. A TOTAL OF  3 VOLUMES WERE LESS THAN 10 % USED
11. A TOTAL OF  8 VOLUMES WERE LESS THAN 25 % USED
12. A TOTAL OF  12 VOLUMES WERE LESS THAN 50 % USED
13. A TOTAL OF  8 VOLUMES WERE LESS THAN 75 % USED
14. A TOTAL OF  168 VOLUMES CONTAINED 1 DATASET
15. A TOTAL OF  1 VOLUMES CONTAINED 2 DATASETS
16. A TOTAL OF  3 VOLUMES CONTAINED 3 DATASETS
17. A TOTAL OF  721 VOLUMES CONTAINED MORE THAN 3 DATASETS
```

Tape Volume Activity Graphs

The presentation quality tape volume activity graphs are produced on a PC using Harvard Graphics or any graphing package that supports Comma Separated Value (delimited ASCII) files. Alternatively the graphs can be produced by GDDM on the mainframe if desired. Data point members are built in the HGDLIB library by batch programs that execute on the host machine. Each data point member represents the data for a specific graph. The data point members are subsequently down loaded to the PC and are combined with distributed templates to form high quality graphs.

Tape volume activity graphs allow you to compare the characteristics of the inventory in the Tape Library over time.

Refer to Chapter 3, CIMS Capacity Planner Graphics, for detailed descriptions and samples of the Tape Volume Activity Graphs.

Tape Drive Activity Reports

Tape drive activity reports deal with individual tape drives by address (ccuu). INCLUDE/EXCLUDE processing is supported for all reports. In order to Include or Exclude a specific tape drive, please specify the four characters "TAPE" plus the hexadecimal tape drive address (ccuu). For example:

```
//INCLUDE DD *
TAPE0580
```

would include only the tape drive at address 0580 in any selected report. Normal CIMS Capacity Planner INCLUDE/EXCLUDE rules apply. That is, you can specify multiple entries on one or more lines, separated by commas. Wild cards can be used. That is, to exclude all tape drives from 580-58F, specify:

```
//EXCLUDE DD *
TAPE058*
```

Tape Drive Exception Analysis

This report shows, for each fifteen minute period, the tape drives whose Mount Pending, Active or Allocated percentages exceeded the thresholds specified in the &sid.XCPT member of `CPPR.PARMLIB`.

Following is a sample of the Tape Drive Exception Analysis Report:

```
TAPE DRIVE EXCEPTION ANALYSIS                                    SYSID:SID1
                                                              CIMS LAB, INC.
                                                                   09/16/96
09/16 00.00 - 00.15 : ALLOC  TAPE0301(66.33) TAPE0302(99.99) TAPE0305(99.99) TAPE0308(75.44) TAPE030B(99.99) TAPE030D(99.99)
09/16 00.15 - 00.30 : ALLOC  TAPE0302(100.00)TAPE0305(100.00)TAPE0308(100.00)TAPE030B(100.00)TAPE030D(100.00)
                      MOUNT  TAPE030D(25.99)
09/16 00.30 - 00.45 : ALLOC  TAPE0302(100.00)TAPE0305(100.00)TAPE0308(99.88) TAPE030B(100.00)TAPE030D(100.00)
09/16 00.45 - 01.00 : ALLOC  TAPE0302(100.00)TAPE0303(100.00)TAPE0304(100.00)TAPE0305(100.00)TAPE0308(100.00)TAPE0309(100.00)
                             TAPE030B(100.00)TAPE030D(100.00)
                      ACTIV  TAPE0303(40.12) TAPE0309(59.20)
                      MOUNT  TAPE0309(27.88)
09/16 01.00 - 01.15 : ALLOC  TAPE0302(100.00)TAPE0305(100.00)TAPE030B(100.00)TAPE030D(100.00)
09/16 01.15 - 01.30 : ALLOC  TAPE0302(99.99) TAPE0305(99.99) TAPE030B(99.99) TAPE030D(99.99)
09/16 01.30 - 01.45 : ALLOC  TAPE0302(100.00)TAPE0305(100.00)TAPE0309(95.11) TAPE030B(100.00)TAPE030D(100.00)
                      MOUNT  TAPE0304(27.88) TAPE0308(35.88) TAPE0309(43.99)
09/16 01.45 - 02.00 : ALLOC  TAPE0302(100.00)TAPE0305(100.00)TAPE0308(100.00)TAPE0309(100.00)TAPE030B(100.00)TAPE030D(100.00)
09/16 02.00 - 02.15 : ALLOC  TAPE0302(100.01)TAPE0305(100.01)TAPE030B(100.01)TAPE030D(100.01)
09/16 02.15 - 02.30 : ALLOC  TAPE0302(99.99) TAPE0305(99.99) TAPE030B(99.99) TAPE030D(99.99)
09/16 02.30 - 02.45 : ALLOC  TAPE0302(100.00)TAPE0305(100.00)TAPE030B(100.00)TAPE030D(100.00)
09/16 02.45 - 03.00 : ALLOC  TAPE0302(100.00)TAPE0305(100.00)TAPE030B(100.00)TAPE030D(100.00)
09/16 03.00 - 03.15 : ALLOC  TAPE0300(98.54) TAPE0302(99.99) TAPE0303(98.54) TAPE0305(99.99) TAPE030B(99.99) TAPE030D(99.99)
                      MOUNT  TAPE0300(51.66) TAPE0303(47.77)
09/16 03.15 - 03.30 : ALLOC  TAPE0300(99.99) TAPE0302(99.99) TAPE0303(99.99) TAPE0305(99.99) TAPE030B(99.99) TAPE030D(99.99)
09/16 03.30 - 03.45 : ALLOC  TAPE0300(100.00)TAPE0302(100.00)TAPE0303(100.00)TAPE0305(100.00)TAPE030B(100.00)TAPE030D(100.00)
09/16 03.45 - 04.00 : ALLOC  TAPE0300(100.01)TAPE0302(100.01)TAPE0303(100.01)TAPE0305(100.01)TAPE030B(100.01)TAPE030D(100.01)
09/16 04.00 - 04.15 : ALLOC  TAPE0300(99.97) TAPE0302(99.97) TAPE0303(99.97) TAPE0305(99.97) TAPE030B(99.97) TAPE030D(99.97)
                      MOUNT  TAPE0304(22.99)
09/16 04.15 - 04.30 : ALLOC  TAPE0300(100.00)TAPE0302(100.00)TAPE0303(100.00)TAPE0305(100.00)TAPE030B(100.00)TAPE030D(100.00)
                      MOUNT  TAPE0300(100.00)TAPE0304(34.99)
09/16 04.30 - 04.45 : ALLOC  TAPE0300(100.02)TAPE0302(100.02)TAPE0303(100.02)TAPE0304(63.33) TAPE0305(100.02)TAPE0308(100.00)
                             TAPE0309(67.44) TAPE030B(100.02)TAPE030D(100.02)
                      ACTIV  TAPE0309(39.21)
                      MOUNT  TAPE0304(45.00)
09/16 04.45 - 05.00 : ALLOC  TAPE0300(99.90) TAPE0302(99.90) TAPE0303(99.90) TAPE0305(99.90) TAPE0308(99.90) TAPE030B(99.90)
                             TAPE030D(99.90)
09/16 05.00 - 05.15 : ALLOC  TAPE0300(100.08)TAPE0302(100.08)TAPE0303(100.08)TAPE0304(76.77) TAPE0305(100.08)TAPE0308(100.08)
                             TAPE0309(63.10) TAPE030B(100.08)TAPE030D(100.08)
                      ACTIV  TAPE0309(35.45)
09/16 05.15 - 05.30 : ALLOC  TAPE0300(100.00)TAPE0302(100.00)TAPE0303(100.00)TAPE0304(99.66) TAPE0305(100.00)TAPE0308(100.00)
                             TAPE0309(99.33) TAPE030B(100.00)TAPE030D(100.00)
                      ACTIV  TAPE0309(51.27)
                      MOUNT  TAPE0304(32.88) TAPE0309(43.22)
09/16 05.30 - 05.45 : ALLOC  TAPE0300(100.00)TAPE0302(100.00)TAPE0303(100.00)TAPE0304(96.56) TAPE0305(100.00)TAPE0308(100.00)
                             TAPE0309(99.22) TAPE030B(100.00)TAPE030D(100.00)
                      ACTIV  TAPE0304(46.37) TAPE0309(41.86)
                      MOUNT  TAPE0304(38.55) TAPE0309(20.22)
09/16 05.45 - 06.00 : ALLOC  TAPE0300(100.00)TAPE0302(100.00)TAPE0303(100.00)TAPE0304(96.11) TAPE0305(100.00)TAPE0308(100.00)
   ALLOC=AVERAGE % TIME ALLOCATED BY ADDRESS
   ACTIV=AVERAGE % TIME ACTIVE BY ADDRESS
   MOUNT=AVERAGE % TIME MOUNT PENDING BY ADDRESS
```

Tape Drive Statistics Report

This report shows, for all included tape drives, the top 40 in terms of Device Allocated time, Device Active time and Mount Pending time. A tape drive is considered to be active when data transfer is actually taking place.

Following is a sample of the Tape Drive Statistics Report:

```
                                    TAPE DRIVE STATISTICS REPORT                                SYSID:SID1
                                            CIMS LAB, INC.
                                              09/16/96
DEV ALLOC TIME      TAPE030B  TAPE030D  TAPE0303  TAPE0302  TAPE0305  TAPE030A  TAPE0309  TAPE0301  TAPE0308  TAPE0300
                    18:20:52  17:18:16  14:53:39  14:34:14  13:32:11  12:20:07  10:55:18  10:31:57   9:14:46   8:44:46
                      12.42%    11.71%    10.08%     9.86%     9.16%     8.35%     7.39%     7.13%     6.25%     5.92%
                    TAPE0304  TAPE030C  TAPE0343  TAPE0341  TAPE0340  TAPE0342
                    7:35:28   3:33:49   2:17:53   1:32:24   1:12:40   1:04:08
                      5.13%     2.41%     1.55%     1.04%      .81%      .72%

DEV ACTIVE TIME     TAPE030D  TAPE0309  TAPE0304  TAPE0301  TAPE030B  TAPE0305  TAPE0302  TAPE0308  TAPE0303  TAPE030A
                    2:32:10   2:19:23   1:55:22   1:54:37   1:47:44   1:27:37   1:26:42   1:16:36   1:14:19   1:02:55
                      12.42%    11.38%     9.42%     9.36%     8.79%     7.15%     7.08%     6.25%     6.06%     5.13%

                    TAPE0343  TAPE0300  TAPE0341  TAPE030C  TAPE0342  TAPE0340
                    0:55:35   0:40:33   0:34:47   0:26:28   0:26:20   0:23:12
                      4.53%     3.31%     2.84%     2.16%     2.15%     1.89%

DEV MNTPND TIME     TAPE0304  TAPE0309  TAPE030D  TAPE0301  TAPE0343  TAPE0303  TAPE030B  TAPE0341  TAPE0302  TAPE030A
                    1:51:47   1:35:57   1:18:56   1:08:34   1:05:21   0:56:24   0:52:59   0:47:24   0:44:29   0:39:36
                      13.94%    11.96%     9.84%     8.55%     8.15%     7.03%     6.60%     5.91%     5.54%     4.93%

                    TAPE0300  TAPE0305  TAPE0342  TAPE0308  TAPE0340  TAPE030C
                    0:34:04   0:30:20   0:29:49   0:27:56   0:10:56   0:07:17
                      4.24%     3.78%     3.71%     3.48%     1.36%      .91%
```

Tape Drive Activity List

This report shows, for all included tape drives, in ascending sort order by address, the average % of time the drive was allocated, the average % of time the device was active, the average % of time a mount was pending for the drive, the total mount count for the drive and the cumulative number of read or write errors that occurred while the drive was active.

Following is a sample of the Tape Drive Activity List:

```
                                    TAPE DRIVE ACTIVITY LIST                                    SYSID:SID1
                                            CIMS LAB, INC.
                                              09/16/96
ADDRESS  CUU ALLOC(%) CUU ACTIV(%) MNT PEND(%)   MOUNT COUNT DRIVE ERRORS MINS PER MNT
TAPE030A        51.39         4.36         2.75         26.00                      1.52
TAPE030B        76.45         7.48         3.68         44.00         1.00         1.20
TAPE030C        14.84         1.83          .50          8.00                       .91
TAPE030D        72.10        10.56         5.48         55.00     1,189.00         1.43
TAPE0300        36.44         2.81         2.36         10.00         4.00         3.40
TAPE0301        43.88         7.95         4.76         35.00        14.00         1.95
TAPE0302        60.71         6.02         3.08         29.00         8.00         1.53
TAPE0303        62.05         5.16         3.91         39.00       154.00         1.44
TAPE0304        31.63         8.01         7.76         69.00         7.00         1.62
TAPE0305        56.40         6.08         2.10         12.00         8.00         2.52
TAPE0308        38.52         5.31         1.94         10.00                      2.79
TAPE0309        45.50         9.68         6.66         76.00       487.00         1.26
TAPE0340         5.04         1.61          .76          8.00                      1.36
TAPE0341         6.41         2.41         3.29          4.00                     11.85
TAPE0342         4.45         1.82         2.07         67.00                       .44
TAPE0343         9.57         3.86         4.53          6.00                     10.89
TOTALS                                                 498.00     1,872.00         1.61
```

Tape Drive Device Allocation Graph

This graph shows, by individual tape drive (TAPEccuu), for each fifteen minute period, for each day of the week (Mon, Tue, Wed) the % of the period the tape drive was allocated. Since a separate graph is produced for each selected tape drive, it is strongly recommended that the INCLUDE/EXCLUDE facility be used for these graphs.

Following is a sample of the Tape Drive Device Allocation Graph:

```
DEVICE=TAPE030D                                DAY SHOWN: MONDAY                                SYSID:SID1
                                                  09/16/96
                                           TAPE DRIVE % ALLOCATED GRAPH

 00.00 - 00.15 |************************0099:0099***************** 12.00 - 12.15 |********************    0040:0040
 00.15 - 00.30 |************************0100:0100***************** 12.15 - 12.30 |************************ 0045:0045
 00.30 - 00.45 |************************0100:0100***************** 12.30 - 12.45 |                         0000:0000
 00.45 - 01.00 |************************0100:0100***************** 12.45 - 13.00 |**************          0027:0027
 01.00 - 01.15 |************************0100:0100***************** 13.00 - 13.15 |************************0078:0078******
 01.15 - 01.30 |************************0099:0099***************** 13.15 - 13.30 |********                 0015:0015
 01.30 - 01.45 |************************0100:0100***************** 13.30 - 13.45 |************************ 0046:0046
 01.45 - 02.00 |************************0100:0100***************** 13.45 - 14.00 |******************       0036:0036
 02.00 - 02.15 |************************0100:0100***************** 14.00 - 14.15 |************************0073:0073****
 02.15 - 02.30 |************************0099:0099***************** 14.15 - 14.30 |************************ 0045:0045
 02.30 - 02.45 |************************0100:0100***************** 14.30 - 14.45 |************************0086:0086**********
 02.45 - 03.00 |************************0100:0100***************** 14.45 - 15.00 |**********************  0043:0043
 03.00 - 03.15 |************************0099:0099***************** 15.00 - 15.15 |**********************  0044:0044
 03.15 - 03.30 |************************0099:0099***************** 15.15 - 15.30 |******************       0033:0033
 03.30 - 03.45 |************************0100:0100***************** 15.30 - 15.45 |                         0000:0000
 03.45 - 04.00 |************************0100:0100***************** 15.45 - 16.00 |                         0000:0000
 04.00 - 04.15 |************************0099:0099***************** 16.00 - 16.15 |********************    0040:0040
 04.15 - 04.30 |************************0100:0100***************** 16.15 - 16.30 |**********              0020:0020
 04.30 - 04.45 |************************0100:0100***************** 16.30 - 16.45 |                         0000:0000
 04.45 - 05.00 |************************0099:0099***************** 16.45 - 17.00 |                         0000:0000
 05.00 - 05.15 |************************0100:0100***************** 17.00 - 17.15 |************************0055:0055
 05.15 - 05.30 |************************0100:0100***************** 17.15 - 17.30 |************************0099:0099*****************
 05.30 - 05.45 |************************0100:0100***************** 17.30 - 17.45 |************************0100:0100*****************
 05.45 - 06.00 |************************0100:0100***************** 17.45 - 18.00 |************************0099:0099*****************
               +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
               0...10...20...30...40...50...60...70...80...90..100             0...10...20...30...40...50...60...70...80...90..100


 06.00 - 06.15 |************************0100:0100***************** 18.00 - 18.15 |************************0064:0064
 06.15 - 06.30 |************************0099:0099***************** 18.15 - 18.30 |************************0100:0100*****************
 06.30 - 06.45 |************************0099:0099***************** 18.30 - 18.45 |************************0100:0100*****************
 06.45 - 07.00 |********************    0040:0040                   18.45 - 19.00 |************************0100:0100*****************
 07.00 - 07.15 |                        0000:0000                   19.00 - 19.15 |************************0099:0099*****************
 07.15 - 07.30 |                        0000:0000                   19.15 - 19.30 |************************0100:0100*****************
 07.30 - 07.45 |                        0000:0000                   19.30 - 19.45 |************************0099:0099*****************
 07.45 - 08.00 |************************0061:0061                   19.45 - 20.00 |************************0100:0100*****************
 08.00 - 08.15 |************************0099:0099***************** 20.00 - 20.15 |************************0100:0100*****************
 08.15 - 08.30 |************************0100:0100***************** 20.15 - 20.30 |************************0099:0099*****************
 08.30 - 08.45 |************************0100:0100***************** 20.30 - 20.45 |************************0100:0100*****************
 08.45 - 09.00 |************************0051:0051                   20.45 - 21.00 |************************0100:0100*****************
 09.00 - 09.15 |**********              0020:0020                   21.00 - 21.15 |************************0100:0100*****************
 09.15 - 09.30 |*********               0018:0018                   21.15 - 21.30 |************************0100:0100*****************
 09.30 - 09.45 |**********************  0042:0042                   21.30 - 21.45 |************************0100:0100*****************
 09.45 - 10.00 |************************0099:0099***************** 21.45 - 22.00 |************************0099:0099*****************
 10.00 - 10.15 |************************0085:0085**********        22.00 - 22.15 |************************0100:0100*****************
 10.15 - 10.30 |                        0000:0000                   22.15 - 22.30 |************************0100:0100*****************
 10.30 - 10.45 |                        0000:0000                   22.30 - 22.45 |************************0099:0099*****************
 10.45 - 11.00 |                         0000:0000                    22.45 - 23.00 |************************0048:0048
 11.00 - 11.15 |**********************  0041:0041                    23.00 - 23.15 |************************0092:0092*************
 11.15 - 11.30 |***********             0022:0022                   23.15 - 23.30 |************************0099:0099*****************
 11.30 - 11.45 |**********              0020:0020                   23.30 - 23.45 |************************0100:0100*****************
 11.45 - 12.00 |************************0078:0078******           23.45 - 24.00 |************************0100:0100*****************
               +----+----+----+----+----+----+----+----+----+----+              +----+----+----+----+----+----+----+----+----+----+
               0...10...20...30...40...50...60...70...80...90..100             0...10...20...30...40...50...60...70...80...90..100

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Tape Drive Device Active Graph

This graph shows, by individual tape drive (TAPEccuu), for each fifteen minute period, for each day of the week (Mon, Tue, Wed) the % of the period the tape drive was active. Since a separate graph is produced for each selected tape drive, it is strongly recommended that the INCLUDE/EXCLUDE facility be used for these graphs.

Following is a sample of the Drive Device Active Graph:

```
DEVICE=TAPE030D                          DAY SHOWN: MONDAY                          SYSID:SID1
                                            09/16/96
                                    TAPE DRIVE % ACTIVE GRAPH

  00.00 - 00.15 |**                    0003:0003      12.00 - 12.15 |**********          0023:0023
  00.15 - 00.30 |***                   0005:0005      12.15 - 12.30 |**********          0019:0019
  00.30 - 00.45 |**                    0004:0004      12.30 - 12.45 |                     0000:0000
  00.45 - 01.00 |***                   0005:0005      12.45 - 13.00 |**                   0004:0004
  01.00 - 01.15 |*                     0001:0001      13.00 - 13.15 |***                  0005:0005
  01.15 - 01.30 |****                  0007:0007      13.15 - 13.30 |**                   0004:0004
  01.30 - 01.45 |*                     0001:0001      13.30 - 13.45 |*********            0018:0018
  01.45 - 02.00 |*                     0002:0002      13.45 - 14.00 |                     0000:0000
  02.00 - 02.15 |**                    0003:0003      14.00 - 14.15 |*******              0013:0013
  02.15 - 02.30 |**                    0004:0004      14.15 - 14.30 |*********            0017:0017
  02.30 - 02.45 |**                    0003:0003      14.30 - 14.45 |********             0016:0016
  02.45 - 03.00 |***                   0006:0006      14.45 - 15.00 |**************       0025:0025
  03.00 - 03.15 |*                     0001:0001      15.00 - 15.15 |********             0016:0016
  03.15 - 03.30 |*                     0002:0002      15.15 - 15.30 |                     0000:0000
  03.30 - 03.45 |******                0011:0011      15.30 - 15.45 |                     0000:0000
  03.45 - 04.00 |**********            0020:0020      15.45 - 16.00 |                     0000:0000
  04.00 - 04.15 |*****                 0009:0009      16.00 - 16.15 |                     0000:0000
  04.15 - 04.30 |****                  0008:0008      16.15 - 16.30 |                     0000:0000
  04.30 - 04.45 |*****                 0009:0009      16.30 - 16.45 |                     0000:0000
  04.45 - 05.00 |****                  0008:0008      16.45 - 17.00 |                     0000:0000
  05.00 - 05.15 |***                   0006:0006      17.00 - 17.15 |**************       0027:0027
  05.15 - 05.30 |******                0012:0012      17.15 - 17.30 |**********************0041:0041
  05.30 - 05.45 |*****                 0009:0009      17.30 - 17.45 |******************   0035:0035
  05.45 - 06.00 |***                   0005:0005      17.45 - 18.00 |************************0050:0050
            +----+----+----+----+----+----+----+----+----+----+           +----+----+----+----+----+----+----+----+----+----+
            0...10...20...30...40...50...60...70...80...90..100          0...10...20...30...40...50...60...70...80...90..100

  06.00 - 06.15 |*******               0014:0014      18.00 - 18.15 |********            0015:0015
  06.15 - 06.30 |*********             0017:0017      18.15 - 18.30 |*************       0026:0026
  06.30 - 06.45 |************************0048:0048      18.30 - 18.45 |*****               0010:0010
  06.45 - 07.00 |***************       0029:0029      18.45 - 19.00 |********            0016:0016
  07.00 - 07.15 |                      0000:0000      19.00 - 19.15 |**                  0004:0004
  07.15 - 07.30 |                      0000:0000      19.15 - 19.30 |*************       0026:0026
  07.30 - 07.45 |                      0000:0000      19.30 - 19.45 |*********           0017:0017
  07.45 - 08.00 |                      0000:0000      19.45 - 20.00 |****                0007:0007
  08.00 - 08.15 |                      0000:0000      20.00 - 20.15 |*                   0001:0001
  08.15 - 08.30 |                      0000:0000      20.15 - 20.30 |*                   0001:0001
  08.30 - 08.45 |                      0000:0000      20.30 - 20.45 |*                   0001:0001
  08.45 - 09.00 |****************      0032:0032      20.45 - 21.00 |*                   0001:0001
  09.00 - 09.15 |*******               0013:0013      21.00 - 21.15 |*                   0002:0002
  09.15 - 09.30 |*******               0014:0014      21.15 - 21.30 |**                  0003:0003
  09.30 - 09.45 |                      0000:0000      21.30 - 21.45 |***                 0005:0005
  09.45 - 10.00 |************************0050:0050      21.45 - 22.00 |****                0007:0007
  10.00 - 10.15 |************************0050:0050      22.00 - 22.15 |****                0008:0008
  10.15 - 10.30 |                      0000:0000      22.15 - 22.30 |*****               0009:0009
  10.30 - 10.45 |                      0000:0000      22.30 - 22.45 |*****               0009:0009
  10.45 - 11.00 |                      0000:0000      22.45 - 23.00 |**************      0026:0026
  11.00 - 11.15 |**********            0020:0020      23.00 - 23.15 |                     0000:0000
  11.15 - 11.30 |*********             0018:0018      23.15 - 23.30 |                     0000:0000
  11.30 - 11.45 |*****                 0010:0010      23.30 - 23.45 |                     0000:0000
  11.45 - 12.00 |******                0012:0012      23.45 - 24.00 |                     0000:0000
            +----+----+----+----+----+----+----+----+----+----+           +----+----+----+----+----+----+----+----+----+----+
            0...10...20...30...40...50...60...70...80...90..100          0...10...20...30...40...50...60...70...80...90..100

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Tape Drive Mount Pending Graph

This graph shows, by individual tape drive (TAPEccuu), for each fifteen minute period, for each day of the week (Mon, Tue, Wed) the % of the period the tape drive had a mount pending. Since a separate graph is produced for each selected tape drive, it is strongly recommended that the INCLUDE/EXCLUDE facility be used for these graphs.

Following is a sample of the Tape Drive Mount Pending Graph:

```
DEVICE=TAPE030D                          DAY SHOWN: MONDAY                          SYSID:SID1
                                            09/16/96
                                  TAPE DRIVE % MOUNT PENDING GRAPH

  00.00 - 00.15 |                      0000:0000          12.00 - 12.15 |**********          0020:0020
  00.15 - 00.30 |*************         0025:0025          12.15 - 12.30 |****                0008:0008
  00.30 - 00.45 |***                   0006:0006          12.30 - 12.45 |                    0000:0000
  00.45 - 01.00 |                      0000:0000          12.45 - 13.00 |***********         0022:0022
  01.00 - 01.15 |                      0000:0000          13.00 - 13.15 |                    0000:0000
  01.15 - 01.30 |                      0000:0000          13.15 - 13.30 |*****               0010:0010
  01.30 - 01.45 |                      0000:0000          13.30 - 13.45 |*************       0025:0025
  01.45 - 02.00 |                      0000:0000          13.45 - 14.00 |******************  0035:0035
  02.00 - 02.15 |                      0000:0000          14.00 - 14.15 |********************* 0041:0041
  02.15 - 02.30 |                      0000:0000          14.15 - 14.30 |*************       0026:0026
  02.30 - 02.45 |                      0000:0000          14.30 - 14.45 |********            0016:0016
  02.45 - 03.00 |**                    0003:0003          14.45 - 15.00 |********            0015:0015
  03.00 - 03.15 |                      0000:0000          15.00 - 15.15 |***********         0022:0022
  03.15 - 03.30 |                      0000:0000          15.15 - 15.30 |                    0000:0000
  03.30 - 03.45 |                      0000:0000          15.30 - 15.45 |                    0000:0000
  03.45 - 04.00 |                      0000:0000          15.45 - 16.00 |                    0000:0000
  04.00 - 04.15 |                      0000:0000          16.00 - 16.15 |                    0000:0000
  04.15 - 04.30 |                      0000:0000          16.15 - 16.30 |                    0000:0000
  04.30 - 04.45 |                      0000:0000          16.30 - 16.45 |                    0000:0000
  04.45 - 05.00 |                      0000:0000          16.45 - 17.00 |                    0000:0000
  05.00 - 05.15 |                      0000:0000          17.00 - 17.15 |*******             0013:0013
  05.15 - 05.30 |                      0000:0000          17.15 - 17.30 |***********         0021:0021
  05.30 - 05.45 |                      0000:0000          17.30 - 17.45 |***                 0006:0006
  05.45 - 06.00 |                      0000:0000          17.45 - 18.00 |******              0012:0012
              +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100         0...10...20...30...40...50...60...70...80...90..100

  06.00 - 06.15 |                      0000:0000          18.00 - 18.15 |******              0012:0012
  06.15 - 06.30 |*********             0018:0018          18.15 - 18.30 |                    0000:0000
  06.30 - 06.45 |*******************   0037:0037          18.30 - 18.45 |                    0000:0000
  06.45 - 07.00 |***                   0006:0006          18.45 - 19.00 |**                  0003:0003
  07.00 - 07.15 |                      0000:0000          19.00 - 19.15 |                    0000:0000
  07.15 - 07.30 |                      0000:0000          19.15 - 19.30 |*                   0002:0002
  07.30 - 07.45 |                      0000:0000          19.30 - 19.45 |                    0000:0000
  07.45 - 08.00 |                      0000:0000          19.45 - 20.00 |                    0000:0000
  08.00 - 08.15 |                      0000:0000          20.00 - 20.15 |                    0000:0000
  08.15 - 08.30 |                      0000:0000          20.15 - 20.30 |                    0000:0000
  08.30 - 08.45 |                      0000:0000          20.30 - 20.45 |                    0000:0000
  08.45 - 09.00 |*******               0013:0013          20.45 - 21.00 |                    0000:0000
  09.00 - 09.15 |**                    0003:0003          21.00 - 21.15 |                    0000:0000
  09.15 - 09.30 |**                    0003:0003          21.15 - 21.30 |                    0000:0000
  09.30 - 09.45 |*****                 0009:0009          21.30 - 21.45 |                    0000:0000
  09.45 - 10.00 |********              0015:0015          21.45 - 22.00 |                    0000:0000
  10.00 - 10.15 |*********             0017:0017          22.00 - 22.15 |                    0000:0000
  10.15 - 10.30 |                      0000:0000          22.15 - 22.30 |                    0000:0000
  10.30 - 10.45 |                      0000:0000          22.30 - 22.45 |                    0000:0000
  10.45 - 11.00 |                      0000:0000          22.45 - 23.00 |                    0000:0000
  11.00 - 11.15 |*******               0013:0013          23.00 - 23.15 |                    0000:0000
  11.15 - 11.30 |**                    0003:0003          23.15 - 23.30 |                    0000:0000
  11.30 - 11.45 |*****                 0009:0009          23.30 - 23.45 |                    0000:0000
  11.45 - 12.00 |**********            0020:0020          23.45 - 24.00 |                    0000:0000
              +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100         0...10...20...30...40...50...60...70...80...90..100

  LEGEND: (*) = AVERAGE  (-) = PEAK
```

Tape Drive Activity Graphs

The presentation quality tape drive activity graphs are produced on a PC using Harvard Graphics or any graphing package that supports Comma Separated Value (delimited ASCII) files. Alternatively the graphs can be produced by GDDM on the mainframe if desired. Data point members are built in the HGDLIB library by batch programs that execute on the host machine. Each data point member represents the data for a specific graph. The data point members are subsequently down loaded to the PC and are combined with distributed templates to form high quality graphs.

Tape drive activity graphs allow you to compare the behavior and usage of tape drives or strings of tape drives over time.

Refer to Chapter 3, CIMS Capacity Planner Graphics, for detailed descriptions and samples of the Tape Drive Activity Graphs.

UNIX Subsystem Reports

The following discussion enumerates the various CIMS Capacity Planner UNIX reports and describes the contents of each report.

UNIX Summary Report

The UNIX Summary Report is produced for all UNIX servers whose CIMS Capacity Planner name satisfies the SELECTED SYSTEM criteria as noted above. The summary report pertains to an "average" UNIX server that is the accumulation of all data for each server included in the population of servers that match the SELECTED SYSTEM criteria.

Disk statistics are reported separately, however, with the top 10 arm/server combinations being referenced in the following categories:

- Disk percentage busy
- Disk queue time in milliseconds
- Disk response time in milliseconds

The summary report is organized into the following line items:

- The period reported upon
- The average run queue size during prime shift
- The average run queue percent occupied during prime shift
- Swap in operations per second (prime shift)
- Swap out operations per second (prime shift)
- Page in/out operations per second (prime shift)
- Process switches per second (prime shift)
- Local system calls per second(prime shift)

- Local read/write cache hit ratio (prime shift)
- Memory allocation failures (prime shift)
- % CPU Busy by shift divided into:
  - User time
  - Local time
  - Remote time
  - Wait i/o
  - Idle time
- The top 10 arm/server disk % busy by shift
- The top 10 arm/server disk queue time by shift
- The top 10 arm/server disk response time by shift

```
SUMMARY REPORT                                                SYSID:U010
  1. THE MEASURED PERIOD BEGINS AT 08:00 TUESDAY, NOVEMBER 22,1994, AND CONTINUES THROUGH 17:40 WEDNESDAY, NOVEMBER 23,1994.
  2. DURING PRIME SHIFT,  THE RUN QUEUE LENGTH AVERAGED: 1.49
  3. DURING PRIME SHIFT,  THE PERCENTAGE OF TIME THE RUN QUEUE WAS OCCUPIED WAS: 100.00
  4. DURING PRIME SHIFT,  PAGE IN OPERATIONS PER SECOND AVERAGED: 8.53
  5. DURING PRIME SHIFT,  PAGE OUT OPERATIONS PER SECOND AVERAGED: .60
  6. DURING PRIME SHIFT,  PROCESS SWITCHES PER SECOND AVERAGED: 34.27
  7. DURING PRIME SHIFT,  LOCAL SYSTEM CALLS PER SECOND AVERAGED: 680.76
  8. DURING PRIME SHIFT,  LOCAL READ CACHE HIT RATIO AVERAGED: 1.03
  9. DURING PRIME SHIFT,  LOCAL WRITE CACHE HIT RATIO AVERAGED: .81
 10. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT PERCENTAGE CPU BUSY TIME WITHIN SHIFT AVERAGED:
                          00:00 - 08:00          08:00 - 18:00          18:00 - 24:00
    USER                          .00                  20.97                    .00
    LOCAL                         .00                  11.43                    .00
    REMOTE                        .00                    .00                    .00
    WAIT I/O                      .00                  16.84                    .00
    IDLE TIME                     .00                  50.72                    .00

 11. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT DISK PERCENTAGE BUSY WITHIN SHIFT AVERAGED:
                         00:00 - 08:00          08:00 - 18:00          18:00 - 24:00
     TODOSONN                   .00%                 14.90%                   .00%
     C1T5D0S0                   .00%                 11.44%                   .00%
     C0T4D0S0                   .00%                  2.87%                   .00%
     C0T6D0S0                   .00%                  1.39%                   .00%

 12. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT DISK QUEUE TIME (MILLISECONDS) AVERAGED:
                          00:00 - 08:00          08:00 - 18:00          18:00 - 24:00
     C0T4D0S0                     .00                  34.95                    .00
     C1T5D0S0                     .00                   2.83                    .00
     C0T6D0S0                     .00                   2.34                    .00
     TODOSONN                     .00                    .23                    .00

 13. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT DISK RESPONSE TIME (MILLISECONDS) AVERAGED:
                          00:00 - 08:00          08:00 - 18:00          18:00 - 24:00
     TODOSONN                     .00                  26.34                    .00
     C1T5D0S0                     .00                  11.99                    .00
     C0T6D0S0                     .00                  10.22                    .00
     C0T4D0S0                     .00                   7.15                    .00
                                                SUMMARY REPORT                                SYSID:U010
 14. AN ANALYSIS OF THE ENTIRE PERIOD INDICATES THAT DISK I/O WAIT TIME (MILLISECONDS) AVERAGED:
                          00:00 - 08:00          08:00 - 18:00          18:00 - 24:00
     C1T5D0S0                     .00                  32.07                    .00
     C0T6D0S0                     .00                  15.10                    .00
     C0T4D0S0                     .00                  14.81                    .00
     TODOSONN                     .00                    .08                    .00
```

UNIX Statistics Reports

The UNIX Statistics Reports are produced for all UNIX servers whose CIMS Capacity Planner name satisfies the SELECTED SYSTEM criteria as noted above. The statistics reports pertain to the top 40 UNIX servers included in the population of servers that match the SELECTED SYSTEM criteria.

Disk statistics are reported differently, however, with the top 40 arm/server combinations being referenced in the following categories:

- Disk percentage busy
- Disk response time in milliseconds
- Disk i/o count

All UNIX Statistics Reports recognize the BEGIN TIME/END TIME statements to delimit the time period for the report. That is, all UNIX statistics are kept in hourly increments, and you specify:

- BEGIN TIME=hh.mm.ss
- END TIME=hh.mm.ss

in order to select a specific time period for the report. The default time period is:

- BEGIN TIME=00.00.00
- END TIME=24.00.00

UNIX Disk Statistics Report

This report shows, for the top 40 arm/server combinations as noted above, the following statistics:

- highest average response time in milliseconds
- highest percent busy
- highest i/o count

Following is a sample of the UNIX Disk Statistics Report:

```
                                        DISK STATISTICS                                  SYSID:U010
                                          CIMS LAB, INC.
                                        11/22/94-11/23/94
RESPONSE(MS)          TODOSONN  C1T5DOSO  COT6DOSO  COT4DOSO
                         13.17     12.03     10.32      8.62


% BUSY                TODOSONN  C1T5DOSO  COT4DOSO  COT6DOSO
                         37.25     11.43      2.87      1.39


I/O COUNT             C1T5DOSO  COT4DOSO  TODOSONN  COT6DOSO
                       691,976   285,939   202,800    97,133
                         54.15%    22.37%    15.87%     7.60%
```

UNIX Process Table Statistics Report

This report shows, for the top 40 servers in each category, the following process table statistics:

- maximum entries in the process table
- maximum percent used
- process table overflows

Following is a sample of the UNIX Process Table Statistics Report:

```
                                                 PROCESS TABLE STATISTICS                                    SYSID:U010
                                                        CIMS LAB, INC.
                                                      11/22/94-11/23/94
MAX ENTRIES             SYSTU010
                             200


MAX % USED              SYSTU010
                           53.75


OVERFLOWS               (NO DETAIL AVAILABLE)
```

UNIX Lock Table Statistics Report

This report shows, for the top 40 servers in each category, the following lock table statistics:

- maximum entries in the lock table
- maximum percent used
- lock table overflows

Following is a sample of the UNIX Lock Table Statistics Report:

```
                                                   LOCK TABLE STATISTICS                                     SYSID:U010
                                                        CIMS LAB, INC.
                                                      11/22/94-11/23/94
MAX ENTRIES             SYSTU010
                             300


MAX % USED              SYSTU010
                           40.33


OVERFLOWS               (NO DETAIL AVAILABLE)
```

UNIX Inode Table Statistics Report

This report shows, for the top 40 servers in each category, the following Inode table statistics:

- maximum entries in the Inode table
- maximum percent used
- Inode table overflows

Following is a sample of the UNIX Inode Table Statistics Report:

```
                                        INODE TABLE STATISTICS                  SYSID:U010
                                             CIMS LAB, INC.
                                           11/22/94-11/23/94
MAX ENTRIES          SYSTU010
                          500


MAX % USED           (NO DETAIL AVAILABLE)



OVERFLOWS            (NO DETAIL AVAILABLE)
```

UNIX File Table Statistics Report

This report shows, for the top 40 servers in each category, the following file table statistics:

- maximum entries in the file table
- maximum percent used
- file table overflows

Following is a sample of the UNIX File Table Statistics report:

```
                                        FILE TABLE STATISTICS                   SYSID:U010
                                             CIMS LAB, INC.
                                               11/20/96
 MAX ENTRIES         SYSTU010
                          382


 MAX % USED          SYSTU010
                        100.00


 OVERFLOWS           (NO DETAIL AVAILABLE)
```

UNIX Technical Graph Reports

The UNIX technical graph reports are produced for each day of the week (Monday, Tuesday, Wednesday) in the period being reported upon. For example, if a full month's worth of data were being examined, seven separate graphs would be produced; one for all Mondays in the month, another for all Tuesdays and so forth.

Each graph is in the form of a horizontal bar chart, with one bar representing each fifteen minute period of the day. The bars themselves are comprised of dashes (peak values) and asterisks (average values). For example, on a Monday chart, the asterisks represent the average value for that fifteen minute slot for all Mondays over the entire period whereas the dashes represent the peak value for that time slot for one of the Mondays.

Each graph is divided into four quadrants: one quadrant representing a 6 hour period. The time period from midnight to 6 a.m. is positioned at the top left hand side of the page. Six a.m. until noon is positioned at the bottom left hand side of the page. Noon until 6 p.m. is at the top right hand side of the page and 6 p.m. until midnight is at the bottom right hand side of the page.

A column down the middle of each quadrant of the graph presents the actual values represented by the asterisks (averages: left hand side of the column) and the dashes (peaks: right hand side). This column can be turned off by specifying:

```
DETAIL=NONE
```

in the SYSIN.

UNIX Buffer Write Activity Graph

This graph presents the number of UNIX Buffer Writes per second that occurred on a specific server (or on an average server in the population defined by the SELECTED SYSTEM statement in the SYSIN) for each fifteen minute period of the day.

UNIX Physical Write Activity Graph

This graph presents the number of UNIX Physical Writes per second that occurred on a specific server (or on an average server in the population defined by the SELECTED SYSTEM statement in the SYSIN) for each fifteen minute period of the day.

Following is a sample of the UNIX Physical Write Activity Graph:

```
DAY SHOWN: WEDNESDAY                                    SYSID:U010
                                                    11/22/94-11/23/94
                                          UNIX SERVER PHYSICAL WRITES PER SECOND

00.00 - 00.15 |                    0000:0000          12.00 - 12.15 |                    0000:0000
00.15 - 00.30 |                    0000:0000          12.15 - 12.30 |                    0000:0000
00.30 - 00.45 |                    0000:0000          12.30 - 12.45 |                    0000:0000
00.45 - 01.00 |                    0000:0000          12.45 - 13.00 |                    0000:0000
01.00 - 01.15 |                    0000:0000          13.00 - 13.15 |                    0000:0000
01.15 - 01.30 |                    0000:0000          13.15 - 13.30 |                    0000:0000
01.30 - 01.45 |                    0000:0000          13.30 - 13.45 |                    0000:0000
01.45 - 02.00 |                    0000:0000          13.45 - 14.00 |                    0000:0000
02.00 - 02.15 |                    0000:0000          14.00 - 14.15 |                    0000:0000
02.15 - 02.30 |                    0000:0000          14.15 - 14.30 |                    0000:0000
02.30 - 02.45 |                    0000:0000          14.30 - 14.45 |                    0000:0000
02.45 - 03.00 |                    0000:0000          14.45 - 15.00 |                    0000:0000
03.00 - 03.15 |                    0000:0000          15.00 - 15.15 |                    0000:0000
03.15 - 03.30 |                    0000:0000          15.15 - 15.30 |                    0000:0000
03.30 - 03.45 |                    0000:0000          15.30 - 15.45 |                    0000:0000
03.45 - 04.00 |                    0000:0000          15.45 - 16.00 |                    0000:0000
04.00 - 04.15 |                    0000:0000          16.00 - 16.15 |*                   0015:0015
04.15 - 04.30 |                    0000:0000          16.15 - 16.30 |*                   0015:0015
04.30 - 04.45 |                    0000:0000          16.30 - 16.45 |*                   0015:0015
04.45 - 05.00 |                    0000:0000          16.45 - 17.00 |*                   0015:0015
05.00 - 05.15 |                    0000:0000          17.00 - 17.15 |*                   0016:0016
05.15 - 05.30 |                    0000:0000          17.15 - 17.30 |*                   0016:0016
05.30 - 05.45 |                    0000:0000          17.30 - 17.45 |*                   0016:0016
05.45 - 06.00 |                    0000:0000          17.45 - 18.00 |*                   0016:0016
              +----+----+----+----+----+----+----+----+----+----+            +----+----+----+----+----+----+----+----+----+----+
              0...90..180..270..360..450..540..630..720..810..900            0...90..180..270..360..450..540..630..720..810..900

06.00 - 06.15 |                    0000:0000          18.00 - 18.15 |                    0000:0000
06.15 - 06.30 |                    0000:0000          18.15 - 18.30 |                    0000:0000
06.30 - 06.45 |                    0000:0000          18.30 - 18.45 |                    0000:0000
06.45 - 07.00 |                    0000:0000          18.45 - 19.00 |                    0000:0000
07.00 - 07.15 |                    0000:0000          19.00 - 19.15 |                    0000:0000
07.15 - 07.30 |                    0000:0000          19.15 - 19.30 |                    0000:0000
07.30 - 07.45 |                    0000:0000          19.30 - 19.45 |                    0000:0000
07.45 - 08.00 |                    0000:0000          19.45 - 20.00 |                    0000:0000
08.00 - 08.15 |                    0000:0000          20.00 - 20.15 |                    0000:0000
08.15 - 08.30 |                    0000:0000          20.15 - 20.30 |                    0000:0000
08.30 - 08.45 |                    0000:0000          20.30 - 20.45 |                    0000:0000
08.45 - 09.00 |                    0000:0000          20.45 - 21.00 |                    0000:0000
09.00 - 09.15 |                    0000:0000          21.00 - 21.15 |                    0000:0000
09.15 - 09.30 |                    0000:0000          21.15 - 21.30 |                    0000:0000
09.30 - 09.45 |                    0000:0000          21.30 - 21.45 |                    0000:0000
09.45 - 10.00 |                    0000:0000          21.45 - 22.00 |                    0000:0000
10.00 - 10.15 |                    0000:0000          22.00 - 22.15 |                    0000:0000
10.15 - 10.30 |                    0000:0000          22.15 - 22.30 |                    0000:0000
10.30 - 10.45 |                    0000:0000          22.30 - 22.45 |                    0000:0000
10.45 - 11.00 |                    0000:0000          22.45 - 23.00 |                    0000:0000
11.00 - 11.15 |                    0000:0000          23.00 - 23.15 |                    0000:0000
11.15 - 11.30 |                    0000:0000          23.15 - 23.30 |                    0000:0000
11.30 - 11.45 |                    0000:0000          23.30 - 23.45 |                    0000:0000
11.45 - 12.00 |                    0000:0000          23.45 - 24.00 |                    0000:0000
              +----+----+----+----+----+----+----+----+----+----+            +----+----+----+----+----+----+----+----+----+----+
              0...90..180..270..360..450..540..630..720..810..900            0...90..180..270..360..450..540..630..720..810..900
  LEGEND: (*) = AVERAGE  (-) = PEAK
```

UNIX Logical Write Activity Graph

This graph presents the number of UNIX Logical Writes per second that occurred on a specific server (or on an average server in the population defined by the SELECTED SYSTEM statement in the SYSIN) for each fifteen minute period of the day.

Following is a sample of the UNIX Logical Write Activity Graph:

```
DAY SHOWN: WEDNESDAY                                    SYSID:U010
                                                    11/22/94-11/23/94
                                          UNIX SERVER LOGICAL WRITES PER SECOND

00.00 - 00.15 |                    0000:0000          12.00 - 12.15 |*                   0006:0006
00.15 - 00.30 |                    0000:0000          12.15 - 12.30 |*                   0006:0006
00.30 - 00.45 |                    0000:0000          12.30 - 12.45 |*                   0006:0006
00.45 - 01.00 |                    0000:0000          12.45 - 13.00 |*                   0006:0006
01.00 - 01.15 |                    0000:0000          13.00 - 13.15 |*                   0001:0001
01.15 - 01.30 |                    0000:0000          13.15 - 13.30 |*                   0001:0001
01.30 - 01.45 |                    0000:0000          13.30 - 13.45 |*                   0001:0001
01.45 - 02.00 |                    0000:0000          13.45 - 14.00 |*                   0001:0001
02.00 - 02.15 |                    0000:0000          14.00 - 14.15 |*                   0002:0002
02.15 - 02.30 |                    0000:0000          14.15 - 14.30 |*                   0002:0002
02.30 - 02.45 |                    0000:0000          14.30 - 14.45 |*                   0002:0002
02.45 - 03.00 |                    0000:0000          14.45 - 15.00 |*                   0002:0002
03.00 - 03.15 |                    0000:0000          15.00 - 15.15 |*                   0001:0001
03.15 - 03.30 |                    0000:0000          15.15 - 15.30 |*                   0001:0001
03.30 - 03.45 |                    0000:0000          15.30 - 15.45 |*                   0001:0001
03.45 - 04.00 |                    0000:0000          15.45 - 16.00 |*                   0001:0001
04.00 - 04.15 |                    0000:0000          16.00 - 16.15 |                    0000:0000
04.15 - 04.30 |                    0000:0000          16.15 - 16.30 |                    0000:0000
04.30 - 04.45 |                    0000:0000          16.30 - 16.45 |                    0000:0000
04.45 - 05.00 |                    0000:0000          16.45 - 17.00 |                    0000:0000
05.00 - 05.15 |                    0000:0000          17.00 - 17.15 |*                   0003:0003
05.15 - 05.30 |                    0000:0000          17.15 - 17.30 |*                   0003:0003
05.30 - 05.45 |                    0000:0000          17.30 - 17.45 |*                   0003:0003
05.45 - 06.00 |                    0000:0000          17.45 - 18.00 |*                   0003:0003
              +----+----+----+----+----+----+----+----+----+----+                       +----+----+----+----+----+----+----+----+----+----+
              0...50..100..150..200..250..300..350..400..450..500                       0...50..100..150..200..250..300..350..400..450..500


06.00 - 06.15 |                    0000:0000          18.00 - 18.15 |                    0000:0000
06.15 - 06.30 |                    0000:0000          18.15 - 18.30 |                    0000:0000
06.30 - 06.45 |                    0000:0000          18.30 - 18.45 |                    0000:0000
06.45 - 07.00 |                    0000:0000          18.45 - 19.00 |                    0000:0000
07.00 - 07.15 |                    0000:0000          19.00 - 19.15 |                    0000:0000
07.15 - 07.30 |                    0000:0000          19.15 - 19.30 |                    0000:0000
07.30 - 07.45 |                    0000:0000          19.30 - 19.45 |                    0000:0000
07.45 - 08.00 |                    0000:0000          19.45 - 20.00 |                    0000:0000
08.00 - 08.15 |*                   0004:0004          20.00 - 20.15 |                    0000:0000
08.15 - 08.30 |*                   0004:0004          20.15 - 20.30 |                    0000:0000
08.30 - 08.45 |*                   0004:0004          20.30 - 20.45 |                    0000:0000
08.45 - 09.00 |*                   0004:0004          20.45 - 21.00 |                    0000:0000
09.00 - 09.15 |*                   0006:0006          21.00 - 21.15 |                    0000:0000
09.15 - 09.30 |*                   0006:0006          21.15 - 21.30 |                    0000:0000
09.30 - 09.45 |*                   0006:0006          21.30 - 21.45 |                    0000:0000
09.45 - 10.00 |*                   0006:0006          21.45 - 22.00 |                    0000:0000
10.00 - 10.15 |**                  0016:0016          22.00 - 22.15 |                    0000:0000
10.15 - 10.30 |**                  0016:0016          22.15 - 22.30 |                    0000:0000
10.30 - 10.45 |**                  0016:0016          22.30 - 22.45 |                    0000:0000
10.45 - 11.00 |**                  0016:0016          22.45 - 23.00 |                    0000:0000
11.00 - 11.15 |******              0058:0058          23.00 - 23.15 |                    0000:0000
11.15 - 11.30 |******              0058:0058          23.15 - 23.30 |                    0000:0000
11.30 - 11.45 |******              0058:0058          23.30 - 23.45 |                    0000:0000
11.45 - 12.00 |******              0058:0058          23.45 - 24.00 |                    0000:0000
              +----+----+----+----+----+----+----+----+----+----+                       +----+----+----+----+----+----+----+----+----+----+
              0...50..100..150..200..250..300..350..400..450..500                       0...50..100..150..200..250..300..350..400..450..500
LEGEND: (*) = AVERAGE  (-) = PEAK
```

UNIX Paging Activity Graph

This graph presents the number of UNIX Page In and Page Out operations in terms of pages per second that occurred on a specific server (or on an average server in the population defined by the SELECTED SYSTEM statement in the SYSIN) for each fifteen minute period of the day.

Following is a sample of the UNIX Paging Activity Graph:

```
DAY SHOWN: WEDNESDAY                                    SYSID:U010
                                                    11/22/94-11/23/94
                                            PAGING ACTIVITY (PAGES PER SECOND)

00.00 - 00.15 |                      0000:0000   12.00 - 12.15 |********          0016:0016
00.15 - 00.30 |                      0000:0000   12.15 - 12.30 |********          0016:0016
00.30 - 00.45 |                      0000:0000   12.30 - 12.45 |********          0016:0016
00.45 - 01.00 |                      0000:0000   12.45 - 13.00 |********          0016:0016
01.00 - 01.15 |                      0000:0000   13.00 - 13.15 |**********        0020:0020
01.15 - 01.30 |                      0000:0000   13.15 - 13.30 |**********        0020:0020
01.30 - 01.45 |                      0000:0000   13.30 - 13.45 |**********        0020:0020
01.45 - 02.00 |                      0000:0000   13.45 - 14.00 |**********        0020:0020
02.00 - 02.15 |                      0000:0000   14.00 - 14.15 |*                 0001:0001
02.15 - 02.30 |                      0000:0000   14.15 - 14.30 |*                 0001:0001
02.30 - 02.45 |                      0000:0000   14.30 - 14.45 |*                 0001:0001
02.45 - 03.00 |                      0000:0000   14.45 - 15.00 |*                 0001:0001
03.00 - 03.15 |                      0000:0000   15.00 - 15.15 |                  0000:0000
03.15 - 03.30 |                      0000:0000   15.15 - 15.30 |                  0000:0000
03.30 - 03.45 |                      0000:0000   15.30 - 15.45 |                  0000:0000
03.45 - 04.00 |                      0000:0000   15.45 - 16.00 |                  0000:0000
04.00 - 04.15 |                      0000:0000   16.00 - 16.15 |**********        0019:0019
04.15 - 04.30 |                      0000:0000   16.15 - 16.30 |**********        0019:0019
04.30 - 04.45 |                      0000:0000   16.30 - 16.45 |**********        0019:0019
04.45 - 05.00 |                      0000:0000   16.45 - 17.00 |**********        0019:0019
05.00 - 05.15 |                      0000:0000   17.00 - 17.15 |**********        0019:0019
05.15 - 05.30 |                      0000:0000   17.15 - 17.30 |**********        0019:0019
05.30 - 05.45 |                      0000:0000   17.30 - 17.45 |**********        0019:0019
05.45 - 06.00 |                      0000:0000   17.45 - 18.00 |**********        0019:0019
              +----+----+----+----+----+----+----+----+----+----+                  +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100                 0...10...20...30...40...50...60...70...80...90..100


06.00 - 06.15 |                      0000:0000   18.00 - 18.15 |                  0000:0000
06.15 - 06.30 |                      0000:0000   18.15 - 18.30 |                  0000:0000
06.30 - 06.45 |                      0000:0000   18.30 - 18.45 |                  0000:0000
06.45 - 07.00 |                      0000:0000   18.45 - 19.00 |                  0000:0000
07.00 - 07.15 |                      0000:0000   19.00 - 19.15 |                  0000:0000
07.15 - 07.30 |                      0000:0000   19.15 - 19.30 |                  0000:0000
07.30 - 07.45 |                      0000:0000   19.30 - 19.45 |                  0000:0000
07.45 - 08.00 |                      0000:0000   19.45 - 20.00 |                  0000:0000
08.00 - 08.15 |*                     0002:0002   20.00 - 20.15 |                  0000:0000
08.15 - 08.30 |*                     0002:0002   20.15 - 20.30 |                  0000:0000
08.30 - 08.45 |*                     0002:0002   20.30 - 20.45 |                  0000:0000
08.45 - 09.00 |*                     0002:0002   20.45 - 21.00 |                  0000:0000
09.00 - 09.15 |******                0011:0011   21.00 - 21.15 |                  0000:0000
09.15 - 09.30 |******                0011:0011   21.15 - 21.30 |                  0000:0000
09.30 - 09.45 |******                0011:0011   21.30 - 21.45 |                  0000:0000
09.45 - 10.00 |******                0011:0011   21.45 - 22.00 |                  0000:0000
10.00 - 10.15 |****                  0007:0007   22.00 - 22.15 |                  0000:0000
10.15 - 10.30 |****                  0007:0007   22.15 - 22.30 |                  0000:0000
10.30 - 10.45 |****                  0007:0007   22.30 - 22.45 |                  0000:0000
10.45 - 11.00 |****                  0007:0007   22.45 - 23.00 |                  0000:0000
11.00 - 11.15 |****************      0032:0032   23.00 - 23.15 |                  0000:0000
11.15 - 11.30 |****************      0032:0032   23.15 - 23.30 |                  0000:0000
11.30 - 11.45 |****************      0032:0032   23.30 - 23.45 |                  0000:0000
11.45 - 12.00 |****************      0032:0032   23.45 - 24.00 |                  0000:0000
              +----+----+----+----+----+----+----+----+----+----+                  +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100                 0...10...20...30...40...50...60...70...80...90..100

   LEGEND: (*) = AVERAGE  (-) = PEAK
```

UNIX Swapping Activity Graph

This graph presents the number of UNIX Swap In and Swap Out operations in terms of swaps per second that occurred on a specific server (or on an average server in the population defined by the SELECTED SYSTEM statement in the SYSIN) for each fifteen minute period of the day.

Following is a sample of the UNIX Swapping Activity graph:

```
DAY SHOWN: WEDNESDAY                                    SYSID:U010
                                                        11/20/96
                                        SWAP ACTIVITY (.XX SWAPS PER SECOND)
00.00 - 00.15 |                    0000:0000            12.00 - 12.15 |                    0000:0000
00.15 - 00.30 |                    0000:0000            12.15 - 12.30 |                    0000:0000
00.30 - 00.45 |                    0000:0000            12.30 - 12.45 |                    0000:0000
00.45 - 01.00 |                    0000:0000            12.45 - 13.00 |                    0000:0000
01.00 - 01.15 |                    0000:0000            13.00 - 13.15 |                    0000:0000
01.15 - 01.30 |                    0000:0000            13.15 - 13.30 |                    0000:0000
01.30 - 01.45 |                    0000:0000            13.30 - 13.45 |                    0000:0000
01.45 - 02.00 |                    0000:0000            13.45 - 14.00 |                    0000:0000
02.00 - 02.15 |                    0000:0000            14.00 - 14.15 |                    0000:0000
02.15 - 02.30 |                    0000:0000            14.15 - 14.30 |                    0000:0000
02.30 - 02.45 |                    0000:0000            14.30 - 14.45 |                    0000:0000
02.45 - 03.00 |                    0000:0000            14.45 - 15.00 |                    0000:0000
03.00 - 03.15 |                    0000:0000            15.00 - 15.15 |**                  0003:0003
03.15 - 03.30 |                    0000:0000            15.15 - 15.30 |**                  0003:0003
03.30 - 03.45 |                    0000:0000            15.30 - 15.45 |**                  0003:0003
03.45 - 04.00 |                    0000:0000            15.45 - 16.00 |**                  0003:0003
04.00 - 04.15 |                    0000:0000            16.00 - 16.15 |                    0000:0000
04.15 - 04.30 |                    0000:0000            16.15 - 16.30 |                    0000:0000
04.30 - 04.45 |                    0000:0000            16.30 - 16.45 |                    0000:0000
04.45 - 05.00 |                    0000:0000            16.45 - 17.00 |                    0000:0000
05.00 - 05.15 |                    0000:0000            17.00 - 17.15 |                    0000:0000
05.15 - 05.30 |                    0000:0000            17.15 - 17.30 |                    0000:0000
05.30 - 05.45 |                    0000:0000            17.30 - 17.45 |                    0000:0000
05.45 - 06.00 |                    0000:0000            17.45 - 18.00 |                    0000:0000
              +----+----+----+----+----+----+----+----+----+----+           +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100           0...10...20...30...40...50...60...70...80...90..100

06.00 - 06.15 |                    0000:0000            18.00 - 18.15 |                    0000:0000
06.15 - 06.30 |                    0000:0000            18.15 - 18.30 |                    0000:0000
06.30 - 06.45 |                    0000:0000            18.30 - 18.45 |                    0000:0000
06.45 - 07.00 |                    0000:0000            18.45 - 19.00 |                    0000:0000
07.00 - 07.15 |                    0000:0000            19.00 - 19.15 |                    0000:0000
07.15 - 07.30 |                    0000:0000            19.15 - 19.30 |                    0000:0000
07.30 - 07.45 |                    0000:0000            19.30 - 19.45 |                    0000:0000
07.45 - 08.00 |                    0000:0000            19.45 - 20.00 |                    0000:0000
08.00 - 08.15 |                    0000:0000            20.00 - 20.15 |                    0000:0000
08.15 - 08.30 |                    0000:0000            20.15 - 20.30 |                    0000:0000
08.30 - 08.45 |                    0000:0000            20.30 - 20.45 |                    0000:0000
08.45 - 09.00 |                    0000:0000            20.45 - 21.00 |                    0000:0000
09.00 - 09.15 |                    0000:0000            21.00 - 21.15 |                    0000:0000
09.15 - 09.30 |                    0000:0000            21.15 - 21.30 |                    0000:0000
09.30 - 09.45 |                    0000:0000            21.30 - 21.45 |                    0000:0000
09.45 - 10.00 |                    0000:0000            21.45 - 22.00 |                    0000:0000
10.00 - 10.15 |                    0000:0000            22.00 - 22.15 |                    0000:0000
10.15 - 10.30 |                    0000:0000            22.15 - 22.30 |                    0000:0000
10.30 - 10.45 |                    0000:0000            22.30 - 22.45 |                    0000:0000
10.45 - 11.00 |                    0000:0000            22.45 - 23.00 |                    0000:0000
11.00 - 11.15 |                    0000:0000            23.00 - 23.15 |                    0000:0000
11.15 - 11.30 |                    0000:0000            23.15 - 23.30 |                    0000:0000
11.30 - 11.45 |                    0000:0000            23.30 - 23.45 |                    0000:0000
11.45 - 12.00 |                    0000:0000            23.45 - 24.00 |                    0000:0000
              +----+----+----+----+----+----+----+----+----+----+           +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100           0...10...20...30...40...50...60...70...80...90..100

   LEGEND: (*) = AVERAGE  (-) = PEAK
```

UNIX System Calls Graph

This graph presents the number of UNIX System Calls per second that occurred on a specific server (or on an average server in the population defined by the SELECTED SYSTEM statement in the SYSIN) for each fifteen minute period of the day.

Following is a sample of the UNIX System Calls Graph:

```
DAY SHOWN: TUESDAY                                        SYSID:U010
                                                      11/22/94-11/23/94
                                                  SYSTEM CALLS PER SECOND

00.00 - 00.15 |                        0000:0000                  12.00-12.15 |******************      0313:0313
00.15 - 00.30 |                        0000:0000                  12.15-12.30 |******************      0313:0313
00.30 - 00.45 |                        0000:0000                  12.30-12.45 |******************      0313:0313
00.45 - 01.00 |                        0000:0000                  12.45-13.00 |******************      0313:0313
01.00 - 01.15 |                        0000:0000                  13.00-13.15 |************************0436:0436
01.15 - 01.30 |                        0000:0000                  13.15-13.30 |************************0436:0436
01.30 - 01.45 |                        0000:0000                  13.30-13.45 |************************0436:0436
01.45 - 02.00 |                        0000:0000                  13.45-14.00 |************************0436:0436
02.00 - 02.15 |                        0000:0000                  14.00-14.15 |************************0620:0620**
02.15 - 02.30 |                        0000:0000                  14.15-14.30 |************************0620:0620**
02.30 - 02.45 |                        0000:0000                  14.30-14.45 |************************0620:0620**
02.45 - 03.00 |                        0000:0000                  14.45-15.00 |************************0620:0620**
03.00 - 03.15 |                        0000:0000                  15.00-15.15 |**********************  0384:0384
03.15 - 03.30 |                        0000:0000                  15.15-15.30 |**********************  0384:0384
03.30 - 03.45 |                        0000:0000                  15.30-15.45 |**********************  0384:0384
03.45 - 04.00 |                        0000:0000                  15.45-16.00 |**********************  0384:0384
04.00 - 04.15 |                        0000:0000                  16.00-16.15 |************************1246:1246**********************
04.15 - 04.30 |                        0000:0000                  16.15-16.30 |************************1246:1246**********************
04.30 - 04.45 |                        0000:0000                  16.30-16.45 |************************1246:1246**********************
04.45 - 05.00 |                        0000:0000                  16.45-17.00 |************************1246:1246**********************
05.00 - 05.15 |                        0000:0000                  17.00-17.15 |************************1768:1768**********************
05.15 - 05.30 |                        0000:0000                  17.15-17.30 |************************1768:1768**********************
05.30 - 05.45 |                        0000:0000                  17.30-17.45 |************************1768:1768**********************
05.45 - 06.00 |                        0000:0000                  17.45-18.00 |************************1768:1768**********************
              +----+----+----+----+----+----+----+----+----+----+            +----+----+----+----+----+----+----+----+----+----+
              0...90..180..270..360..450..540..630..720..810..900            0...90..180..270..360..450..540..630..720..810..900


06.00 - 06.15 |                        0000:0000                  18.00-18.15 |                        0000:0000
06.15 - 06.30 |                        0000:0000                  18.15-18.30 |                        0000:0000
06.30 - 06.45 |                        0000:0000                  18.30-18.45 |                        0000:0000
06.45 - 07.00 |                        0000:0000                  18.45-19.00 |                        0000:0000
07.00 - 07.15 |                        0000:0000                  19.00-19.15 |                        0000:0000
07.15 - 07.30 |                        0000:0000                  19.15-19.30 |                        0000:0000
07.30 - 07.45 |                        0000:0000                  19.30-19.45 |                        0000:0000
07.45 - 08.00 |                        0000:0000                  19.45-20.00 |                        0000:0000
08.00 - 08.15 |********************** 0406:0406                  20.00-20.15 |                        0000:0000
08.15 - 08.30 |********************** 0406:0406                  20.15-20.30 |                        0000:0000
08.30 - 08.45 |********************** 0406:0406                  20.30-20.45 |                        0000:0000
08.45 - 09.00 |********************** 0406:0406                  20.45-21.00 |                        0000:0000
09.00 - 09.15 |************************1402:1402****************** 21.00-21.15 |                        0000:0000
09.15 - 09.30 |************************1402:1402****************** 21.15-21.30 |                        0000:0000
09.30 - 09.45 |************************1402:1402****************** 21.30-21.45 |                        0000:0000
09.45 - 10.00 |************************1402:1402****************** 21.45-22.00 |                        0000:0000
10.00 - 10.15 |************************0585:0585                  22.00-22.15 |                        0000:0000
10.15 - 10.30 |************************0585:0585                  22.15-22.30 |                        0000:0000
10.30 - 10.45 |************************0585:0585                  22.30-22.45 |                        0000:0000
10.45 - 11.00 |************************0585:0585                  22.45-23.00 |                        0000:0000
11.00 - 11.15 |************************0601:0601*                 23.00-23.15 |                        0000:0000
11.15 - 11.30 |************************0601:0601*                 23.15-23.30 |                        0000:0000
11.30 - 11.45 |************************0601:0601*                 23.30-23.45 |                        0000:0000
11.45 - 12.00 |************************0601:0601*                 23.45-24.00 |                        0000:0000
              +----+----+----+----+----+----+----+----+----+----+            +----+----+----+----+----+----+----+----+----+----+
              0...90..180..270..360..450..540..630..720..810..900            0...90..180..270..360..450..540..630..720..810..900

   LEGEND: (*) = AVERAGE  (-) = PEAK
\
```

UNIX Buffer Read Activity Graph

This graph presents the number of UNIX Buffer Reads per second that occurred on a specific server (or on an average server in the population defined by the SELECTED SYSTEM statement in the SYSIN) for each fifteen minute period of the day.

UNIX Logical Read Activity Graph

This graph presents the number of UNIX Logical Reads per second that occurred on a specific server (or on an average server in the population defined by the SELECTED SYSTEM statement in the SYSIN) for each fifteen minute period of the day.

Following is a sample Logical Read Activity Graph:

```
DAY SHOWN: WEDNESDAY                                    SYSID:U010
                                                    11/22/94-11/23/94
                                            UNIX SERVER LOGICAL READS PER SECOND

00.00 - 00.15 |                       0000:0000          12.00 - 12.15 |********          0077:0077
00.15 - 00.30 |                       0000:0000          12.15 - 12.30 |********          0077:0077
00.30 - 00.45 |                       0000:0000          12.30 - 12.45 |********          0077:0077
00.45 - 01.00 |                       0000:0000          12.45 - 13.00 |********          0077:0077
01.00 - 01.15 |                       0000:0000          13.00 - 13.15 |*****             0041:0041
01.15 - 01.30 |                       0000:0000          13.15 - 13.30 |*****             0041:0041
01.30 - 01.45 |                       0000:0000          13.30 - 13.45 |*****             0041:0041
01.45 - 02.00 |                       0000:0000          13.45 - 14.00 |*****             0041:0041
02.00 - 02.15 |                       0000:0000          14.00 - 14.15 |*                 0009:0009
02.15 - 02.30 |                       0000:0000          14.15 - 14.30 |*                 0009:0009
02.30 - 02.45 |                       0000:0000          14.30 - 14.45 |*                 0009:0009
02.45 - 03.00 |                       0000:0000          14.45 - 15.00 |*                 0009:0009
03.00 - 03.15 |                       0000:0000          15.00 - 15.15 |*                 0003:0003
03.15 - 03.30 |                       0000:0000          15.15 - 15.30 |*                 0003:0003
03.30 - 03.45 |                       0000:0000          15.30 - 15.45 |*                 0003:0003
03.45 - 04.00 |                       0000:0000          15.45 - 16.00 |*                 0003:0003
04.00 - 04.15 |                       0000:0000          16.00 - 16.15 |****              0031:0031
04.15 - 04.30 |                       0000:0000          16.15 - 16.30 |****              0031:0031
04.30 - 04.45 |                       0000:0000          16.30 - 16.45 |****              0031:0031
04.45 - 05.00 |                       0000:0000          16.45 - 17.00 |****              0031:0031
05.00 - 05.15 |                       0000:0000          17.00 - 17.15 |******            0059:0059
05.15 - 05.30 |                       0000:0000          17.15 - 17.30 |******            0059:0059
05.30 - 05.45 |                       0000:0000          17.30 - 17.45 |******            0059:0059
05.45 - 06.00 |                       0000:0000          17.45 - 18.00 |******            0059:0059
              +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
              0...50..100..150..200..250..300..350..400..450..500          0...50..100..150..200..250..300..350..400..450..500


06.00 - 06.15 |                       0000:0000          18.00 - 18.15 |                  0000:0000
06.15 - 06.30 |                       0000:0000          18.15 - 18.30 |                  0000:0000
06.30 - 06.45 |                       0000:0000          18.30 - 18.45 |                  0000:0000
06.45 - 07.00 |                       0000:0000          18.45 - 19.00 |                  0000:0000
07.00 - 07.15 |                       0000:0000          19.00 - 19.15 |                  0000:0000
07.15 - 07.30 |                       0000:0000          19.15 - 19.30 |                  0000:0000
07.30 - 07.45 |                       0000:0000          19.30 - 19.45 |                  0000:0000
07.45 - 08.00 |                       0000:0000          19.45 - 20.00 |                  0000:0000
08.00 - 08.15 |*****                  0049:0049          20.00 - 20.15 |                  0000:0000
08.15 - 08.30 |*****                  0049:0049          20.15 - 20.30 |                  0000:0000
08.30 - 08.45 |*****                  0049:0049          20.30 - 20.45 |                  0000:0000
08.45 - 09.00 |*****                  0049:0049          20.45 - 21.00 |                  0000:0000
09.00 - 09.15 |****************       0160:0160          21.00 - 21.15 |                  0000:0000
09.15 - 09.30 |****************       0160:0160          21.15 - 21.30 |                  0000:0000
09.30 - 09.45 |****************       0160:0160          21.30 - 21.45 |                  0000:0000
09.45 - 10.00 |****************       0160:0160          21.45 - 22.00 |                  0000:0000
10.00 - 10.15 |**************         0135:0135          22.00 - 22.15 |                  0000:0000
10.15 - 10.30 |**************         0135:0135          22.15 - 22.30 |                  0000:0000
10.30 - 10.45 |**************         0135:0135          22.30 - 22.45 |                  0000:0000
10.45 - 11.00 |**************         0135:0135          22.45 - 23.00 |                  0000:0000
11.00 - 11.15 |************************0277:0277          23.00 - 23.15 |                  0000:0000
11.15 - 11.30 |************************0277:0277          23.15 - 23.30 |                  0000:0000
11.30 - 11.45 |************************0277:0277          23.30 - 23.45 |                  0000:0000
11.45 - 12.00 |************************0277:0277          23.45 - 24.00 |                  0000:0000
              +----+----+----+----+----+----+----+----+----+----+          +----+----+----+----+----+----+----+----+----+----+
              0...50..100..150..200..250..300..350..400..450..500          0...50..100..150..200..250..300..350..400..450..500

   LEGEND: (*) = AVERAGE  (-) = PEAK
```

UNIX Physical Read Activity Graph

This graph presents the number of UNIX Physical Reads per second that occurred on a specific server (or on an average server in the population defined by the SELECTED SYSTEM statement in the SYSIN) for each fifteen minute period of the day.

Following is a sample of the UNIX Physical Read Activity Graph:

```
DAY SHOWN: WEDNESDAY                                    SYSID:U010
                                                    11/22/94-11/23/94
                                          UNIX SERVER PHYSICAL READS PER SECOND

00.00 - 00.15 |                    0000:0000          12.00 - 12.15 |                    0000:0000
00.15 - 00.30 |                    0000:0000          12.15 - 12.30 |                    0000:0000
00.30 - 00.45 |                    0000:0000          12.30 - 12.45 |                    0000:0000
00.45 - 01.00 |                    0000:0000          12.45 - 13.00 |                    0000:0000
01.00 - 01.15 |                    0000:0000          13.00 - 13.15 |                    0000:0000
01.15 - 01.30 |                    0000:0000          13.15 - 13.30 |                    0000:0000
01.30 - 01.45 |                    0000:0000          13.30 - 13.45 |                    0000:0000
01.45 - 02.00 |                    0000:0000          13.45 - 14.00 |                    0000:0000
02.00 - 02.15 |                    0000:0000          14.00 - 14.15 |                    0000:0000
02.15 - 02.30 |                    0000:0000          14.15 - 14.30 |                    0000:0000
02.30 - 02.45 |                    0000:0000          14.30 - 14.45 |                    0000:0000
02.45 - 03.00 |                    0000:0000          14.45 - 15.00 |                    0000:0000
03.00 - 03.15 |                    0000:0000          15.00 - 15.15 |                    0000:0000
03.15 - 03.30 |                    0000:0000          15.15 - 15.30 |                    0000:0000
03.30 - 03.45 |                    0000:0000          15.30 - 15.45 |                    0000:0000
03.45 - 04.00 |                    0000:0000          15.45 - 16.00 |                    0000:0000
04.00 - 04.15 |                    0000:0000          16.00 - 16.15 |********            0016:0016
04.15 - 04.30 |                    0000:0000          16.15 - 16.30 |********            0016:0016
04.30 - 04.45 |                    0000:0000          16.30 - 16.45 |********            0016:0016
04.45 - 05.00 |                    0000:0000          16.45 - 17.00 |********            0016:0016
05.00 - 05.15 |                    0000:0000          17.00 - 17.15 |*****               0009:0009
05.15 - 05.30 |                    0000:0000          17.15 - 17.30 |*****               0009:0009
05.30 - 05.45 |                    0000:0000          17.30 - 17.45 |*****               0009:0009
05.45 - 06.00 |                    0000:0000          17.45 - 18.00 |*****               0009:0009
              +----+----+----+----+----+----+----+----+----+----+                       +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100                      0...10...20...30...40...50...60...70...80...90..100


06.00 - 06.15 |                    0000:0000          18.00 - 18.15 |                    0000:0000
06.15 - 06.30 |                    0000:0000          18.15 - 18.30 |                    0000:0000
06.30 - 06.45 |                    0000:0000          18.30 - 18.45 |                    0000:0000
06.45 - 07.00 |                    0000:0000          18.45 - 19.00 |                    0000:0000
07.00 - 07.15 |                    0000:0000          19.00 - 19.15 |                    0000:0000
07.15 - 07.30 |                    0000:0000          19.15 - 19.30 |                    0000:0000
07.30 - 07.45 |                    0000:0000          19.30 - 19.45 |                    0000:0000
07.45 - 08.00 |                    0000:0000          19.45 - 20.00 |                    0000:0000
08.00 - 08.15 |                    0000:0000          20.00 - 20.15 |                    0000:0000
08.15 - 08.30 |                    0000:0000          20.15 - 20.30 |                    0000:0000
08.30 - 08.45 |                    0000:0000          20.30 - 20.45 |                    0000:0000
08.45 - 09.00 |                    0000:0000          20.45 - 21.00 |                    0000:0000
09.00 - 09.15 |                    0000:0000          21.00 - 21.15 |                    0000:0000
09.15 - 09.30 |                    0000:0000          21.15 - 21.30 |                    0000:0000
09.30 - 09.45 |                    0000:0000          21.30 - 21.45 |                    0000:0000
09.45 - 10.00 |                    0000:0000          21.45 - 22.00 |                    0000:0000
10.00 - 10.15 |                    0000:0000          22.00 - 22.15 |                    0000:0000
10.15 - 10.30 |                    0000:0000          22.15 - 22.30 |                    0000:0000
10.30 - 10.45 |                    0000:0000          22.30 - 22.45 |                    0000:0000
10.45 - 11.00 |                    0000:0000          22.45 - 23.00 |                    0000:0000
11.00 - 11.15 |                    0000:0000          23.00 - 23.15 |                    0000:0000
11.15 - 11.30 |                    0000:0000          23.15 - 23.30 |                    0000:0000
11.30 - 11.45 |                    0000:0000          23.30 - 23.45 |                    0000:0000
11.45 - 12.00 |                    0000:0000          23.45 - 24.00 |                    0000:0000
              +----+----+----+----+----+----+----+----+----+----+                       +----+----+----+----+----+----+----+----+----+----+
              0...10...20...30...40...50...60...70...80...90..100                      0...10...20...30...40...50...60...70...80...90..100

   LEGEND: (*) = AVERAGE  (-) = PEAK
```

5

CIMS Capacity Planner Return Codes

At the conclusion of execution, CIMS Capacity Planner load modules present a completion code to you. The completion codes conform to the following standards throughout the CIMS Capacity Planner product:

0	Processing completed successfully, no errors.
2	Workload data reduction: no RMF records found.
4	All Data Reduction: no data found which conformed to the selectivity criteria. For example, if a CICSNAME was specified, no data was found for that region. Or if a date range was specified, no data was found in that date range.
6	A Region name was specified, but that name is not registered in the CPPRERT file. Typically a User error.
8	Subsystem Not Authorized. The CPPRERT file indicates that the trial period has expired and the subsystem for which the request is being processed does not have the authorization (Lease or Purchase) flags turned on. This sometimes happens when a User allocates a new CPPRERT file while installing a new version of CPPR and inadvertently forgets to turn on the flags in the new file. We recommend that the old CPPRERT file always be used in production.
12	Invalid LOADLIB. This return code originates in the ISPF/PDF interface and comes from TSO as a result of a CALL statement . Usually the specification of the LOADLIB in the SETUP panel is incorrect.
13	Insufficient Storage. This return code also originates form the ISPF/PDF interface. Increase the SIZE and try again.

16 CPU not Authorized. With Version 3 of CIMS Capacity Planner, CPU level security has been implemented across the entire CIMS Capacity Planner system. Typically the CPU Serial number is passed against a mask which results in the generation of a password which is then compared to the value presented via the CPPRPASS keyword (either in the GLOBAL member of PARMLIB or through the SYSIN). During a trial period, no password checking is performed. This code may inadvertently result from one of the following:

1. CPPRERT DD Statement missing (Trial period)
2. CPPRPARM DD Statement missing (cannot find GLOBAL member)

6

CIMS Capacity Planner Key Phrases

Introductory Notes

This glossary of CIMS Capacity Planner key phrases is intended for use as a reference to the User's Guide. Supplemental information is contained in each of the subsystem chapters. The following terms are used throughout this glossary:

A Numeric Value

means any decimal number.

A Date Value

means a date in one of the following forms:

mm/dd/yyyy (Gregorian USA date form)

dd.mm.yyyy (Gregorian European date form)

yyyyddd (Julian date form)

*, *-n (relative day format where *=Today)

A Time Value

means a time in the following form:

hh.mm.ss (separation by periods)

1ST PEAK PERIOD 1ST HOUR

Applicable Subsystems:

LongView

Values:

A numeric value ranging from 00—24

Default Value:

00

Used for:

Identifying the beginning of the 1st peak period for

LongView extract processing

1ST PEAK PERIOD 2ND HOUR

Applicable Subsystems:

LongView

Values:

A numeric value ranging from 00—24

Default Value:

00

Used for:

Identifying the end of the 1st peak period for

LongView extract processing

1ST PERIOD BEGIN DATE

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A date value

Default Value:

92001

Used for:

Identifying the beginning of the 1st period for Trends Analysis for any subsystem

1ST PERIOD END DATE

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A date value

Default Value:

2099365

Used for:

Identifying the end of the 1st period for Trends Analysis for any subsystem

2ND PEAK PERIOD 1ST HOUR

Applicable Subsystems:

LongView

Values:

A numeric value ranging from 00—24

Default Value:

00

Used for:

Identifying the beginning of the 2nd peak period for LongView extract processing

2ND PEAK PERIOD 2ND HOUR

Applicable Subsystems:

LongView

Values:

A numeric value ranging from 00—24

Default Value:

00

Used for:

Identifying the end of the 2nd peak period for LongView extract processing

2ND PERIOD BEGIN DATE

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A date value

Default Value:

92001

Used for:

Identifying the beginning of the 2nd period for Trends Analysis for any subsystem

2ND PERIOD END DATE

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A date value

Default Value:

2099365

Used for:

Identifying the end of the 2nd period for Trends Analysis for any subsystem

ACCOUNTING

Applicable Subsystems:

Accounting

Values:

One of the following character strings:

JES WRITER (for Printer Accounting)

BATCH (for Batch JOBs)

TSO (for TSO Sessions)

STX (for Started Tasks)

DASD SPACE (for DASD Space)

CICS TRANSACTION

IDMS TRANSACTION

IMS TRANSACTION

DB2 TRANSACTION

VTAM TRANSACTION

M204 TRANSACTION

Default Value:

(none)

Used for:

Identifying the type(s) of accounting records that are to be produced during data reduction. Multiple ACCOUNTING statements can be in a SYSIN stream, but each can only have a single argument.

ALIASNAME

Applicable Subsystems:

CICS, IDMS, Network

Values:

An eight character string identifying an alias

Default Value:

(none)

Used for:

Identifying an alias for a CICS region name or an IDMS Central Version or a Network VTAM APPLID

ASCENDING SORT COLUMN

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, Utilities

Values:

YES/NO

Default Value:

(none)

Used for:

Any report where sorting is supported, normally element lists, this indicates the column to be sorted in ascending sequence

AUXILIARY TO CENTRAL STORAGE ACTIVITY GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

AVERAGES

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, Utilities

Values:

YES/NONE

Default Value:

YES

Used for:

Eliminating the calculation for daily averages in the various graph data point member build routines

BATCH PERFORMANCE REPORT

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

BATCH TOTALS

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

PERCENT/NUMERIC

Default Value:

PERCENT

Used for:

Changing the form of the numbers as presented in the Batch Performance Report

BATCHPGN

Applicable Subsystems:

Workload

Values:

Up to 16 PGNs associated with the Batch category

Default Value:

01

Used for:

Identifying the Batch category of work for Workload data reduction

BATCHTAG

Applicable Subsystems:

Workload

Values:

An eight character identifier

Default Value:

BATCH

Used for:

Naming the Batch category of work for reporting

BEGIN DATE

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A date value

Default Value:

00001

Used for:

Identifying the beginning of the period for any report or graph

BEGIN TIME

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A time value (hh.mm.ss)

Default Value:

00.00.00

Used for:

Identifying the beginning of a time slice for any report that supports time slices

BITS PER TRANSMITTED CHARACTER

Applicable Subsystems:

Network

Values:

A numeric value

Default Value:

09

Used for:

Calculating Physical Line loads

BYPASS DUPLICATE CHECKS

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, Utilities

Values:

YES/NO

Default Value:

NO

Used for:

Eliminating the test for duplicate records

CALL DETAIL DAILY COLLECTION SUMMARY REPORT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CALL DETAIL SUMMARY REPORT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CANCEL TRANSIENT OPTION

Applicable Subsystems:

DASM

Values:

YES/NO

Default Value:

NO

Used for:

Disabling the option of treating datasets that were created and deleted in a 24 hour period as transients

CAPTURE CICS DICTIONARY RECORDS

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Processing 110 records, saving the Dictionary records in a CICSDICT file

CENTRAL TO AUXILIARY STORAGE ACTIVITY GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CENTRAL TO EXPANDED STORAGE ACTIVITY GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CENTRAL:EXPANDED STORAGE ACTIVITY RATIO GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CHANNEL ACTIVITY GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CHANNEL EXCEPTION ANALYSIS

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CICS CPU ACTIVITY GRAPH

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CICS EXCEPTION ANALYSIS

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CICS FILTERED VALUES

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Activating the INCLUDE/EXCLUDE capability for CICS graph data point members

CICS I/O ACTIVITY GRAPH

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CICS LINEAR LIST

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CICS PERFORMANCE REPORT

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CICS SUMMARY REPORT

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

YES

Used for:

Selecting the specified report

CICS SYSTEM OVERVIEW

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CICS TERMINAL ACTIVITY GRAPH

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CICS TERMINAL ACTIVITY LIST

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CICS TERMINAL NAME

Applicable Subsystems:

CICS

Values:

An eight character terminal name

Default Value:

(none)

Used for:

Identifying the name of the CICS terminal for an Ad Hoc report

CICS TERMINAL RESPONSE GRAPH

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CICS TERMINAL STATISTICS REPORT

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CICS TRANSACTION ACTIVITY GRAPH

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CICS TRANSACTION ACTIVITY LIST

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CICS TRANSACTION NAME

Applicable Subsystems:

CICS

Values:

An eight character CICS transaction name

Default Value:

(none)

Used for:

Identifying the CICS transaction for an Ad Hoc Report or a CICS transaction profile

CICS TRANSACTION PROFILE

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CICS TRANSACTION RESPONSE GRAPH

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CICS TRANSACTION STATISTICS REPORT

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CICSNAME

Applicable Subsystems:

CICS

Values:

A CICS region name

Default Value:

(none)

Used for:

Identifying the CICS region for which reports or graphs are to be produced

CIMS ACCOUNTING FORMAT

Applicable Subsystems:

Accounting

Values:

YES/T30

Default Value:

(none)

Used for:

Identifying the type of CIMS accounting records to be produced by the Accounting Subsystem during data reduction

CLUSTER CONTROLLER ACTIVITY REPORT

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CLUSTER CONTROLLER INBOUND PIU GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CLUSTER CONTROLLER INBOUND TRAFFIC GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CLUSTER CONTROLLER OUTBOUND PIU GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CLUSTER CONTROLLER OUTBOUND TRAFFIC GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CLUSTER CONTROLLER RETRANSMITTED TRAFFIC GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CLUSTER CONTROLLER STATISTICS REPORT

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CLUSTER CONTROLLER TOTAL TRAFFIC GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

COMMIT

Applicable Subsystems:

DASM

Values:

(none)

Default Value:

(none)

Used for:

Saving the tables created during DASM data reduction into the CIMS Capacity Planner Performance database

CPU ACTIVITY GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

CPU RATIO GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DASD ACTIVITY GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DASD ACTIVITY LIST

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DASD ACTIVITY REPORT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DASD DETAIL REPORT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DASD DEVICE BUSY GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DASD EXCEPTION ANALYSIS

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DASD I/O SERVICE TIME GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DASD LINEAR LIST

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DASD MAPPING REPORT

Applicable Subsystems:

DASM

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DASD QUEUE DELAY GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DASD SUBPOOL SUFFIX

Applicable Subsystems:

DASM

Values:

A numeric value

Default Value:

(none)

Used for:

Building DASM Pie/Bar graphs using the DASDSPnn member of PARMLIB where "nn" is the subpool suffix

DASM ARCHIVAL CANDIDATE LIST

Applicable Subsystems:

DASM

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DASM REBLOCKING CANDIDATE LIST

Applicable Subsystems:

DASM

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DASM RELEASE CANDIDATE LIST

Applicable Subsystems:

DASM

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DASM VSAM STATISTICS

Applicable Subsystems:

DASM

Values:

YES/NO

Default Value:

NO

Used for:

During the DASD data reduction process, accessing the system VSAM catalog to determine how much VSAM space is idle (High-Allocated RBA:High-Used RBA)

DASM X37 CANDIDATE LIST

Applicable Subsystems:

DASM

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DATABASEPGN

Applicable Subsystems:

Workload

Values:

up to 16 PGNs

Default Value:

03

Used for:

Identifying the PGNs that are to be associated with the Database workload category

DATABASETAG

Applicable Subsystems:

Workload

Values:

An eight character name

Default Value:

DATABASE

Used for:

Naming the Database workload category

DATASET ACTIVITY REPORT

Applicable Subsystems:

DASM

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DATE LINE TAG

Applicable Subsystems:

UNIX

Values:

The first six characters in the header of the sar report

Default Value:

(none)

Used for:

Identifying the line that contains the date for the UNIX sar report

DB2 AD HOC AUTH-ID NAME

Applicable Subsystems:

DB2

Values:

An eight character DB2 AUTH-ID

Default Value:

(none)

Used for:

Identifying the DB2 Auth-ID for an Ad Hoc report

DB2 AD HOC PLAN NAME

Applicable Subsystems:

DB2

Values:

An eight character DB2 Plan Name

Default Value:

(none)

Used for:

Identifying the DB2 Plan for an Ad Hoc report

DB2 AUTH-ID FILTERED VALUES

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Determining whether or not the INCLUDE/EXCLUDE filter is to be used to produce HGDLIB graph data point members

DB2 AUTH-ID NAME

Applicable Subsystems:

DB2

Values:

An eight character DB2 Auth-Id

Default Value:

(none)

Used for:

DB2 Auth-ID profile report

DB2 AUTH-ID PROFILE

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 CONNECTION:AUTH-ID COMMIT ACTIVITY GRAPH

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 CONNECTION:AUTH-ID EXCEPTION ANALYSIS

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 CONNECTION:AUTH-ID PERFORMANCE REPORT

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 CONNECTION:AUTH-ID SQL ACTIVITY GRAPH

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 CONNECTION:AUTH-ID STATISTICS REPORT

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 CONNECTION:AUTH-ID SUMMARY REPORT

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 CONNECTION:AUTH-ID THREAD ACTIVITY GRAPH

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 CONNECTION:AUTH-ID THREAD TRANSIT TIME GRAPH

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 CONNECTION:PLAN COMMIT ACTIVITY GRAPH

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 CONNECTION:PLAN EXCEPTION ANALYSIS

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 CONNECTION:PLAN PERFORMANCE REPORT

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 CONNECTION:PLAN SQL ACTIVITY GRAPH

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 CONNECTION:PLAN STATISTICS REPORT

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 CONNECTION:PLAN SUMMARY REPORT

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 CONNECTION:PLAN THREAD ACTIVITY GRAPH

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 CONNECTION:PLAN THREAD TRANSIT TIME GRAPH

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 PLAN FILTERED VALUES

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Determining whether or not the INCLUDE/EXCLUDE filter is to be used to build the HGDLIB data point members

DB2 PLAN NAME

Applicable Subsystems:

DB2

Values:

An eight character DB2 Plan Name

Default Value:

(none)

Used for:

DB2 Plan Profile

DB2 PLAN PROFILE

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 SUBSYSTEM NAME

Applicable Subsystems:

DB2

Values:

An eight character DB2 Subsystem Name

Default Value:

(none)

Used for:

Identifying the DB2 Subsystem to be used for the reports or graphs

DB2 SYSTEM WIDE AD HOC REPORT

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2 SYSTEM WIDE SUMMARY REPORT

Applicable Subsystems:

DB2

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DB2NAME

Applicable Subsystems:

DB2

Values:

An eight character DB2 connect name

Default Value:

(none)

Used for:

Identifying the DB2 connect name to be used for the reports and graphs

DBRC REGION

Applicable Subsystems:

IMS

Values:

An eight character IMS DBRC name

Default Value:

(none)

Used for:

Identifying the IMS DBRC during IMS data reduction

CPPRPASS

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

The CPPR password associated with a specific CPU serial number. Up to six individual passwords can be specified, separated by commas. This phrase normally goes in the GLOBAL member of PARMLIB.

Default Value:

(none)

Used for:

Authorization to execute any CIMS Capacity Planner program

DEBUGON

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

(none)

Default Value:

(none)

Used for:

Providing SNAP dumps at strategic junctures throughout the entire CIMS Capacity Planner system. Used for debugging only.

DESCENDING SORT COLUMN

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A numeric value

Default Value:

(none)

Used for:

Identifying the column to be sorted in descending order for reports where sorts are supported

DETAIL

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

YES/NO

Default Value:

YES

Used for:

In Statistics reports, turning off the second and third line of detail information (percentages, values)

DEVICE TYPE REPORT

Applicable Subsystems:

DASM

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DLI REGION

Applicable Subsystems:

IMS

Values:

An IMS DL/1 Region name

Default Value:

(none)

Used for:

Identifying the IMS DL/1 region during data reduction

DSNAME ACTIVITY REPORT

Applicable Subsystems:

DASM

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DSNAME DETAIL REPORT

Applicable Subsystems:

DASM

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

DSNAME RECORDS

Applicable Subsystems:

Workload

Values:

INCLUDE/EXCLUDE

Default Value:

INCLUDE

Used for:

During Workload data reduction, allowing the exclusion of SMF type 14, 15, and 6x records

DSNAME SELECTION

Applicable Subsystems:

DASM

Values:

INCLUDE/EXCLUDE

Default Value:

EXCLUDE

Used for:

Determining whether the DSNAMEs in the DSNLIST are to be EXCLUDED or INCLUDED during DASM data reduction

DSNAME

Applicable Subsystems:

DASM

Values:

Up to 44 character DSNAME

Default Value:

(none)

Used for:

Identifying the name of the data set for the DSNAME Ad Hoc report

DSNDBM1 REGION

Applicable Subsystems:

IMS

Values:

An eight character IMS DSNDBM1 region name

Default Value:

(none)

Used for:

Identifying the IMS DSNDBM1 region during data reduction processing

DSNMSTR REGION

Applicable Subsystems:

IMS

Values:

An eight character IMS DSNMSTR region name

Default Value:

(none)

Used for:

Identifying the IMS DSNMSTR region during data reduction processing

DUMP SMF STATISTICS

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

YES/NO

Default Value:

NO

Used for:

A variety of content-specific data during data reduction for all the subsystems

ELAPSED TIME FROM JOB INIT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Normally the JOB turnaround time is defined as the time from JES reader until JOB termination. If you have a JOB scheduling system, the JOBs can be read into a HOLD class and released at a later time. In this case, the turnaround time is better defined as the time from JOB initiation until JOB termination. This parameter tells the Workload data reduction progam to calculate the JOB turnaround time in this manner.

END DATE

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A date value

Default Value:

2099365

Used for:

Identifying the end date for data reduction, reports and graphs

END TIME

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A time value

Default Value:

24.00.00

Used for:

Identifying the end time for data reduction, reports and graphs where time slices are supported

ENQ QNAME

Applicable Subsystems:

Workload, DASM

Values:

An eight character ENQ Queue Name

Default Value:

(none)

Used for:

Identifying the ENQ QNAME for an ENQ Ad Hoc report

ENQ RNAME

Applicable Subsystems:

Workload, DASM

Values:

Up to 44 character ENQ Resource Name

Default Value:

(none)

Used for:

Identifying the ENQ Resource Name for an ENQ Ad Hoc report

ESA STORAGE ACTIVITY RATIO GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

EXCLUDE TEMPORARY DSNAMES

Applicable Subsystems:

DASM

Values:

YES/NO

Default Value:

NO

Used for:

Eliminating the consideration of temporary dsnames when reducing data into the Dataset Activity Table (002)

EXCLUSIVE ELEMENT MASK

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

An eight position mask of 1's or 0's

Default Value:

00000000

Used for:

EXCLUDE processing during report and graphs production. The mask tells CIMS Capacity Planner whether or not to consider the contents of a position in a key field when that field is compared to an item in the EXCLUDE list. If the position is set to "1", that position is ignored.

EXPANDED TO AUXILIARY STORAGE ACTIVITY GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

EXPANDED TO CENTRAL STORAGE ACTIVITY GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

EXPANDED:AUXILIARY STORAGE ACTIVITY RATIO GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

FILTER

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

Up to 16 numeric values, separated by commas

Default Value:

(none)

Used for:

This parameter is used for a variety of purposes throughout the entire CIMS Capacity Planner system, all the way from selecting SMF records to send to SYSUT2 to determining the specific structure of a UNIX sar report

FOOT1

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

Up to 60 character footnote to be appended to reports

Default Value:

(none)

Used for:

Footnotes. The end of the footnote is delimited by a double blank (two consecutive x'40').

FOOT2

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

(see FOOT1)

Default Value:

(see FOOT1)

Used for:

Secondary footnote.

FORCE CICS INPUT

Applicable Subsystems:

CICS

Values:

YES/NO

Default Value:

NO

Used for:

Overriding the duplicate check facility during CICS data reduction

FORCE DETAIL TABLE PROCESSING

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

YES/NO

Default Value:

NO

Used for:

Using detail tables instead of summary tables when producing graphs

FORCE IDMS INPUT

Applicable Subsystems:

IDMS

Values:

YES/NO

Default Value:

NO

Used for:

Overriding the duplicate check facility during IDMS data reduction

FORCE IMS LOG

Applicable Subsystems:

IMS

Values:

YES/NO

Default Value:

NO

Used for:

Overriding the duplicate checking facility during IMS data reduction

FORCE VTAM INPUT

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Overriding the duplicate checking facility during Network data reduction

GDDM BATCH PROCESS

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

YES/NO

Default Value:

NO

Used for:

Notifying CIMS Capacity Planner that this is a batch run (no TSO terminal)

GDDM CHART NAME

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

An eight character chart name by which this chart is to be saved (ICUDATA and ICUFORMS)

Default Value:

(none)

Used for:

GDDM batch, saving the created chart

GDDM DONT CORRUPT TEMPLATE HEADER

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

YES/NO

Default Value:

NO

Used for:

GDDM batch, disregarding title information

GDDM FORM NAME

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

An eight character template name in ICUFORMS

Default Value:

(none)

Used for:

GDDM batch, the naming of the template for a chart

GDDM GDF NAME

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

An eight character GDF member name for GDDM batch

Default Value:

(none)

Used for:

GDDM batch, the naming of the GDF member

GDDM PRINT CONTROLS

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

Four fields (positional, separated by commas) denoting:

A numeric value for Vertical offset

A numeric value for Horizontal offset

A numeric value, % character width

A numeric value, % character length

Default Value:

(none)

Used for:

GDDM batch, setting printer controls for various printers and plotters

GDDM PRINTER NAME

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

An eight character GDDM printer name

Default Value:

(none)

Used for:

Identifying the GDDM printer in batch

GENERIC DAILY OVERVIEW

Applicable Subsystems:

Generic

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

GENERIC ELEMENT ACTIVITY LIST

Applicable Subsystems:

Generic

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

GENERIC ELEMENT KEY

Applicable Subsystems:

Generic

Values:

An eight character key for Generic Ad Hoc reports

Default Value:

(none)

Used for:

Selecting records for a Generic Ad Hoc report

GENERIC ELEMENT MASK

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

An 8 position mask of 1's or 0's

Default Value:

00000000

Used for:

Changing the makeup of a key for any report in the CIMS Capacity Planner system that uses a key. If the position in the mask is "0", the character is unaffected. If the position is a "1", that position is replaced by an "*". If the mask is set to all "1's", key substitution is performed based on a PARMLIB member, depending on the subsystem. See specifics in the above mentioned subsystem chapters.

GENERIC LINEAR LIST

Applicable Subsystems:

Generic

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

GENERIC PERFORMANCE REPORT

Applicable Subsystems:

Generic

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

GENERIC STATISTICS REPORT

Applicable Subsystems:

Generic

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

GENERIC USER KEY LABEL

Applicable Subsystems:

Generic

Values:

An eight character label that replaces "USERKEY" in the header line of the Generic Linear List report

Default Value:

USERKEY

Used for:

Customizing the header line in the Generic Linear List

GEOGRAPHIC LOCATION

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

One of the following:

USA (mm/dd/yy and period as decimal point)

EUROPE (dd.mm.yy and comma as decimal point)

GREAT BRITAIN (dd/mm/yy and period as decimal point)

Default Value:

USA

Used for:

Formatting dates and numbers in the reports and graphs

GMT OFFSET

Applicable Subsystems:

CICS, DB2

Values:

Two positional fields as follows:

1) First position W(est) or E(ast)

2) Second position a numeric value in hours

Default Value:

(none)

Used for:

Co-ordinating time in the CICS 110 record with local time during data reduction. Also used with DB2. A value of "W" in the First position means subtracting the hours value from GMT to get local time. A value of "E" means adding the hour value to GMT to get local time.

GRAPH PERIOD

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic

Values:

One of the following:

HOURLY

DAILY

WEEKLY

MONTHLY

Default Value:

(none)

Used for:

Establishing the period for a set of graph data point members. See the section on producing graphs for more information.

HGDF DATA ONLY

Applicable Subsystems:

Utilities

Values:

YES/NO

Default Value:

NO

Used for:

SSA1HGDF, the HGDLIB member formatting and printing, do not print header information for the report

HGDLIB 1ST MEMBER NAME

Applicable Subsystems:

Utilities

Values:

An eight character HGDLIB member name

Default Value:

(none)

Used for:

Identifying the first of two members to be merged by SSA1HGDM

HGDLIB 2ND MEMBER NAME

Applicable Subsystems:

Utilities

Values:

An eight character HGDLIB member name

Default Value:

(none)

Used for:

Identifying the second of two members to be merged by SSA1HGDM

HGDLIB MEMBER COLUMNS

Applicable Subsystems:

Utilities

Values:

Either of the following two values:

1) APPEND

2) COMBINE

Default Value:

APPEND

Used for:

The HGDLIB member merge utility, SSA1HGDM, determining whether the columns for members should be combined (added together) or appended (merged alongside the other column(s))

HGDLIB MEMBER NAME SUFFIX

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, Utilities

Values:

A one position alpha-numeric character

Default Value:

(none)

Used for:

Appending a one character suffix to the end of the HGDLIB member name, overriding the eighth position as necessary.

HGDLIB NEW MEMBER NAME

Applicable Subsystems:

Utilities

Values:

An eight character HGDLIB member name

Default Value:

(none)

Used for:

Identifying the HGDLIB member to be produced as a result of merging two HGDLIB members together

IDENTIFY

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

(none)

Default Value:

(none)

Used for:

This diagnostic keyword lists the CPU serial number, the SMF SID, the CPU model and the CPU coefficient.

IDMS ACCOUNTING TASK NAME

Applicable Subsystems:

IDMS

Values:

YES/NO

Default Value:

NO

Used for:

IDMS accounting, using the dialogue name instead of the USERID in account records

IDMS BATCH

Applicable Subsystems:

IDMS

Values:

INCLUDE/EXCLUDE

Default Value:

INCLUDE

Used for:

IDMS data reduction, excluding batch tasks

IDMS CPU ACTIVITY GRAPH

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

YES/NO

Default Value:

00

Used for:

Selecting the specified report

IDMS D/B ACTIVITY GRAPH

Applicable Subsystems:

IDMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IDMS EXCEPTION ANALYSIS

Applicable Subsystems:

IDMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IDMS FILTERED VALUES

Applicable Subsystems:

IDMS

Values:

YES/NO

Default Value:

NO

Used for:

HGDLIB members, directing CIMS Capacity Planner to use the values that resulted from INCLUDE/EXCLUDE filtering

IDMS I/O ACTIVITY GRAPH

Applicable Subsystems:

IDMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IDMS NON-BATCH

Applicable Subsystems:

IDMS

Values:

INCLUDE/EXCLUDE

Default Value:

INCLUDE

Used for:

IDMS data reduction, exlcuding non-batch tasks

IDMS PERFORMANCE REPORT

Applicable Subsystems:

IDMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IDMS SUMMARY REPORT

Applicable Subsystems:

IDMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IDMS TERMINAL ACTIVITY GRAPH

Applicable Subsystems:

IDMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IDMS TERMINAL NAME

Applicable Subsystems:

IDMS

Values:

An eight character IDMS terminal name

Default Value:

(none)

Used for:

Identifying the terminal to be used for the IDMS Ad Hoc report

IDMS TERMINAL STATISTICS REPORT

Applicable Subsystems:

IDMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IDMS TRANSACTION ACTIVITY GRAPH

Applicable Subsystems:

IDMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IDMS TRANSACTION NAME

Applicable Subsystems:

IDMS

Values:

An eight character IDMS transaction name

Default Value:

(none)

Used for:

Identifying the IDMS transaction name to be used for the IDMS Ad Hoc report or the IDMS Transaction profile

IDMS TRANSACTION PROFILE

Applicable Subsystems:

IDMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IDMS TRANSACTION RESPONSE GRAPH

Applicable Subsystems:

IDMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IDMS TRANSACTION STATISTICS REPORT

Applicable Subsystems:

IDMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IDMSNAME

Applicable Subsystems:

IDMS

Values:

An eight character IDMS region name or CV number

Default Value:

(none)

Used for:

Identifying the IDMS region for which reports are to be produced, or which graphs are to be built

IGNORE PERIOD 1ST HOUR

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A numeric value ranging from 00 - 24

Default Value:

00

Used for:

Identifying the beginning of the Lunch Break

IGNORE PERIOD 2ND HOUR

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A numeric value ranging from 00 - 24

Default Value:

00

Used for:

Identifying the end of the Lunch Break

IMS CONTROL

Applicable Subsystems:

IMS

Values:

An eight character JOBNAME

Default Value:

(none)

Used for:

Identifying the Job Name of the IMS Control Region

IMS CPU ACTIVITY GRAPH

Applicable Subsystems:

IMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IMS DUMP

Applicable Subsystems:

IMS

Values:

YES/NO

Default Value:

NO

Used for:

During problem determination, forcing IMS to display storage contents just before abnormal termination

IMS EXCEPTION ANALYSIS

Applicable Subsystems:

IMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IMS FILTERED VALUES

Applicable Subsystems:

IMS

Values:

YES/NO

Default Value:

NO

Used for:

Determining whether or not the INCLUDE/EXCLUDE filter is to be used when building HGDLIB members

IMS I/O ACTIVITY GRAPH

Applicable Subsystems:

IMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IMS PAGING ACTIVITY GRAPH

Applicable Subsystems:

IMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IMS PERFORMANCE REPORT

Applicable Subsystems:

IMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IMS SUMMARY REPORT

Applicable Subsystems:

IMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IMS SYSTEM

Applicable Subsystems:

IMS

Values:

A four character IMS system name

Default Value:

(none)

Used for:

Identifying the IMS system for reports or graphs

IMS TERMINAL ACTIVITY GRAPH

Applicable Subsystems:

IMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IMS TERMINAL NAME

Applicable Subsystems:

IMS

Values:

An eight character IMS terminal name

Default Value:

(none)

Used for:

Identifying the IMS terminal name for IMS Ad Hoc reports

IMS TERMINAL RESPONSE DISTRIBUTION REPORT

Applicable Subsystems:

IMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IMS TERMINAL STATISTICS REPORT

Applicable Subsystems:

IMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IMS TRANSACTION ACTIVITY REPORT

Applicable Subsystems:

IMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IMS TRANSACTION NAME

Applicable Subsystems:

IMS

Values:

An eight character IMS transaction name

Default Value:

(none)

Used for:

Identifying the IMS transaction name for IMS Ad Hoc reports or the IMS transaction profile report

IMS TRANSACTION PROFILE

Applicable Subsystems:

IMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IMS TRANSACTION RESPONSE GRAPH

Applicable Subsystems:

IMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

IMS TRANSACTION STATISTICS REPORT

Applicable Subsystems:

IMS

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

INCLUSIVE ELEMENT MASK

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

An 8 position mask of 1's or 0's

Default Value:

00000000

Used for:

INCLUDE processing during report and graphs production. The mask tells CIMS Capacity Planner whether or not to consider the contents of a position in a key field when that field is compared to an item in the INCLUDE list. If the position is set to "1", that position is ignored.

JOB STATISTICS REPORT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

JOB#INT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

The JOBNAME Ad Hoc report, including the SMF type 30 interval records in addition to the JOB termination records in the report

JOBCLASS

Applicable Subsystems:

Workload

Values:

Up to 26 alphanumeric characters

Default Value:

ABCDEFGHIJKLMNOPQRSTUVWXYZ

Used for:

Identifying the Job Classes for the Batch Performance report

JOBNAME

Applicable Subsystems:

Workload

Values:

An eight character Job Name

Default Value:

(none)

Used for:

Identifying the name of the Job for the JOBNAME Ad Hoc report

JOBNAME:CPU ACTIVITY LIST

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

JOBNAME:CPU ACTIVITY REPORT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Determining whether or not the JOBNAME:CPU Activity report is to be produced.

JOBNAME:CPU LINEAR LIST

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Synonym for the JOBNAME:CPU Activity report

LATE SHIFT FIRST HOUR

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A numeric value ranging from 00 - 24

Default Value:

16

Used for:

Identifying the beginning of the Late shift. The Late shift always ends at midnight

LNGVLIB MEMBER NAME SUFFIX

Applicable Subsystems:

LongView

Values:

A one character alphanumeric suffix

Default Value:

(none)

Used for:

Appending an optional suffix to the end of the set of LongView members produced

LOCAL HOLIDAYS

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

INCLUDE/EXCLUDE

Default Value:

INCLUDE

Used for:

Determining whether or not to honor the HOLIDAYS member of PARMLIB in determining whether to process a particular day's worth of data for reports and graphs

LUNCH BREAK BEGIN HOUR

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A numeric value ranging from 00 - 24

Default Value:

00

Used for:

Identifying the beginning of the Lunch Break

LUNCH BREAK END HOUR

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A numeric value ranging from 00—24

Default Value:

00

Used for:

Identifying the end of the Lunch Break

M/P .X FACTOR

Applicable Subsystems:

Workload

Values:

A numeric value

Default Value:

10

Used for:

For PR/SM CPU % busy graphs, assessing the effect of a potential modification in processor power

M/P FACTOR

Applicable Subsystems:

CICS, IDMS, IMS, Model 204, DB2

Values:

A numeric value

Default Value:

1

Used for:

Specifying the number of engines to be used to determine % busy for a component

M204 ACCOUNT NAME

Applicable Subsystems:

Model 204

Values:

An eight character Model 204 Account name

Default Value:

(none)

Used for:

Identifying the Model 204 account name for selection in the Model 204 Ad Hoc report

M204 CPU ACTIVITY GRAPH

Applicable Subsystems:

Model 204

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

M204 EXCEPTION ANALYSIS

Applicable Subsystems:

Model 204

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

M204 FILTERED VALUES

Applicable Subsystems:

Model 204

Values:

YES/NO

Default Value:

NO

Used for:

Whether or not INLCUDE/EXCLUDE filtering should be used when building HGDLIB members

M204 I/O ACTIVITY GRAPH

Applicable Subsystems:

Model 204

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

M204 LINEAR LIST

Applicable Subsystems:

Model 204

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

M204 PERFORMANCE REPORT

Applicable Subsystems:

Model 204

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

M204 SUMMARY REPORT

Applicable Subsystems:

Model 204

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

M204 TERMINAL ACTIVITY GRAPH

Applicable Subsystems:

Model 204

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

M204 TERMINAL ACTIVITY LIST

Applicable Subsystems:

Model 204

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

M204 TERMINAL RESPONSE GRAPH

Applicable Subsystems:

Model 204

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

M204 TERMINAL STATISTICS REPORT

Applicable Subsystems:

Model 204

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

M204 TRANSACTION ACTIVITY GRAPH

Applicable Subsystems:

Model 204

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

M204 TRANSACTION ACTIVITY LIST

Applicable Subsystems:

Model 204

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

M204 TRANSACTION RESPONSE GRAPH

Applicable Subsystems:

Model 204

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

M204 TRANSACTION STATISTICS REPORT

Applicable Subsystems:

Model 204

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

M204 USERID PROFILE

Applicable Subsystems:

Model 204

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

M204 USERID

Applicable Subsystems:

Model 204

Values:

An eight character Model 204 USERID

Default Value:

(none)

Used for:

Identifying the Model 204 USERID to be used for M204 Ad Hoc reports and the M204 USERID Profile

MIPSET

Applicable Subsystems:

Workload

Values:

A numeric value

Default Value:

(none)

Used for:

Identifying the MIP rate for a processor so that CIMS Capacity Planner can establish an optimum paging line for the Page Ratio graph

NCP ACTIVITY GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NCP CHANNEL HOLD QUEUE LENGTH GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NCP FREE BUFFER HIGH WATERMARK GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NCP FREE BUFFER LOW WATERMARK GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NCP SLOWDOWN TIME COUNT GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK EXCEPTION ANALYSIS

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK INBOUND ACTIVITY GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK INBOUND TRAFFIC GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK LINEAR LIST

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK NODE AVAILABILITY LIST

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK OUTBOUND ACTIVITY GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK OUTBOUND TRAFFIC GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK PERFORMANCE REPORT

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK PHYSICAL EXCEPTION ANALYSIS

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK PHYSICAL LINE ACTIVITY REPORT

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK PHYSICAL LINE CAPACITY GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK PHYSICAL LINE INBOUND TRAFFIC GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK PHYSICAL LINE OUTBOUND TRAFFIC GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK PHYSICAL LINE RETRANSMITTED TRAFFIC GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK PHYSICAL LINE STATISTICS REPORT

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK PHYSICAL LINE TOTAL TRAFFIC GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK SUMMARY REPORT

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK TERMINAL ACTIVITY GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK TERMINAL ACTIVITY LIST

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK TERMINAL NAME

Applicable Subsystems:

Network

Values:

An eight character VTAM LU name

Default Value:

(none)

Used for:

Identifying the name of a Network terminal for an Ad Hoc report or a terminal profile report

NETWORK TERMINAL PROFILE

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK TERMINAL STATISTICS REPORT

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK TOTAL TRAFFIC GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORK TRANSACTION RESPONSE GRAPH

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

NETWORKPGN

Applicable Subsystems:

Workload

Values:

Up to 16 PGNs, separated by commas

Default Value:

14

Used for:

Identifying the Performance Group Numbers associated with the Network category of work

NETWORKTAG

Applicable Subsystems:

Workload

Values:

An eight character label

Default Value:

NETWORK

Used for:

Specifying the label for the network category of work

NO HGDLIB NULLS

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

YES/NO

Default Value:

NO

Used for:

During HGDLIB member creation, determining whether or not zeroes should be converted to nulls (blanks). The default is to replace all 00 or .00 values with blanks

NO HGDLIB SKIPS

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

YES/NO

Default Value:

NO

Used for:

During HGDLIB member creation, determining whether or not every other X-Axis label should be skipped for greater than 13 rows of data. The default is to skip every other label in order to improve the appearance of the graph.

NO SMF SID

Applicable Subsystems:

Generic

Values:

YES/NO

Default Value:

NO

Used for:

Generic data reduction, determining whether or not the input contains an SMF SID. The default is that it does.

O/STAG

Applicable Subsystems:

Workload

Values:

An eight character label for the O/S category of work

Default Value:

O/S

Used for:

Specifying the label for the O/S category of work, that is, in reality, a capture ratio representing the difference between the amount of CPU used and the amount of CPU associated with PGNs

ONLINEPGN

Applicable Subsystems:

Workload

Values:

Up to 16 PGNs, separated by commas

Default Value:

12

Used for:

Specifying the PGNs for the ONLINE category of work

ONLINETAG

Applicable Subsystems:

Workload

Values:

An eight character label for the ONLINE category of work

Default Value:

ONLINE

Used for:

Specifiying the label for the ONLINE category of work

OWNER ALLOCATION THRESHOLD

Applicable Subsystems:

DASM

Values:

A numeric value

Default Value:

(none)

Used for:

For the DASM Device Type report, specifying the value in Megabytes that serves as a lower threshold for reporting who owns space in the DASD farm

PAGING ACTIVITY GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

PAGING RATIO GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

PASSWORD

Applicable Subsystems:

Utilities

Values:

A password

Default Value:

(none)

Used for:

Supplying a password when extending a trial period or evaluating a new subsystem (REFRESH)

PGMNAME

Applicable Subsystems:

Workload

Values:

An eight character program name

Default Value:

(none)

Used for:

The Program Name Ad Hoc report, providing the name of the program for which the report is to be produced

PGN SERVICE UNIT STATISTICS REPORT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

PMDC SHORT TASK RECORDS

Applicable Subsystems:

IDMS

Values:

YES/NO

Default Value:

NO

Used for:

When the PMDC monitor input is used by the IDMS data reduction program, indicates that short task records are being processed

PRIMARY ELEMENT KEY

Applicable Subsystems:

CICS, IDMS

Values:

One of the following:

USERID

TERMINAL

PROGRAM

Default Value:

TRANSACTION

Used for:

The primary key to the transaction statistics table is the transaction name. This changes the key during data reduction for IDMS or CICS

PRIME SHIFT FIRST HOUR

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A numeric value ranging from 00—24

Default Value:

08

Used for:

Identifying the beginning of Prime Shift. Early shift always begins at midnight and runs up to this hour.

PRINTER ACTIVITY LIST

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

PRINTER ACTIVITY REPORT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

PRINTER LINEAR LIST

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

PRINTER LINES PER PAGE

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A numeric value

Default Value:

60

Used for:

Modifying the length of a page for several reports

PRINTER STATISTICS REPORT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

PROCESSOR EXCEPTION ANALYSIS

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

PROGRAM STATISTICS REPORT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

RELATIVE BEGIN MONTH

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A relative value (*-nn)

Default Value:

(none)

Used for:

Optionally setting the Begin Date based on the current execution date

RELATIVE BEGIN WEEK

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A relative value (*-nn)

Default Value:

(none)

Used for:

Optionally setting the Begin Date based on the current execution date

RELATIVE END MONTH

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A relative value (*-nn)

Default Value:

(none)

Used for:

Optionally setting the End Date based on the current execution date

RELATIVE END WEEK

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A relative value (*-nn)

Default Value:

(none)

Used for:

Optionally setting the End Date based on the current execution date

RELATIVE MONTH

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A relative value (*-nn)

Default Value:

(none)

Used for:

Optionally setting the Begin Date and End Date based on the current execution date

RELATIVE WEEK

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A relative value (*-nn)

Default Value:

(none)

Used for:

Optionally setting the Begin Date and End Date based on the current execution date

REPORT HEADINGS

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

INCLUDE/EXCLUDE

Default Value:

INCLUDE

Used for:

Determining whether or not to write headings at the top of each page for selected reports

REPORT LANGUAGE

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

One of the following:

ENGLISH

DEUTSCH

Default Value:

ENGLISH

Used for:

Changing the target language for the reports

RMF RECORDS

Applicable Subsystems:

Workload

Values:

INCLUDE/EXCLUDE

Default Value:

INCLUDE

Used for:

Excluding RMF (type 7x) records during Workload data reduction

SCANONLY

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

YES/NO

Default Value:

NO

Used for:

During data reduction, determining whether or not to save the tables in the Performance database

SCHEDLIB WEEKLY FORMAT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

When producing the HGDLIB member for the availability graphs, determining whether or not the SCHEDLIB is in weekly or monthly format (SSA1TGRK)

SELECTED DAY or SELECTED DAYS

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

One of the following:

MONDAY

TUESDAY

WEDNESDAY

THURSDAY

FRIDAY

SATURDAY

SUNDAY

WEEKDAYS

ALL DAYS

Default Value:

ALL DAYS (for non-graph programs)

WEEKDAYS (for graph programs)

Used for:

Selecting days to be processed

SELECTED SHIFT 1ST HOUR

Applicable Subsystems:

Workload

Values:

A numeric value ranging from 00—24

Default Value:

00

Used for:

Identifying the beginning of the shift for shift reports and graphs, a special set of reports and graphs where the shift definition can span calendar days

SELECTED SHIFT 2ND HOUR

Applicable Subsystems:

Workload

Values:

A numeric value ranging from 00 - 24

Default Value:

00

Used for:

Identifying the end of the shift for shift reports and graphs, a special set of reports and graphs where the shift definition can span calendar days

SELECTED SYSTEM

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

One of the following:

A four (or less) character SMF SID

The character "*" that means the system under which the program is running

INCLUDE(5) for data reduction which means the first 5 registered SMF SIDs (Workload only) discovered in the input stream

Default Value:

*

Used for:

Identifying the SMF SID that is to be used to store tables in the Performance database

SELECTED TABLES

Applicable Subsystems:

Utilities

Values:

Up to 16 numeric values, separated by commas

Default Value:

(none)

Used for:

Identifying the tables to be deleted by the table delete utility (SSA1PDBD)

SELECTED VOLUME

Applicable Subsystems:

DASM

Values:

A six character Volume Serial Number

Default Value:

(none)

Used for:

Identifying a specific volume for Volume Activity reports or for Volume Mapping reports

SHIFT BASIS

Applicable Subsystems:

Workload

Values:

CONTINUOUS/NON-CONTINUOUS

Default Value:

NON-CONTINUOUS

Used for:

For Shift reports and graphs, determining whether or not the shift begin and end times are points in a single 24 hour period (non-continuous) or whether they span days (an entire weekend, for example)

SMF RECORD SET

Applicable Subsystems:

Workload

Values:

Up to 16 numeric values, separated by commas

Default Value:

(none)

Used for:

Identifying the SMF record types to be written to an output file for subsequent processing. Up to nine SMF RECORD SET statements can be included in the SYSIN stream. The first statement refers to the DDNAME of SYSUT000, the second to DDNAME of SYSUT001, and so forth

SMF USER RECORD NUMBER

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

A numeric value ranging from 00—255

Default Value:

(none)

Used for:

Identifying the SMF record number for many of the data reduction programs that accept SMF User records

SMFILE

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

This is a context-dependant variable. The actual values for this keyword are listed in each subsystem chapter.

Default Value:

(none)

Used for:

Identifying the format of the incoming data file

SPACE STATS

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

YES/NO

Default Value:

YES

Used for:

During data reduction, showing how much DASD space was used in each of the various files

STCTAG

Applicable Subsystems:

Workload

Values:

An eight character label

Default Value:

STC

Used for:

Identifying the label of the STC category of work

SUMMARY REPORT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

YES

Used for:

Selecting the specified report

SUPPRESS WTO MESSAGES

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

YES/NO

Default Value:

NO

Used for:

Preventing WTO messages from being written to the system console

SYSTEM TASKS

Applicable Subsystems:

Workload

Values:

INCLUDE/EXCLUDE

Default Value:

INCLUDE

Used for:

During workload data reduction, determining whether or not system tasks should be included in the O/S workload category

SYSTEM

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

MVS/MSP

Default Value:

MVS

Used for:

Identifying the Operating system under which execution is being monitored. Used to support Fujitsu MSP

SYSTSO

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

YES/NO

Default Value:

NO

Used for:

For reports, determining whether or not the report is to be sent to a TSO terminal. Used for ISPF/PDF support

SYSUT2

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

YES/NO

Default Value:

NO

Used for:

During data reduction, if selected record spooling is supported, this keyword turns on the function

TAPE DRIVE ACTIVITY LIST

Applicable Subsystems:

Tape

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

TAPE DRIVE DEVICE ACTIVE GRAPH

Applicable Subsystems:

Tape

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

TAPE DRIVE DEVICE ALLOCATION GRAPH

Applicable Subsystems:

Tape

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

TAPE DRIVE EXCEPTION ANALYSIS

Applicable Subsystems:

Tape

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

TAPE DRIVE LINEAR LIST

Applicable Subsystems:

Tape

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

TAPE DRIVE MOUNT PENDING GRAPH

Applicable Subsystems:

Tape

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

TAPE DRIVE STATISTICS REPORT

Applicable Subsystems:

Tape

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

TAPE STORAGE BY OWNERID REPORT

Applicable Subsystems:

Tape

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

TAPE VOLUME MAPPING REPORT

Applicable Subsystems:

Tape

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

TAPE VOLUME SUMMARY REPORT

Applicable Subsystems:

Tape

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

TITLE

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

Up to 54 character title

Default Value:

(none)

Used for:

Specifying the data center name for most of the reports

TOP LABEL

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

Up to 64 character top label for most reports

Default Value:

(none)

Used for:

Specifying an optional top label for most reports

TRACEO

Applicable Subsystems:

Workload, CICS, IDMS, DASM, IMS, Network, Model 204, DB2, Tape, UNIX, Generic, LongView, Utilities

Values:

(none)

Default Value:

(none)

Used for:

Turning on a module trace for diagnostic purposes

TSO ACTIVITY GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

TSO COMMAND STATISTICS REPORT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

TSO PERFORMANCE REPORT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

TSO TRANSACTION ACTIVITY GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

TSO TRANSACTION RESPONSE GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

TSO USER STATISTICS REPORT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

TSOPGN

Applicable Subsystems:

Workload

Values:

Up to 16 numeric values, separated by commas

Default Value:

02

Used for:

Identifying the PGNs associated with the TSO category of work

TSOTAG

Applicable Subsystems:

Workload

Values:

An eight character label

Default Value:

TSO

Used for:

Identifying the label for the TSO category of work

UNIX BUFFER READ ACTIVITY GRAPH

Applicable Subsystems:

UNIX

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

UNIX BUFFER WRITE ACTIVITY GRAPH

Applicable Subsystems:

UNIX

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

UNIX DISK STATISTICS REPORT

Applicable Subsystems:

UNIX

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

UNIX FILE TABLE STATISTICS REPORT

Applicable Subsystems:

UNIX

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

UNIX INODE TABLE STATISTICS REPORT

Applicable Subsystems:

UNIX

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

UNIX LOCK TABLE STATISTICS REPORT

Applicable Subsystems:

UNIX

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

UNIX LOGICAL READ ACTIVITY GRAPH

Applicable Subsystems:

UNIX

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

UNIX LOGICAL WRITE ACTIVITY GRAPH

Applicable Subsystems:

UNIX

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

UNIX PAGING ACTIVITY GRAPH

Applicable Subsystems:

UNIX

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

UNIX PHYSICAL READ ACTIVITY GRAPH

Applicable Subsystems:

UNIX

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

UNIX PHYSICAL WRITE ACTIVITY GRAPH

Applicable Subsystems:

UNIX

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

UNIX PROCESS TABLE STATISTICS REPORT

Applicable Subsystems:

UNIX

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

UNIX SERVER SUMMARY REPORT

Applicable Subsystems:

UNIX

Values:

YES/NO

Default Value:

YES

Used for:

Selecting the specified report

UNIX SWAPPING ACTIVITY GRAPH

Applicable Subsystems:

UNIX

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

UNIX SYSTEM CALLS GRAPH

Applicable Subsystems:

UNIX

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

USERID

Applicable Subsystems:

Workload, Model 204

Values:

An eight character USERID

Default Value:

(none)

Used for:

A Model 204 or a TSO Ad Hoc report, identifying the USERID(s) to be included in the report

VM USER ACTIVITY GRAPH

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

VM USER STATISTICS REPORT

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

VM USER:CPU ACTIVITY LIST

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

VM USER:CPU LINEAR LIST

Applicable Subsystems:

Workload

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

VOLSER

Applicable Subsystems:

DASM

Values:

A six character Volume Serial number

Default Value:

(none)

Used for:

For the DSNAME Ad Hoc report, limiting the scope of reporting to the specified Volume

VOLUME ACTIVITY REPORT

Applicable Subsystems:

DASM

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

VOLUME ALLOCATION REPORT

Applicable Subsystems:

DASM

Values:

YES/NO

Default Value:

NO

Used for:

Selecting the specified report

VOLUME SELECTION CRITERIA

Applicable Subsystems:

DASM

Values:

TOPnn (where "nn" is the number of volumes)

Default Value:

05

Used for:

Specifying how many of the busiest volumes to list for the Volume Activity report

VTAM FILTERED VALUES

Applicable Subsystems:

Network

Values:

YES/NO

Default Value:

NO

Used for:

Determining whether or not the INCLUDE/EXCLUDE filter is to be used to produce HGDLIB members

VTAMNAME

Applicable Subsystems:

Network

Values:

An eight character VTAM APPLID

Default Value:

(none)

Used for:

Identifying the VTAM region for reports and graphs

WEEKS TO KEEP ONLINE

Applicable Subsystems:

Utilities

Values:

A numeric value

Default Value:

(none)

Used for:

The Archive utility uses this value to determine how many weeks worth of detail tables to leave in the PDB

WORKLOAD PIE SLICES

Applicable Subsystems:

Workload

Values:

A numeric value

Default Value:

(none)

Used for:

The CPU-Time-by-JOB pie chart program (SSA1TGRS) uses this value to determine how many pie slices to build

7

CIMS Capacity Planner Messages

Message Number: CPPR0001S

Message Text: SECURITY VIOLATION: UNAUTHORIZED CPU

Where it came from: SSA1400

What it means: This message is issued at program start time for one of the reporting subsystems. It indicates that the program is being executed on a processor for which no CPPRPASS has been supplied. CIMS Capacity Planner programs will not execute on an unauthorized CPU.

What to do: Contact the CIMS Lab for the proper CPPRPASS for you CPU. Have the CPU Serial Number handy.

Message Number: CPPR0002S

Message Text: NOT AUTHORIZED TO USE THE … SUBSYSTEM

Where it came from: SSA1404

What it means: You were attempting to use a reporting subsystem for which the permanent or lease flags were not activated and the trial period had expired.

What to do: Contact the CIMS Lab to either extend the trial period or to turn on the appropriate flags.

Message Number: CPPR0003S

Message Text: FRAGMENTED TABLE IN DATABASE.

Where it came from: SSA1421, SSA1421Q, SSA1423, SSA1423Q, SSA1427, SSA1427Q

What it means: The online file appears to have a fragmented table. This might be caused by several conditions.

- It is possible that an x37 ABEND occurred during a prior data reduction run. This is the primary culprit. A dangling fragment of a table results from this type of error. In this case, it is necessary to restore the Online file from a prior backup and rerun the data reduction (make sure the Online file is restored into a larger space!)
- It might be the case that a reporting program was attempting to read the Online file while it was being rewritten. In this case, the Online file is not damaged. Simply re-submit the reporting job.
- During data reduction, the entire Online file is moved to the SYSUT3 file, updates are performed and, once the update process is complete, the SYSUT3 file is moved back into the Online file. If you have STOPX37 installed, the space can be extended beyond 16 extents. This is inappropriate for the CIMS Capacity Planner! Because BSAM NOTE POINT logic is used the STOPX37 processing interferes with the manner in which records are read and written. Don't use STOPX37 to manage either the Online files or the SYSUT3 work space. In no case has any damage been done to the Online file, however, since the condition was detected within the SYSUT3 work space. The SYSUT3 space should be enlarged and the job re-submitted.

What to do: See above.

Message Number: CPPR0010S

Message Text: THE HGDLIB DIRECTORY HAS RUN OUT OF SPACE.

Where it came from: SSA1438, SSA1438X

What it means: The HGDLIB is a library that is used to store data point members that are used during graph construction on a PC. This library contains one member for the data for each supported graph in the system. This library has run out of space.

What to do: Increase the space allocation for the HGDLIB and re-submit the job.

Message Number: CPPR0020E

Message Text: CPPRPARM DD STATEMENT MISSING.

Where it came from: SSA1437, SSA1437B, SSA1437F, SSA1437N, SSA1437R, SSA1437T, SSA1450, SSA1450L, SSA1479

What it means: Many of the parameters supplied to the CIMS Capacity Planner reside in the PARMLIB. The PARMLIB is identified through the CPPRPARM DD statement in the JCL. In this case, the PARMLIB was needed by a program, but the DD statement required to locate the library was missing.

What to do: Correct the JCL and re-submit the job.

Message Number: CPPR0021E

Message Text: CPPRERT DD STATEMENT MISSING.

Where it came from: SSA1411

What it means: The DD statement for the Element Registration Table (CPPRERT) file was missing and is required for this job.

What to do: Correct the JCL and re-submit the job.

Message Number: CPPR0022E

Message Text: HGDLIB DD STATEMENT MISSING.

Where it came from: SSA1438, SSA1438X, SSA1438Y

What it means: The data point members created by the CIMS Capacity Planner reside in the HGDLIB. The HGDLIB is identified through the HGDLIB DD statement in the JCL. In this case, the HGDLIB was needed by a program, but the DD statement required to locate the library was missing.

What to do: Correct the JCL and re-submit the job.

Message Number: CPPR0030E

Message Text: LABELS FOR THE MEMBER NAMED:… ARE TOO LONG.

Where it came from: SSA1438, SSA1438X, SSA1438Y

What it means: During construction of an HGDLIB data point member, the space (80 bytes wide less commas and double quotes) for the labels was not large enough to accommodate the labels themselves.

What to do: Make the labels smaller and re-submit the job.

Message Number: CPPR0031E

Message Text: PASSWORD INCORRECT.

Where it came from: SSA10TR

What it means: This message is issued by the Refresh program when you are attempting to either extend the trial period or to turn on permanent or lease flags in the CPPRERT file. It indicates that the Password supplied by you was incorrect.

What to do: Get in touch with the CIMS Lab and obtain the correct password.

Message Number: CPPR0032E

Message Text: CPPRERT FILE EMPTY.

Where it came from: SSA10TR

What it means: This message is issued by the Refresh program when you are attempting to extend a trial period or to turn on permanent or lease flags in the CPPRERT file. The CPPRERT file is empty and therefore has no flags to maintain.

What to do: Register a system in the empty CPPRERT file or point to the proper CPPRERT file.

Message Number: CPPR0040I

Message Text: MEMBER NAMED: … MISSING FROM PARMLIB

Where it came from: SSA1437, SSA1437B, SSA1437F, SSA1437N, SSA1437R, SSA1437T, SSA1450, SSA1450L, SSA1479

What it means: Many of the parameters supplied to the CIMS Capacity Planner reside in the PARMLIB. In this case, a particular member from the PARMLIB (named in the body of the message) was needed by a program, but the member itself was not found.

What to do: Add the member to the PARMLIB and re-submit the job.

Message Number: CPPR0041I

Message Text: AWAITING AVAILABILITY OF THE ONLINE FILE'

Where it came from: SSA1421

What it means: This message is issued when the Online file is to be updated, but it is currently in use by another update process.

What to do: Wait until the other job finishes, then re-submit the job that produced this message.

Message Number: CPPR0052I

Message Text: NO DATA GENERATED FOR HGDLIB MEMBER NAMED:…

Where it came from: SSA1438, SSA1438X, SSA1438Y

What it means: Occasionally, when building data point members, no data is present for a specific date range, or the features required to produce a particular data point member are absent from an installation. In this case, the member is not stored, since it contained no data.

What to do: This is an informational message and requires no action.

Message Number: CPPR0053I

Message Text: THE … FILE USED A TOTAL OF … TRACKS

Where it came from: SSA1442

What it means: This message is issued during data reduction and tells you how much space has been used by a particular file. It should be used to expand files that are becoming nearly full. Or the Archive program should be run to reduce the size of a particular file.

What to do: This is an informational message. No action is required.

Message Number: CPPR0120I

Message Text: MEMBER NAMED …SVCL MISSING FROM PARMLIB

Where it came from: SSA11115

What it means: This message is issued during data reduction for an MVS Goal Mode system. The SVCL member MUST be present when reducing data into the Online file.

What to do: Build the appropriate member in the CPPR PARMLIB and re-submit the job.

Message Number: CPPR0121I

Message Text: C'FLOATING POINT VALUE IN ERROR AT OFFSET +X'''

Where it came from: SSA11115

What it means: This message is issued during data reduction into the Workload file. An RMF type 72 record was detected in which a floating point value would have caused an overflow condition had it been processed.

What to do: This is an informational message. The record is discarded.

Message Number: CPPR0122I

Message Text: INCORRECT SERVICE UNIT INFORMATION IN TYPE 72 RECD

Where it came from: SSA11115

What it means: This message is issued during data reduction in to the Workload Online file. An RMF type 72 record contained invalid information. The record was discarded.

What to do: This is an information only message. The record was discarded.

Message Number: CPPR0G30E

Message Text: SEQUENCE ERROR IN FORMULA * * *

Where it came from: SSA1405G

What it means: The Generic Subsystem requires a complex set of input statements that describe the function to be performed. In this case, an incorrect sequence of operators was discovered in the formula. For example, two operators without intervening subjects (A + + B)

What to do: Correct the formula and re-submit the job.

Message Number: CPPR0G31E

Message Text: UNBALANCED PARENTHESES IN FORMULA.

Where it came from: SSA1405G

What it means: The Generic Subsystem requires a complex set of input statements that describe the function to be performed. In this case, the formula in the Output Element Cell statement contained unbalanced parentheses.

What to do: Correct the formula and re-submit the job.

Message Number: CPPR0G32E

Message Text: INVALID CHARACTER IN FORMULA.

Where it came from: SSA1405G

What it means: The Generic Subsystem requires a complex set of input statements that describe the function to be performed. In this case, the formula in the Output Element Cell statement contained an unsupported operator. The supported operators are:

+ for addition

- for subtraction

/ for division

* for multiplication

: for modulo (remainder)

What to do: Correct the formula and re-submit the job.

Message Number: CPPR0G33E

Message Text: CELL NUMBER OUT OF SEQUENCE.

Where it came from: SSA1405G

What it means: The Generic Subsystem requires a complex set of input statements that describe the function to be performed. In this case, the sequence number of the Output Element Cell statement was incorrect.

What to do: Correct the sequence number and re-submit the job.

8

Options for Advanced Applications

CIMS Capacity Planner User Exits

Throughout the entire system several User Exits have been made available for your convenience. These User Exits are strategically placed so that you are able to exercise a measure of control over the form of the input being presented to various data reduction programs. The User Exits are described in detail below.

SSA1UX00: Generic Subsystem Initial Record Analysis

This User Exit is invoked when an input record is first presented to the Generic Subsystem Data Reduction routine. It is used primarily to reformat an incoming record or to summarize values that can be found in a variety of segments that would otherwise be difficult to describe to the Generic Subsystem.

Upon entry to the routine, Register 15 points to the beginning of the routine. Register 0 points to the record just read. Register 13 points to a register save area. The routine is entered in 31 bit addressing mode. You are allowed to change the structure of the record before returning control to the Generic Subsystem. Upon return Register 15 = 0 if the Generic Subsystem is to process the record, or Register 15 = non-zero if the Generic Subsystem is to skip the record.

A model of this routine is found in the distribution SOURCE Library, member name SSA1UX00.

SSA1UX01: Generic Subsystem Special Date Form Handler

This User Exit is invoked when a Date field is encountered by the Generic Subsystem Data Reduction routine and the Input Element Cell definition for that field is set to a type of "2F" or "6F". It is used to process a date value that is in a format other than one normally supported by the Generic Subsystem.

Upon entry, Register 15 points to the beginning of the routine. Register 0 points to the Date Field. Register 13 points to a register save area. The routine is entered in 31 bit addressing mode. You convert the date to standard packed form (PL4'ccyydddx' where the "cc" is "00" for 19yy, "01" for 20yy, the yy is the year within the century, the ddd is the Julian day within the year, and the x is a sign) and places that value in Register 0 before returning control to the Generic Subsystem. Upon return Register 15 = 0 if the Generic Subsystem is to process the record, or Register 15 = non-zero if the Generic Subsystem is to skip the record.

A model of this routine is found in the distribution SOURCE Library, member name SSA1UX01.

SSA1UX02: Generic Subsystem Special Time Form Handler

This User Exit is invoked when a Time field is encountered by the Generic Subsystem Data Reduction routine and the Input Element Cell definition for that field is set to a type of "1F" or "5F". It is used to process a time value that is in a format other than one normally supported by the Generic Subsystem.

Upon entry, Register 15 points to the beginning of the routine. Register 0 points to the Date Field. Register 13 points to a register save area. The routine is entered in 31 bit addressing mode. You convert the time to standard internal form (XL4'hundredths of a second past midnight') and places that value in Register 0 before returning control to the Generic Subsystem. Upon return Register 15 = 0 if the Generic Subsystem is to process the record, or Register 15 = non-zero if the Generic Subsystem is to skip the record.

A model of this routine is found in the distribution SOURCE Library, member name SSA1UX02.

SSA1UX03: Generic Subsystem Final Record Analysis

This User Exit is invoked immediately before the data from an input record is to be stored in a User Table by the Generic Subsystem Data Reduction routine. It is used primarily to examine the values derived from an incoming record or to alter the characteristics of the key under which the values are to be stored.

Upon entry to the routine, Register 15 points to the beginning of the routine. Register 0 points to the values that are to be stored (the sample routine found in the SOURCE Library provides a layout of the area pointed to by Register 0). Register 13 points to a register save area. The routine is entered in 31 bit addressing mode. You are allowed to change the structure of the record before returning control to the Generic Subsystem. Upon return Register 15 = 0 if the Generic Subsystem is to process the record, or Register 15 = non-zero if the Generic Subsystem is to skip the record.

A model of this routine is found in the distribution SOURCE Library, member name SSA1UX03.

SSA1UXRD: Data Reduction Generalized Record Input Routine

This User Exit is invoked when an input record is first presented to any of the CIMS Capacity Planner Data Reduction routines. It is used primarily to perform special processing that is otherwise not handled by the Data Reduction Routines. For example, suppose a record is found to be in error and should be discarded from a specific run. This routine could isolate and discard that record, or a record with similar characteristics.

Upon entry to the routine, Register 15 points to the beginning of the routine. Register 0 points to the record just read. Register 13 points to a register save area. The routine is entered in 31 bit addressing mode. Upon return Register 15 = 0 if the Subsystem is to process the record, or Register 15 = non-zero if the Subsystem is to skip the record.

A model of this routine is found in the distribution SOURCE Library, member name SSA1UXRD.

SSA1UXDA: DASM Subsystem Owner-id Determination

This User Exit is invoked when the Owner of a particular allocation of DASD space is to be determined from the DSNAME by the DASM Data Reduction routine. It is used primarily to determine the owner of the space in situations where the high level qualifier

of the DSNAME (or an intervening level as specified in the &sid.DSNX member of the CPPR PARMLIB) is not sufficient. For complex relationships, table lookups can be employed.

Upon entry to the routine, Register 15 points to the beginning of the routine. Register 0 points to a one byte length field (the length of the DSNAME following, not including the length of the length field itself) followed by the DSNAME. Register 1 points to the Volume Serial number upon which the allocated space resides. The routine is entered in 31 bit addressing mode. You derive the Owner-id (8 characters or less) and places it in the first 8 positions of the DSNAME field, followed by at least one space. Upon return Register 15 = 0 if the DASM Subsystem is to process the record, or Register 15 = non-zero if the DASM Subsystem is to skip the record.

A model of this routine is found in the distribution SOURCE Library, member name SSA1UXDA.

SSA1UXTA: Tape Subsystem Owner-id Determination

This User Exit is invoked when the Owner of a particular Tape volume is to be determined from the DSNAME of the first data set on the tape by the Tape Subsystem Data Reduction routine. It is used primarily to determine the owner of the tape volume in situations where the high level qualifier of the DSNAME (or an intervening level as specified in the `&sid.TSNX` member of the CPPR PARMLIB) is not sufficient. For complex relationships, table lookups can be employed.

Upon entry to the routine, Register 15 points to the beginning of the routine. Register 0 points to a one byte length field (the length of the DSNAME following, not including the length of the length field itself) followed by the DSNAME. Register 1 points to the media type (REEL, 3480, 3490) of the tape volume. The routine is entered in 31 bit addressing mode. Derive the Owner-id (8 characters or less) and places it in the first 8 positions of the DSNAME field, followed by at least one space. Upon return Register 15 = 0 if the Tape Subsystem is to process the record, or Register 15 = non-zero if the Tape Subsystem is to skip the record.

A model of this routine is found in the distribution SOURCE Library, member name SSA1UXTA.

User Exit Preferred Name Substitution

There might be times when a you want to construct multiple versions of a particular User Exit routine, and these various routines are to be invoked without the need to allocate a variety of ancillary LOADLIBs. In order to support this capability, you are allowed to provide the names of the routines through an alias names file. Simply add a DDNAME to the JCL as shown below.

```
//UEXALIAS DD *
SSA1UXRD=MODULE1
SSA1UX00=MODULE2
```

In the example shown above, you are presumed to have link edited two user routines into the LOADLIB. The module named "MODULE1" is to be used in place of the SSA1UXRD User Exit, and the module named "MODULE2" is to be used in place of the SSA1UX00 User Exit. The UEXALIAS DD Statement is added to the JCL for the job that is to be used to perform the data reduction. If the MODULE1 member is not found in the LOADLIB, a message is issued and the SSA1UXRD module is loaded instead. If the MODULE2 member is not found in the LOADLIB, a message is issued and the SSA1UX00 module is loaded instead.

CIMS Capacity Planner PARMLIB Member Name Substitution

In general, the CIMS Capacity Planner graphing programs use PARMLIB members to gather elements together into applications or organizations. There might be times when you want to construct multiple versions of a particular PARMLIB member, and these various members are to be used without the need to allocate a variety of ancillary PARMLIBs. In order to support this capability, you are allowed to provide the names of the members through an alias names file. Simply add a DDNAME to the JCL of the job that would normally use the fixed member names as shown below.

```
//PARMEMBR DD *
CPPRCICO=LIST001
CPPRCICT=LIST002
```

In the example shown above, you are presumed to have created two members in the PARMLIB. The member named "LIST001" is used in place of the CPPRCICO PARMLIB member, and the member named "LIST002" is used in place of the CPPRCICT member. The PARMEMBR DD Statement is added to the JCL for the job that is used to build the HGDLIB members (in this case, SSA1CICE).

DUMP SMF STATISTICS=YES Output Interpretation

During the course of the Data Reduction process for virtually all the subsystems, it is valuable to determine the characteristics of the input stream that fed the program. It is also helpful to know which CIMS Capacity Planner tables were actually updated during the data reduction process. This information is provided through the use of the DUMP SMF STATISTICS key phrase.

While each of the data reduction programs produces a slightly different report, based on the form of input data being reduced, all the reports have several features in common:

- The report is in the form of a matrix with 10 columns and 26 rows. Each cell of the matrix contains a numerical count of the values represented by that cell.
- The location of the cell within the matrix indicates the nature of the count at that location. In other words, if you wanted to see the count of values at location 000, this count is located in the first row, first column. Reading across row 1, the counts represent the values for 000, 001, 002… 009. The second row represents values for 010, 011, 012… 019. And so forth.
- Since the matrix is more easily explained using a concrete example, the Workload Data Reduction program produces such a matrix that represents the counts for each SMF Record Type encountered. SMF Record types range from 00 (IPL record) through 255 (User record). If you wanted to know how many SMF Type 14 records were read, go to the 2nd row, 5th column (010, 011, 012, 013, 014) and the value at that location tells how many SMF type 14 records were read.

For all the data reduction programs, an additional matrix is produced that shows the number of times a specific table was written to the SYSUT3 file. Again, reading through the matrix, if you wanted to see how many times table 003 (Workload CPU table) was written, go to the 1st row, 4th column (000, 001, 002, 003) and the value at that location tells how many times table 3 was written.

Workload Subsystem Data Reduction Matrix Report

The data in the DUMP SMF STATISTICS matrix for the Workload Subsystem Data Reduction program (SSA1WKLD) represents, for each SMF SID processed, the number of records read for each SMF record type. One matrix is produced per SMF SID.

Generic Subsystem Data Reduction Matrix Report

The data in the DUMP SMF STATISTICS matrix for the Generic Subsystem Data Reduction program (SSA1GENW) represents the total number of input records that passed specific filters provided by you. The 1st row in the matrix represents the number of input records that successfully passed a series of filters specified by you. Where a filter is not precisely specified, the record is deemed to have passed that filter. The 2nd row in the matrix represents the number of times a record satisfied output filtering requirements. That is, an output record, in order to be stored, must have a date stamp, it must have some value to store, and it must pass User Exit 3.

For Row 1:

The 1st cell represents the total number of records read. The 2nd cell represents the number of records successfully passed through the User Exit SSA1UX00. The 3rd cell represents the total number of records that passed the Record Number filter. The 4th cell represents the total number of records that passed the Record Header Type Qualifier filter. The 5th cell represents the total number of records that passed the SMF SID filter. The 6th cell represents the total number of records that passed the Subsystem ID filter. The 7th cell represents the total number of records for which Input Cells contained actual data.

For Row 2:

The 1st cell represents the total number of records where the Output Cell Set contained non-zero values. The 2nd cell represents the number of records that had a valid date stamp. The 3rd cell represents the number of records that successfully passed through User Exit 3 (SSA1UX03).

Network Subsystem Data Reduction Matrix Report

The data in the DUMP SMF STATISTICS matrix for the Network Subsystem Data Reduction program (SSA1NETW) represents the total number of input records for each ***subtype*** based on the form of the input. Input can come from Netview, NPM or Netspy. The subtypes vary depending on the input format. In each case, the one byte hexadecimal value of the subtype is converted to decimal, and that value is used to determine the location of the cell that will contain the record count for that subtype.

For Netview:

The subtype is derived from the LOGRSUBT value in the record.

For NPM:

The subtype is derived from the SMF28RST value in the record.

For Netspy:

The subtype is derived from the NETLORCT value in the record.

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