



IBM Software Group

What's New with NetView for z/OS? A Whole New Release

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What's the Latest?

- NetView for z/OS V5.3
- Generally available July 27, 2007



Agenda

- TCP/IP Management
- Tivoli Enterprise Portal
- Product Integration
- Core Functions
- For More Information



TCP/IP Management

- **Enterprise Extender Support**
- Packet Filtering by Protocol
- Identify Hung Listeners
- More TCP Connection Information
- Additional IPv6 Support



Enterprise Extender Support

- **Identification of EE sessions**
- More information about paths to session partners

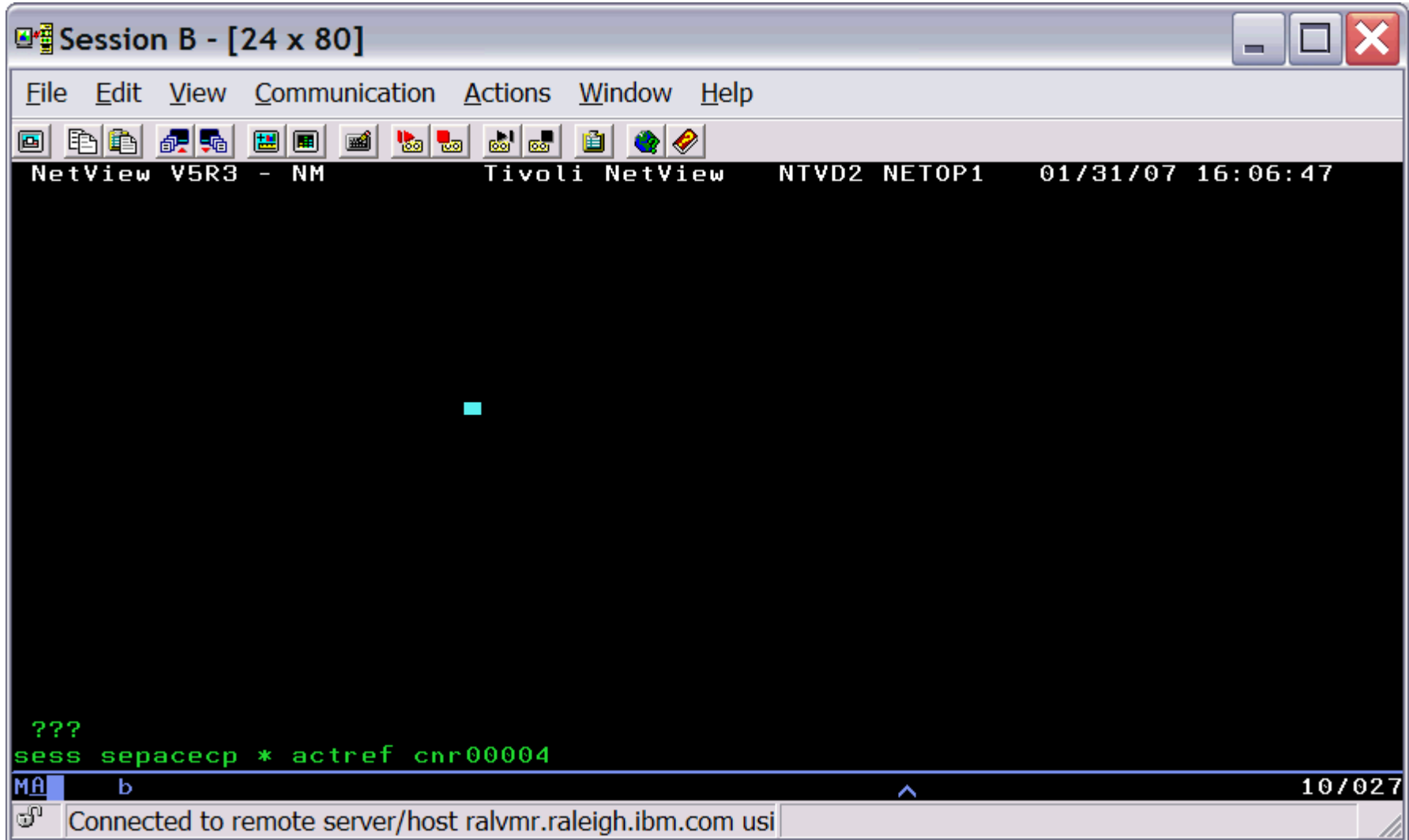


Identification of EE Sessions

- Allows selection of SNA sessions traversing a given resource – no longer need be a session endpoint.
- One common usage will be to see what sessions traverse an ALS (CNRnnnnn), as requested by Enterprise Extender (EE) customers.
- Affected commands
 - ▶ NLDM SESS
 - ▶ NLDM SESMGET
 - ▶ NASESMG



EE Support: NLDM SESS ACTREF



The screenshot shows a terminal window titled "Session B - [24 x 80]". The window has a menu bar with "File", "Edit", "View", "Communication", "Actions", "Window", and "Help". Below the menu bar is a toolbar with various icons. The terminal content is as follows:

```
NetView V5R3 - NM          Tivoli NetView          NTVD2 NETOP1    01/31/07 16:06:47
```

A small cyan cursor is positioned in the center of the screen.

```
???
```

```
sess sepacp * actref cnr00004
```

At the bottom of the terminal, there is a status bar with "MA" on the left, "b" in the middle, and "10/027" on the right. Below the status bar, a message reads: "Connected to remote server/host ralvmr.raleigh.ibm.com usi".

EE Support: NLDM SESS ACTREF

```

Session B - [24 x 80]
File Edit View Communication Actions Window Help
-----
NLDM.SESS                                     PAGE 1
SESSION LIST
NAME: SEPACECP                               DOMAIN: NTVD2
-----
***** PRIMARY *****      ***** SECONDARY *****
SEL#  NAME  TYPE  DOM  NAME  TYPE  DOM  START TIME  END TIME
( 1) SEPACECP ILU  C-C  NTVD2  LU   NTVD2  01/31 15:25:19  *** ACTIVE ***
( 2) NTVD2   LU   NTVD2  SEPACECP ILU  C-C   01/31 15:25:19  *** ACTIVE ***
( 3) NTD2MVS LU   NTVD2  SEPACECP ILU  C-C   01/31 15:24:11  *** ACTIVE ***
( 4) SEPACECP ILU  C-C  NTD2MVS LU   NTVD2  01/31 15:24:11  *** ACTIVE ***

END OF DATA
ENTER SEL# (CONFIG), SEL# AND CT (CONN. TEST), SEL# AND STR (TERM REASON)
CMD==> 1
MA  b                                     24/008
Connected to remote server/host ralvmr.raleigh.ibm.com usi

```


EE Support: NLDM SESS ACTREF

```

Session B - [24 x 80]
File Edit View Communication Actions Window Help
NLDM.COM SESSION CONFIGURATION DATA PAGE 1
----- PRIMARY -----+----- SECONDARY ----- PAGE 1
NAME SEPACECP SA 00D2 EL 00000042 | NAME NTVD2 SA 00D2 EL 0000002A
-----+-----
DOMAIN NTVD2 C-C PCID USIBMNT.SEPACECP.E747BC617FFEA45E DOMAIN NTVD2
CNR00004 | ALS | --- | CP/SSCP | NTD2MVS
LOCAL DATA | APPN TP 03 | SUBAREA PU | NTD2VTAM(0000)
-----+-----
SEPACECP(0042) | ILU | | LU | NTVD2 (002A)
-----+-----
APPNCOS SNASVCMG
SUBACOS N/A
LOGMODE SNASVCMG
PADJ CP SEPACECP
SADJ CP N/A

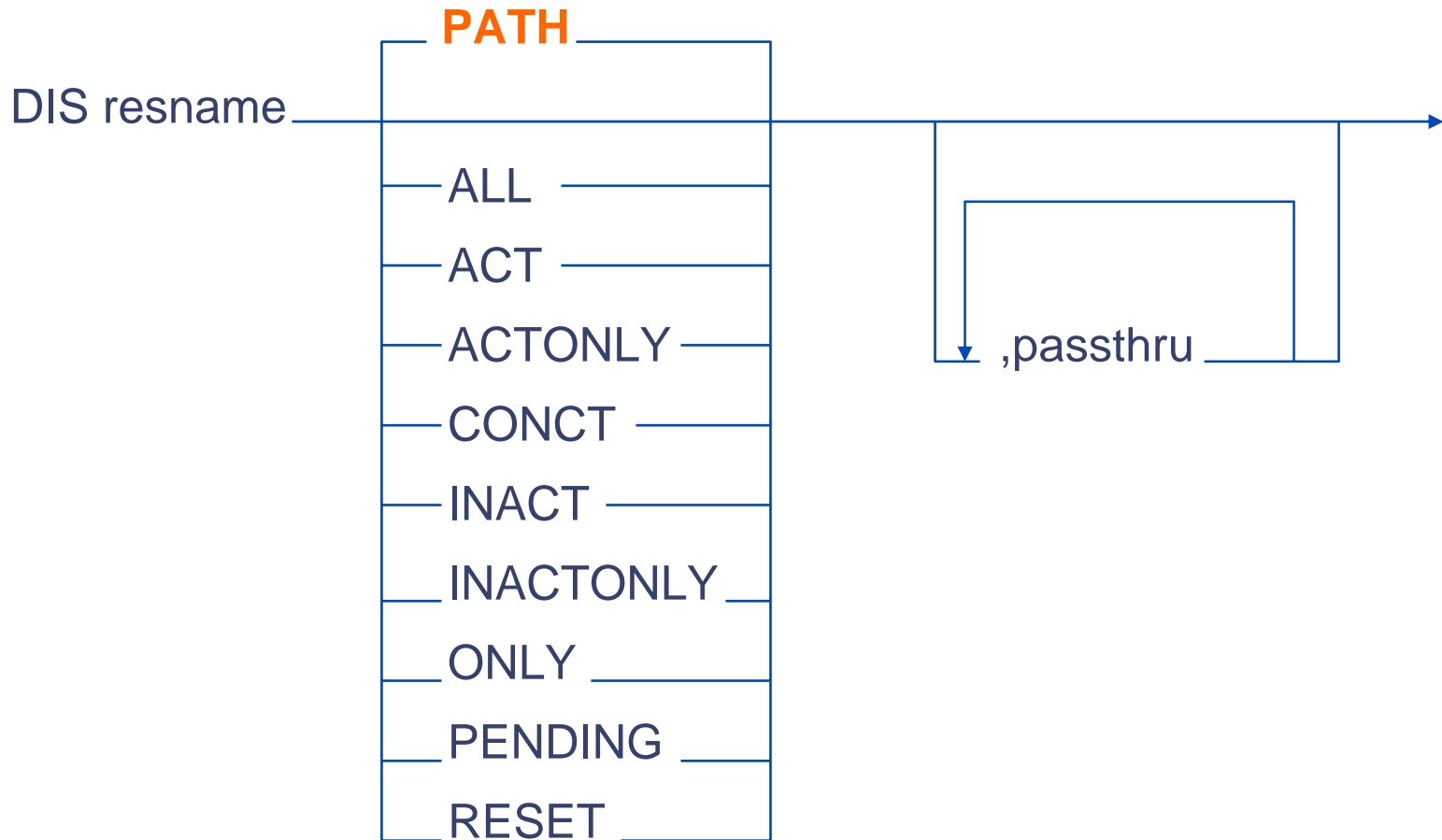
SELECT PT, ST (PRI, SEC TRACE), RT (RESP TIME), P, AR, FC
CMD==>
MA b 24/008
Connected to remote server/host ralvmr.raleigh.ibm.com usi
    
```

Enterprise Extender Support

- Identification of EE sessions
- **More information about paths to session partners**



More Path Information: DIS Command



More Path Information

- If LU is EE-connected
 - ▶ Outboard resource (DLUR)
 - Info about path to owning CP
 - If both hosts are z/OS 1.7 or later, EEDIAG is performed and test results appended.
 - If NetView is active at remote CP and that RMTCMD is enabled and authorized, RTP pipe info from remote host is also appended
 - ▶ Inboard (local)
 - TRACERTE info also appended



DIS Output

```

CNMKWIND OUTPUT FROM USIBMNT.DLD20101 LINE 0 OF 85
*----- Top of Data -----
IST075I NAME = USIBMNT.DLD20101 , TYPE = LOGICAL UNIT
IST486I STATUS = ACT/S , DESIRED STATE = ACTIV
IST1447I REGISTRATION TYPE = NETSRVR
IST977I MDLTAB=***NA*** ASLTAB=***NA***
IST861I MODETAB=AMODETAB USSTAB=AUSSTAB LOGTAB=***NA***
IST934I DLOGMOD=MSDLCQ USS LANGTAB=***NA***
IST597I CAPABILITY-PLU INHIBITED,SLU ENABLED ,SESSION LIMIT 00000001
IST136I SWITCHED SNA MAJOR NODE = EESWMN2
IST135I PHYSICAL UNIT = DPD20001
IST082I DEVTYPE = LU
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST1500I STATE TRACE = OFF
IST1936I LOCADDR = 002
IST228I ENCRYPTION = NONE , TYPE = DES
IST1563I CKEYNAME = DLD20101 CKEY = PRIMARY CERTIFY = NO
IST1552I MAC = NONE MACTYPE = NONE
IST171I ACTIVE SESSIONS = 0000000001, SESSION REQUESTS = 0000000000
IST206I SESSIONS:
IST1081I ADJACENT LINK STATION = CNR00007
IST634I NAME STATUS SID SEND RECV VR TP NETID
IST635I NTVD2010 ACTIV-P F58B139E11365775 0006 000C USIBMNT
IST314I END
BNH061I ... ADJACENT LINK STATION CNR00007...
IST075I NAME = CNR00007 , TYPE = PU_T2.1
IST486I STATUS= ACTIV--LX-, DESIRED STATE= ACTIV
IST1964I APPNCOS = #CONNECT - PRIORITY = MEDIUM
IST1476I TCID X'314E695C00010214' - REMOTE TCID X'0000000005000000'
IST1460I TGN CPNAME TG TYPE HPR
TO SEE YOUR KEY SETTINGS, ENTER 'DISPFK'
CMD==>

```

DIS Output

```

CNMKWIND OUTPUT FROM USIBMNT.DLD20101 LINE 28 OF 85
IST075I NAME = CNR00007 , TYPE = PU_T2.1
IST1460I TGN CPNAME TG TYPE HPR
IST1461I 21 USIBMNT.SEPACECP APPN RTP
BNH061I ...RTP resource = EX000002...
IST075I NAME = EX000002 , TYPE = PU_T2.1
IST1680I LOCAL IP ADDRESS 9.42.44.50
IST1680I REMOTE IP ADDRESS 9.27.143.39
IST2022I EE CONNECTION ACTIVATED ON 04/13/07 AT 16:55:28
IST2114I LIVTIME: INITIAL = 10 MAXIMUM = 0 CURRENT = 10
IST2023I CONNECTED TO LINE EELOFE
IST2025I LDLC SIGNALS RETRANSMITTED AT LEAST ONE TIME = 0
IST2026I LDLC SIGNALS RETRANSMITTED SRQRETRY TIMES = 0
IST2009I RTP PIPES = 4 LU-LU SESSIONS = 5
IST2027I DWINOP = NO REDIAL = *NA* REDDELAY = *NA*
IST2028I KEEPACT = YES
IST2029I MTU SIZE = 548
IST924I -----
IST2035I TOTALS FOR ALL PORT PRIORITIES
IST2036I NLPS SENT = 1419 ( 001K )
IST2037I BYTES SENT = 113337 ( 113K )
IST2038I NLPS RETRANSMITTED = 0 ( 000K )
IST2039I BYTES RETRANSMITTED = 0 ( 000K )
IST2040I NLPS RECEIVED = 1599 ( 001K )
IST2041I BYTES RECEIVED = 152017 ( 152K )
BNH061I ...related local RTP PIPE CNR00007 ...
IST1695I PU NAME CP NAME COSNAME SWITCH CONGEST STALL SESS
IST1960I CNR00007 USIBMNT.SEPACECP #CONNECT NO NO NO 1
BNH810I Tracing IP route to 9.27.143.39 max 30 hops
BNH811I 1: mmpipt50.tivlab.raleigh.ibm.com (9.42.44.50) 5ms

```

DIS Output

```

CNMKWIND OUTPUT FROM USIBMNT.DLD20101 LINE 55 OF 85
BNH810I Tracing IP route to 9.27.143.39 max 30 hops
BNH811I 1: nmpipl50.tivlab.raleigh.ibm.com (9.42.44.50) 5ms
BNH811I 2: mdf-rsm-vlan501.tivlab.raleigh.ibm.com (9.42.63.225) 20ms
BNH811I 3: core3-msfc.tivlab.raleigh.ibm.com (9.42.0.1) 14ms
BNH811I 4: dyn9042255252.raleigh.ibm.com (9.42.255.252) 21ms
BNH811I 5: RTP-fc-3b-g22.raleigh.ibm.com (9.42.254.41) 17ms
BNH811I 6: rtp-pd-10a-ge0-5.raleigh.ibm.com (9.42.254.3) 16ms
BNH811I 7: rtp-co-b-v842.raleigh.ibm.com (9.27.2.169) 17ms
BNH811I 8: rtp-ud-5a-v822.raleigh.ibm.com (9.27.2.90) 19ms
BNH811I 9: sepacc.raleigh.ibm.com (9.27.143.39) 59ms
BNH061I ...PU = DPD20001...
IST075I NAME = DPD20001 , TYPE = PU_T2
IST486I STATUS= ACTIV , DESIRED STATE= ACTIV
IST1043I CP NAME = ***NA*** - CP NETID = USIBMNT - DYNAMIC LU = YES
IST1589I XNETALS = YES
IST1354I DLUR NAME = SEPACPCP MAJNODE = EESWMN2
IST1934I IDBLK = 05D IDNUM = 43330
IST654I I/O TRACE = OFF, BUFFER TRACE = OFF
IST1500I STATE TRACE = OFF
IST1656I VTAMTOPO = REPORT , NODE REPORTED = YES
IST1657I MAJOR NODE VTAMTOPO = REPORT
BNH061I ...EEDIAG...
IST2066I ENTERPRISE EXTENDER CONNECTION SRQRETRY INFORMATION
IST924I -----
IST1680I LOCAL IP ADDRESS 9.42.44.61
IST1680I REMOTE IP ADDRESS 9.27.143.39
IST2024I CONNECTED TO SWITCHED PU EX000002
IST2074I SUCCESSFUL SRQRETRY ATTEMPT = 0 OCCURRENCES = 0
IST2074I SUCCESSFUL SRQRETRY ATTEMPT = 1 OCCURRENCES = 0
TO SEE YOUR KEY SETTINGS, ENTER 'DISPFK'
CMD==>

```

TCP/IP Management

- Enterprise Extender Support
- **Packet Filtering by Protocol**
- Identify Hung Listeners
- More TCP Connection Information
- Additional IPv6 Support



Packet Filtering by Protocol

- Allows user to select traced packets by IP protocol
- New parameter for PKTS and FMTPACKT commands
 - ▶ PROTOCOL
 - ▶ Can be specified as
 - a number from 0 thru 255, or
 - one of 3 names: TCP (6), UDP(17), OSPF (89).
- All other aspects of PKTS and FMTPACKT commands are unchanged



Packet Filtering by Protocol

NetView Command Response - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Print W 22° Forecast 28°/14°

Search the Web Search Address <http://rudolph.tivlab.raleigh.ibm.com:1920///cnp/kdh/lib/cnp.html?~12000=SYSADMIN&~5001=MOPHYSICAL&~1> Go

Welcome SYSADMIN Log out

Tivoli Enterprise Portal

File Edit View Help

NetView Command Response Summary Page: 1 of 5

```

01/31/07 12:23:25 FMTPACKT PROTOCOL=udp
01/31/07 12:23:25 BMH773I NUMBER OF PACKETS: N/A , MISSED BUFFERS: 0 , TCPNAME: TCPIP
z/OS TCP/IP Packet Trace Formatter, (C) IBM 2000-2006, 2006.215

**** 2007/01/31
I - Inbound packet
O - Outbound packet

DP  Nr hh:mm:ss.mmmmm IpId  Seq_num  Ack_num  Wndw  Flags  DatLn
Source/Destination
IU 3748 12:14:05.785592 1059 protocol=UDP 4
127.0.0.1-1406          0F8F1688 *...h  ....  *

127.0.0.1-1406
IU 3752 12:14:05.804815 105C protocol=UDP 4
127.0.0.1-1406          0F8F1688 *...h  ....  *

127.0.0.1-1406
IU 3759 12:14:08.138434 105F protocol=UDP 4
127.0.0.1-1407

```

Hub Time: Wed, 01/31/2007 12:24 PM Server Available NetView Command Response - rudolph.tivlab.raleigh.ibm.com - SYSADMIN

Applet CMWApplet started Internet

TCP/IP Management

- Enterprise Extender Support
- Packet Filtering by Protocol
- **Identify Hung Listeners**
- More TCP Connection Information
- Additional IPv6 Support



Identify Hung Listeners

- Hung Listener
 - ▶ A port that refuses connections but appears to be normal in a netstat command



Hung Listeners: CNMETSTL

- API to set timer for monitoring listeners
- Syntax
 - ▶ **CNMETSTL {stackname | stackaddr} port_number monitor_interval**
 - ▶ Synonym: TESTPORT
 - ▶ If called with parms (stack, port, and interval)
 - sets one timer using the provided information
 - null or zero interval causes specified port to be checked immediately
 - ▶ If called with no parms
 - reads existing definitions
 - deletes any outstanding timers for issuing task
- Automatic or manual invocation
- Results in automatable message to allow for recovery



TCP/IP Management

- Enterprise Extender Support
- Packet Filtering by Protocol
- Identify Hung Listeners
- **More TCP Connection Information**
- Additional IPv6 Support



More TCP Connection Information

- New TCPCONN QUERYACT keyword
 - ▶ More data for active connections than QUERY keyword
 - ▶ New message BNH775I defines data fields for active connections
 - ▶ New minor keyword JOBNAME
 - Specifies criteria for application address space name filter
 - ▶ Data available in TEP and 3270
 - CNMSTCPC handles QUERYACT keyword for 3270 display
- Inactive connection processing remains unchanged



More TCP Connection Information

TCPCONN — **QUERYACT** — **localaddr** — **localport** —
— **remoteaddr** — **remoteport** — **LUnicode** —
— **applname** — **jobname** — **starttime** — ...

More Info on Active TCP Connections

Also:

- # segments sent/received,
- Connection state
- Max send window size
- Current send window size
- Which side initiated connection
- more

Info also available on 3270

Collection Time	Total Active Connections
06/28/07 17:25:57	18

Collection Time	TCPIP Job Name	Local IP Address	Local Port	Remote IP Address	Remote Port	Connection Start Time	Last Activity Timestamp	Resource Name	Connection ID	Tot Byte Rece
06/28/07 17:25:57	TCPIP	9.42.44.190	1525	9.27.132.245	1918	06/27/07 14:31:22	06/28/07 17:25:35	CANSNA	0X0006C502	84
06/28/07 17:25:57	TCPIP	9.42.44.190	4022	9.42.44.10	1052	06/26/07 10:31:05	06/28/07 17:25:55	T530EENV	0X00069378	1572

Hub Time: Thu, 06/28/2007 05:34 PM Server Available TCPIP Connection Data - NED - SYSADMIN

TCP/IP Management

- Enterprise Extender Support
- Packet Filtering by Protocol
- Identify Hung Listeners
- More TCP Connection Information
- **Additional IPv6 Support**



Additional IPv6 Support

- Enable additional commands, components, and internal services
 - IPv6 addresses in input/output
 - IPv6 sockets, etc.
- Trap → Alert Service
 - Newly implemented as base NetView service, can replace existing E/AS Trap → Alert Service
 - Enabled for IPv6
 - Supports SNMPv1, SNMPv2c, SNMPv3



Tivoli Enterprise Portal



NetView Enterprise Management Agent

- NetView for z/OS 5.2: Tivoli Enterprise Portal V6.1 Agent
 - ▶ Windows
 - ▶ AIX
 - ▶ Linux (System z™ & Intel®)
 - ▶ Solaris
 - ▶ HP-UX
- **NEW** – NetView for z/OS 5.3: Enterprise Management Agent
 - ▶ z/OS



Expanded Presence in the TEP

- ▶ Additional and expanded NetView workspaces
 - DVIPA/Sysplex
 - More TCP/IP
 - NetView health
- ▶ 28 Situations provided out of the box
- ▶ Expert advice



Stack Configuration and Status Summary Workspace

Stack Configuration and Status Summary

	Update Time	TCP/IP Job Name	TCP/IP Host Name	Status	Sysplex Name	XCF Group Name	zOS Image Name	Primary Interface	IPv6 Enabled	IPsec Enabled	AT-TLS Enabled	zOS Release Level
	06/29/07 07:52:47	TCP/IP	NMPIPL15	ACTIVE	NETVIEW		NMPIPL15		0	0	0	V1R8
	06/26/07 09:31:31	TCP/IP	NMPIPL10	ACTIVE	NETVIEW	EZBTCPCS	NMPIPL10	TCPIPLINK	Yes	No	No	V1R8
	06/26/07 10:31:15	TCP/IP	NMP190	ACTIVE	NETVIEW	EZBTCPCS	NMP190	VLINK1	Yes	No	No	V1R7

Hub Time: Fri, 06/29/2007 09:58 AM Server Available Stack Configuration and Status - NED - SYSADMIN

Stack Configuration and Status Summary Workspace

Stack Configuration and Status Summary

	Update Time	TCPIP Job Name	TCPIP Host Name	Status	Sysplex Name	XCF Group Name	zOS Image Name	Primary Interface	IPv6 Enabled	IPSec Enabled	AT-TLS Enabled	zOS Release Level
	06/29/07 07:52:47	TCPIP	NMPIPL15	ACTIVE	NETVIEW		NMPIPL15		0	0	0	V1R8
	06/26/07 09:31:31	TCPIP	NMPIPL10	ACTIVE	NETVIEW	EZBTCPCS	NMPIPL10	TCPIPLINK	Yes	No	No	V1R8
	06/26/07 10:31:15	TCPIP	NMP190	ACTIVE	NETVIEW	EZBTCPCS	NMP190	VLINK1	Yes	No	No	V1R7

Hub Time: Fri, 06/29/2007 09:58 AM Server Available Stack Configuration and Status - NED - SYSADMIN

Link to NetView
"DVIPA Definition and Status" workspace

DVIPA Definition and Status

DVIPA Definition and Status - NED - SYSADMIN

File Edit View Help

View: Physical

- NetView Agent
 - CANSNA:IP01:KNAAGENT
 - NetView
 - NTV74
 - DVIPA Connections
 - DVIPA Definition and Sta**
 - DVIPA Distributor Target
 - DVIPA Sysplex Distribut
 - NetView Audit Log
 - NetView Command Resp
 - NetView Health
 - NetView Log
 - Session Data

Physical

DVIPA by Status

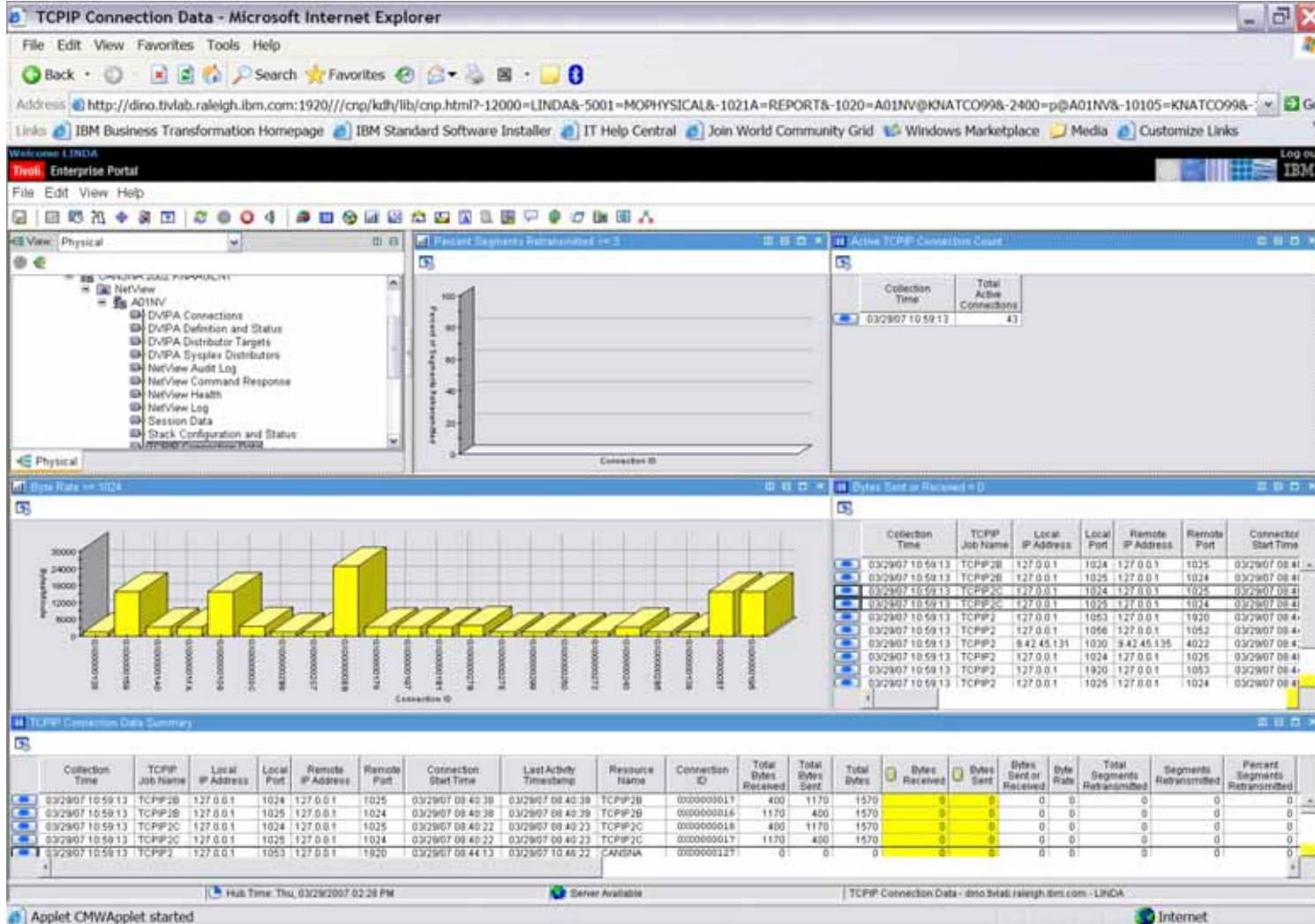
DVIPA Status	Number
active	32
backup	8

DVIPA Definition and Status Summary

Collection Time	DVIPA	Sysplex Name	XCF Group Name	zOS Image Name	TCPIP Host Name	TCPIP Job Name	Origin	Status	Rank	Mobility	Distri Sta
06/28/07 16:10:38	146.99.99.99	NETVIEW		NMP190	NMP190	TCPIP	define	active	255	immediate	distributorA
06/28/07 16:10:38	146.99.99.99				NMP217	TCPIP	target	active	N/A	none	target
06/28/07 16:10:38	201.2.10.10	NETVIEW		NMP190	NMP190	TCPIP	define	backup	255	immediate	target
06/28/07 16:10:38	201.2.10.10				NMP217	TCPIP	target	active	N/A	none	target
06/28/07 16:10:38	201.2.10.11	NETVIEW		NMP190	NMP190	TCPIP	define	backup	255	immediate	target
06/28/07 16:10:38	201.2.10.11				NMP217	TCPIP	backup	backup	100	immediate	target
06/28/07 16:10:38	201.2.10.12	NETVIEW		NMP190	NMP190	TCPIP	define	backup	255	immediate	target
06/28/07 16:10:38	201.2.10.12				NMP217	TCPIP	backup	backup	80	immediate	target
06/28/07 16:10:38	201.2.10.13	NETVIEW		NMP190	NMP190	TCPIP	define	active	255	immediate	none

Hub Time: Thu, 06/28/2007 04:20 PM Server Available DVIPA Definition and Status - NED - SYSADMIN

Active TCP/IP Connections



- Info on active TCP/IP connections on this LPAR for stacks defined in CNMSTYLE
- Much more info than previously available
- All data displayed in a readable format

Active TCP/IP Connections

TCPIP Connection Data - Microsoft Internet Explorer

Address: http://dino.tivlab.raleigh.ibm.com:1920///cnp/kd/h/lib/cnp.html?12000=LINDA&5001=MOPHYSICAL&1021A=REPORT&1020=A01NV@KNATCO99&2400=p@A01NV&10105=KNATCO99&

IBM Enterprise Portal

View: Physical

Percent Segments Retransmitted in 3

Active TCP/IP Connection Count

Collection Time	Total Active Connections
03/29/07 10:59:13	43

Bytes Sent or Received in 0

Collection Time	TCPIP Job Name	Local IP Address	Local Port	Remote IP Address	Remote Port	Connector Start Time
03/29/07 10:59:13	TCPIP2B	127.0.0.1	1024	127.0.0.1	1025	03/29/07 08:41
03/29/07 10:59:13	TCPIP2B	127.0.0.1	1025	127.0.0.1	1024	03/29/07 08:41
03/29/07 10:59:13	TCPIP2C	127.0.0.1	1024	127.0.0.1	1025	03/29/07 08:41
03/29/07 10:59:13	TCPIP2C	127.0.0.1	1025	127.0.0.1	1024	03/29/07 08:41
03/29/07 10:59:13	TCPIP2	127.0.0.1	1053	127.0.0.1	1020	03/29/07 08:41
03/29/07 10:59:13	TCPIP2	127.0.0.1	1056	127.0.0.1	1052	03/29/07 08:41
03/29/07 10:59:13	TCPIP2	9.42.45.131	1030	9.42.45.135	4022	03/29/07 08:41
03/29/07 10:59:13	TCPIP2	127.0.0.1	1024	127.0.0.1	1025	03/29/07 08:41
03/29/07 10:59:13	TCPIP2	127.0.0.1	1920	127.0.0.1	1053	03/29/07 08:41
03/29/07 10:59:13	TCPIP2	127.0.0.1	1025	127.0.0.1	1024	03/29/07 08:41

TCPIP Connection Summary

Collection Time	TCPIP Job Name	Local IP Address	Local Port	Remote IP Address	Remote Port	Connection Start Time	Last Activity Timestamp	Resource Name	Connection ID	Total Bytes Received	Total Bytes Sent	Total Bytes	Bytes Received	Bytes Sent	Bytes Sent or Received	Byte Rate	Total Segments Retransmitted	Segments Retransmitted	Percent Segments Retransmitted
03/29/07 10:59:13	TCPIP2B	127.0.0.1	1024	127.0.0.1	1025	03/29/07 08:40:38	03/29/07 08:40:38	TCPIP2B	0000000011	400	1170	1570	0	0	0	0	0	0	0
03/29/07 10:59:13	TCPIP2B	127.0.0.1	1025	127.0.0.1	1024	03/29/07 08:40:38	03/29/07 08:40:38	TCPIP2B	0000000016	1170	400	1570	0	0	0	0	0	0	0
03/29/07 10:59:13	TCPIP2C	127.0.0.1	1024	127.0.0.1	1025	03/29/07 08:40:22	03/29/07 08:40:23	TCPIP2C	0000000018	400	1170	1570	0	0	0	0	0	0	0
03/29/07 10:59:13	TCPIP2C	127.0.0.1	1025	127.0.0.1	1024	03/29/07 08:40:22	03/29/07 08:40:23	TCPIP2C	0000000017	1170	400	1570	0	0	0	0	0	0	0
03/29/07 10:59:13	TCPIP2	127.0.0.1	1053	127.0.0.1	1920	03/29/07 08:44:13	03/29/07 10:46:22	CANDINA	0000000127	0	0	0	0	0	0	0	0	0	0

Hub Time: Thu, 03/29/2007 02:38 PM

Server Available

TCPIP Connection Data - dino.tivlab.raleigh.ibm.com - LINDA

Applet CWApplet started

Internet

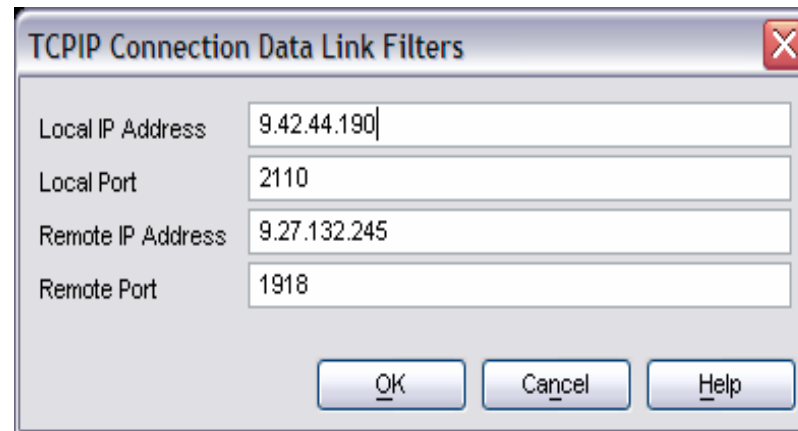
To filter data:

1. Right click on link for selected row.
2. Click on "Filtered TCP/IP Connection Data"

- Info on active TCP/IP connections on this LPAR for stacks defined in CNMSTYLE
- Much more info than previously available
- All data displayed in a readable format

TCP/IP Active Connections Filter

Filter Criteria



Local IP Address: 9.42.44.190

Local Port: 2110

Remote IP Address: 9.27.132.245

Remote Port: 1918

Buttons: OK, Cancel, Help

- The link filter dialog is populated with the values from the row.

Inactive TCP/IP Connections

Inactive TCP/IP Connection Data - NED - SYSADMIN

File Edit View Help

View: Physical

NetView

- NTV74
 - DVIPA Connections
 - DVIPA Definition and Status
 - DVIPA Distributor Targets
 - DVIPA Sysplex Distributors
 - NetView Audit Log
 - NetView Command Response
 - NetView Health
 - NetView Log
 - Session Data
 - Stack Configuration and Status
 - TCP/IP Connection Data

Physical

Total Segments Retransmitted >= 10

Page: 1 of 4

Connection ID: 0X0002E657

Inactive TCP/IP Connection Count

Collection Time	Kept Inactive Connections
06/28/07 17:12:18	1000

Inactive TCP/IP Connection Data Summary

Page: 1 of 4

	Collection Time	TCP/IP Job Name	Local IP Address	Local Port	Remote IP Address	Remote Port	Connection Start Time	Connection End Time	Resource Name	Connection ID	Total Bytes Received
☺	06/28/07 17:12:18	TCP/IP	9.42.44.190	1800	9.42.44.15	4022	06/28/07 10:51:37	06/28/07 16:46:31	T530EENV	0X0006ED3E	1988
☺	06/28/07 17:12:18	TCP/IP	9.42.44.190	1492	9.42.44.15	4022	06/27/07 08:53:17	06/27/07 16:38:01	T530EENV	0X0006B998	2563
☺	06/28/07 17:12:18	TCP/IP	9.42.44.190	1523	9.27.132.245	1918	06/27/07 13:11:28	06/27/07 14:30:20	V410N3	0X0006C274	1574
☺	06/28/07 17:12:18	TCP/IP	127.0.0.1	1522	127.0.0.1	1920	06/27/07 13:11:28	06/27/07 13:11:28	V410N3	0X0006C273	1
☺	06/28/07 17:12:18	TCP/IP	127.0.0.1	1920	127.0.0.1	1522	06/27/07 13:11:28	06/27/07 13:11:28	CANSNA	0X0006C275	3
☺	06/28/07 17:12:18	TCP/IP	9.42.44.190	1517	9.42.44.190	1920	06/27/07 13:10:35	06/27/07 13:10:36	CANSNA	0X0006C19E	1
☺	06/28/07 17:12:18	TCP/IP	9.42.44.190	1920	9.42.44.190	1517	06/27/07 13:10:35	06/27/07 13:10:36	V410N3	0X0006C19F	2

Hub Time: Thu, 06/28/2007 05:42 PM Server Available Inactive TCP/IP Connection Data - NED - SYSADMIN

NetView Command Response

The screenshot displays the NetView Command Response application interface. The main window is titled "NetView Command Response - NED - SYSADMIN *ADMIN MODE*". It features a menu bar (File, Edit, View, Help), a toolbar, and a tree view on the left showing the system hierarchy. The "Take Action" dialog is open, showing the "Action" section with "Name: Issue NetView Commands" and "Command: NA: list ''". The "Destination Systems" list contains "NTV74". A "Run" button is visible at the bottom right of the dialog. Below the dialog, the "NetView Command Response Summary" window shows the output of the command:

```

11/28/06 10:27:42 list ''
11/28/06 10:27:42 STATION: SYSADMIN   TERM: SYSADMIN
                   HCOPI: NOT ACTIVE  PROFILE: DSIPROFC
                   STATUS: ACTIVE     IDLE MINUTES: 0
                   ATTENDED: NO       CURRENT COMMAND: NvLabel
                   AUTHRCVR: NO       CONTROL: GLOBAL
                   NGMFADMN: NO       DEFAULT MVS CONSOLE NAME: SYSANMM
                   NGMFSVSPN: NMMN (NO SPAN CHECKING ON NMC VIEWS)
                   NGMFCMDS: YES     AUTOTASK: YES
                   IP ADDRESS: N/A
                   OP CLASS LIST: NONE
                   DOMAIN LIST: NTV70 (I) NTV74 (I) NTV6D (I) NTV8E (I)
    
```

At the bottom of the interface, there are status indicators: "Hub Time: Not Available", "Server Available", and the window title "NetView Command Response - NED - SYSADMIN *ADMIN MODE*" repeated.

NetView Tasks Workspace

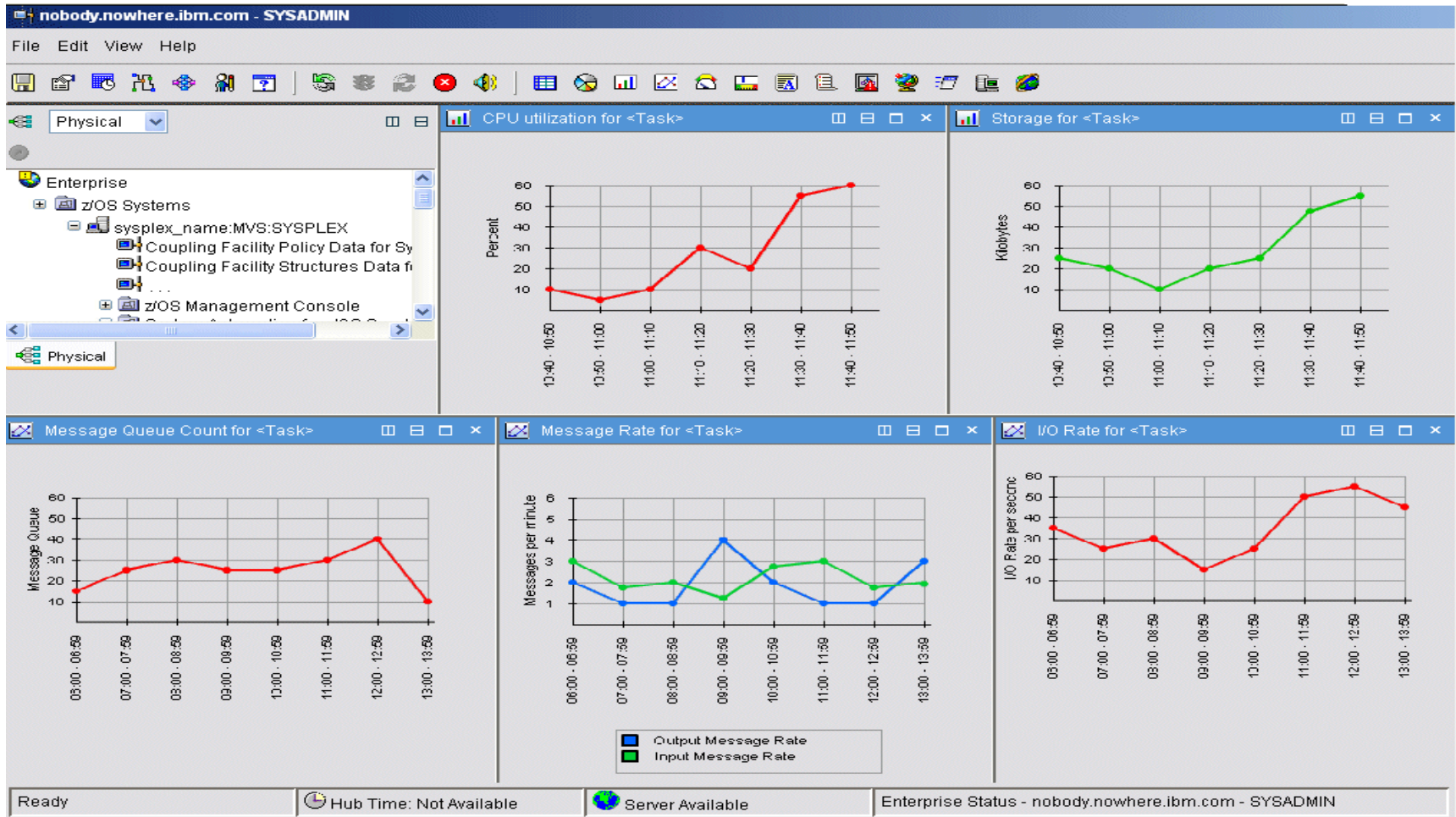
The screenshot displays the NetView Tasks Workspace interface. On the left is a tree view showing the hierarchy of tasks under 'z/OS Systems'. The main area is divided into three sections: a tree view, a 'CPU Utilization' graph, and a 'Storage' graph. The 'CPU Utilization' graph shows a bar for 'MAINTASK' at approximately 24% and other tasks near 0%. The 'Storage' graph shows 'MAINTASK' at approximately 2425 Kilobytes, with other tasks below 1000 Kilobytes. Below the graphs is a 'NetView Tasks Summary' table.

Collection Time	Domain Name	Task Name	Status	CPU Utilization	Storage	Message Queue Count	Output Message Rate	Input Message Rate	I/O Rate	Critical CPU Util Threshold	Critical Storage Threshold
11/29/06 10:35:01	NTV74	MAINTASK	ACTIVE	0	2425	0	0	0	0	95	0
11/29/06 10:35:01	NTV74	NTV74PPT	ACTIVE	0	410	0	0	0	0	95	0
11/29/06 10:35:01	NTV74	DSIMONIT	ACTIVE	0	4	0	0	0	0	95	0
11/29/06 10:35:01	NTV74	DSITIMMT	ACTIVE	0	27	0	0	0	0	95	0
11/29/06 10:35:01	NTV74	DSIDCBMT	ACTIVE	0	3	0	0	0	0	95	0
11/29/06 10:35:01	NTV74	DSIHLLMT	ACTIVE	0	4	0	0	0	0	95	0
11/29/06 10:35:01	NTV74	DSISTMMT	ACTIVE	0	3	0	0	0	0	95	0
11/29/06 10:35:01	NTV74	DSILOGMT	ACTIVE	0	4	0	0	0	0	95	0
11/29/06 10:35:01	NTV74	DSILOG	ACTIVE	0	65	0	0	0	0	95	0
11/29/06 10:35:01	NTV74	DSITRACE	INACTIVE	0	0	0	0	0	0	95	0
11/29/06 10:35:01	NTV74	DSIELTSK	INACTIVE	0	0	0	0	0	0	95	0
11/29/06 10:35:01	NTV74	DSICORRV	INACTIVE	0	0	0	0	0	0	95	0

Hub Time: Wed, 11/29/2006 10:36 AM | Server Available | NetView Tasks - NED - SYSADMIN *ADMIN MODE*

Provides task status and performance statistics for all NetView tasks

NetView Task Details Workspace



Five views show performance metrics for the selected task over time.

Historical Data Collection

- Both real-time and historical data are available within the NetView for z/OS Enterprise Management Agent workspaces.
- Available for:
 - ▶ DVIPA Distributor Targets
 - Server Acceptance
 - DVIPA Distributor Targets Summary
 - ▶ DVIPA Sysplex Distributors
 - DVIPA Sysplex Distributors Summary
 - ▶ Inactive TCP/IP Connections
 - All views except Inactive TCP/IP Connections Count
 - ▶ NetView Tasks (all views)
 - ▶ Session Data
 - Active Session Count
 - ▶ TCP/IP Connection Data (all views)

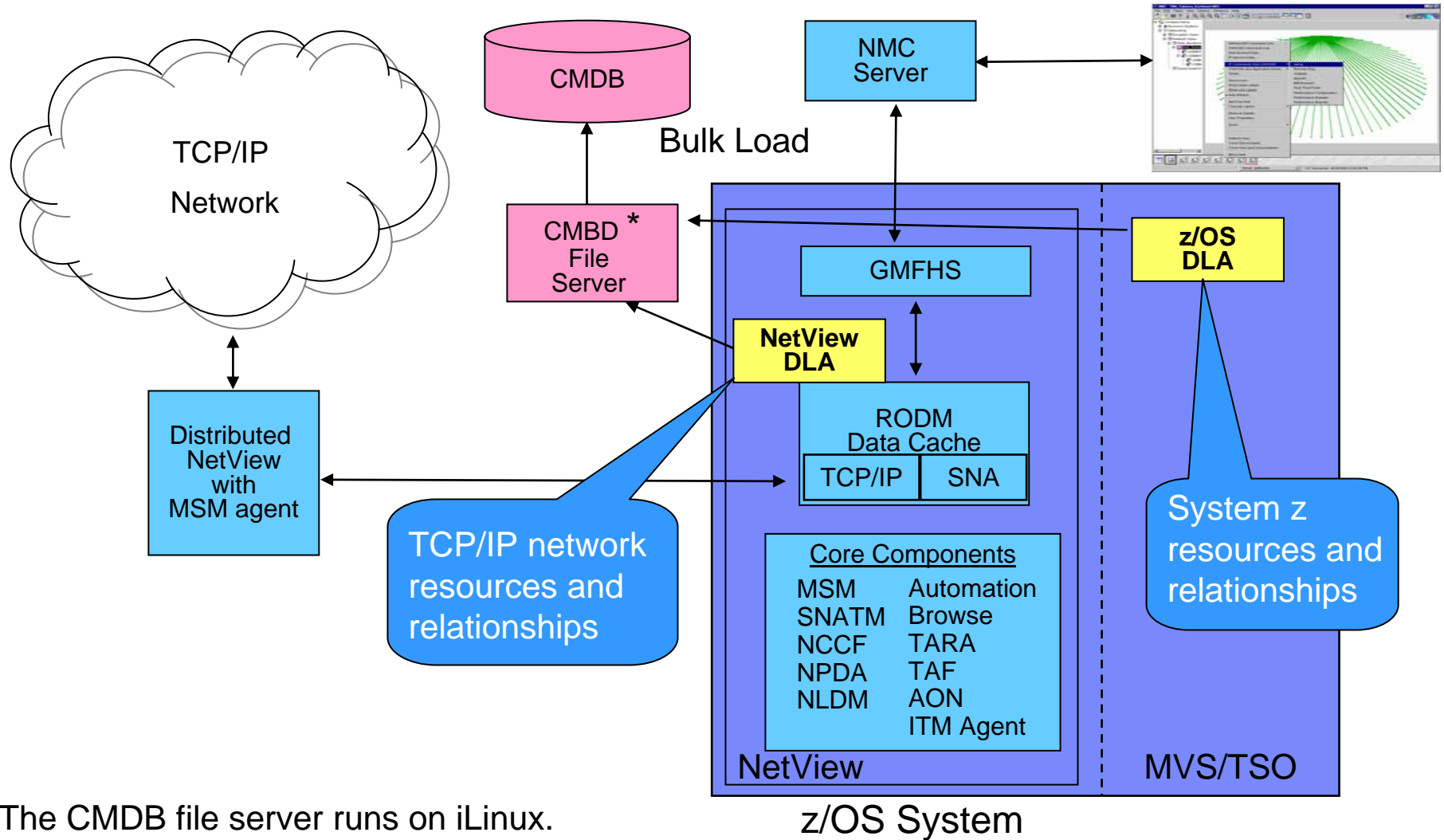


Product Integration

- **Support for CMDB**
- Additional integration with the OMEGAMON® suite



Discovery Library Adapters



Data Types Collected, Results from Actual DLA Runs

ZOSBASE z/OS DLA ZOSTASK

Class Summary

Class	Count
ComputerSystem	1
Fqdn	1
IpInterface	1
IPv4Address	1
Organization	1
Sysplex	1
SystemSpecificCollection	1
ZOS	1
Total Class Instances	8

Link Summary

Link	Count
assignedTo	1
bindsTo	1
contains	2
hostedCollection	1
memberOf	1
owns	2
runsOn	1
Total Link Instances	9

Class Summary

Class	Count
AddressSpace	16
ComputerSystem	1
Fqdn	1
IpInterface	1
IPv4Address	1
Organization	1
Sysplex	1
SystemSpecificCollection	1
TcpPort	13
UdpPort	9
ZOS	1
Total Class Instances	46

Link Summary

Link	Count
accessedVia	17
assignedTo	1
bindsTo	23
contains	2
hostedCollection	1
memberOf	1
owns	2
runsOn	17
Total Link Instances	64

NetView for z/OS DLA

Class Summary

Class	Count
ComputerSystem	281
Fqdn	276
IpInterface	316
IpNetwork	12
IPv4Address	316
OperatingSystem	281
Organization	1
Router	5
SnmpSystemGroup	286
Sysplex	2
SystemSpecificCollection	2
ZOS	5
ZSeriesComputerSystem	5
Total Class Instances	1788

Link Summary

Link	Count
assignedTo	276
bindsTo	316
contains	637
givesDetails	286
hostedCollection	2
installedOn	286
memberOf	5
networks	316
owns	7
provides	5
routes	32
runsOn	286
Total Link Instances	2454

These DLA tallies taken from IDMLBrowse tool UI (distributed with z/OS DLA and free on OPAL)

NetView Data + z/OS DLA Data in TADDDM

Configuration Discovery and Tracking - Version: Current

File Edit Display Discovery Topology Analytics Windows Help

Subnet - 9.42.44.0

Discovered Components

Physical Infrastructure

- Sysplexes
 - PLEX1(4)
 - z/OS nmp196
 - z/OS tvt2011
 - z/OS nmp127
 - z/OS tivmvs7
 - NETVIEW(3)
 - z/OS tvt2006
 - z/OS tvt2003
 - z/OS tvt2002
 - Z-Series(7)
 - nmp127
 - tivmvs7
 - tvt2002
 - tvt2003
 - tvt2003
 - tvt2006
 - tvt2011
 - System p

Details

Items: z/OS IPO1-PLEX1

General IP Parmlib Runtime Storage Subsystems

Label:	nmp196
Name	NMP196.tivlab.raleigh.ibm.com
OS Name	NMP196
SMF ID	IPO1
Net ID SSCP	USIBMNT.NTCAMYS
SysRes Volume	G15E1B
Version	01.05.00
Primary JES	JES2
JES Node	NMS196
IPL Parm Dataset	SYS2.IPLPARM
IPL Parm Device	0400
IPL Parm Member	LOAD0C
IPL Parm Volume	G15E1B
IPL Time	4/10/07 14:44 EDT

Username: administrator | Server: scooby.tivlab.raleigh.ibm.com:9433

zSeries
NMP196
(IPO1)
discovered
by NetView
V5.3 DLA
reconciles
with NMP196
discovered
by z/OS DLA.

z/OS DLA
adds system
infrastructure
while
NetView
provides
network
infrastructure

NetView DLA Deployment options

- One centralized NetView for z/OS
collects data from other NetView installations & multiple distributed NetView agents
- or –
- Multiple NetView for z/OS instances
when topology info is distributed across multiple NetViews, each with its own RODM



Product Integration

- Support for CMDB
- **Additional integration with the OMEGAMON suite**



Additional OMEGAMON Integration

- **More correlated cross-product links**
- Command authorization with NetView

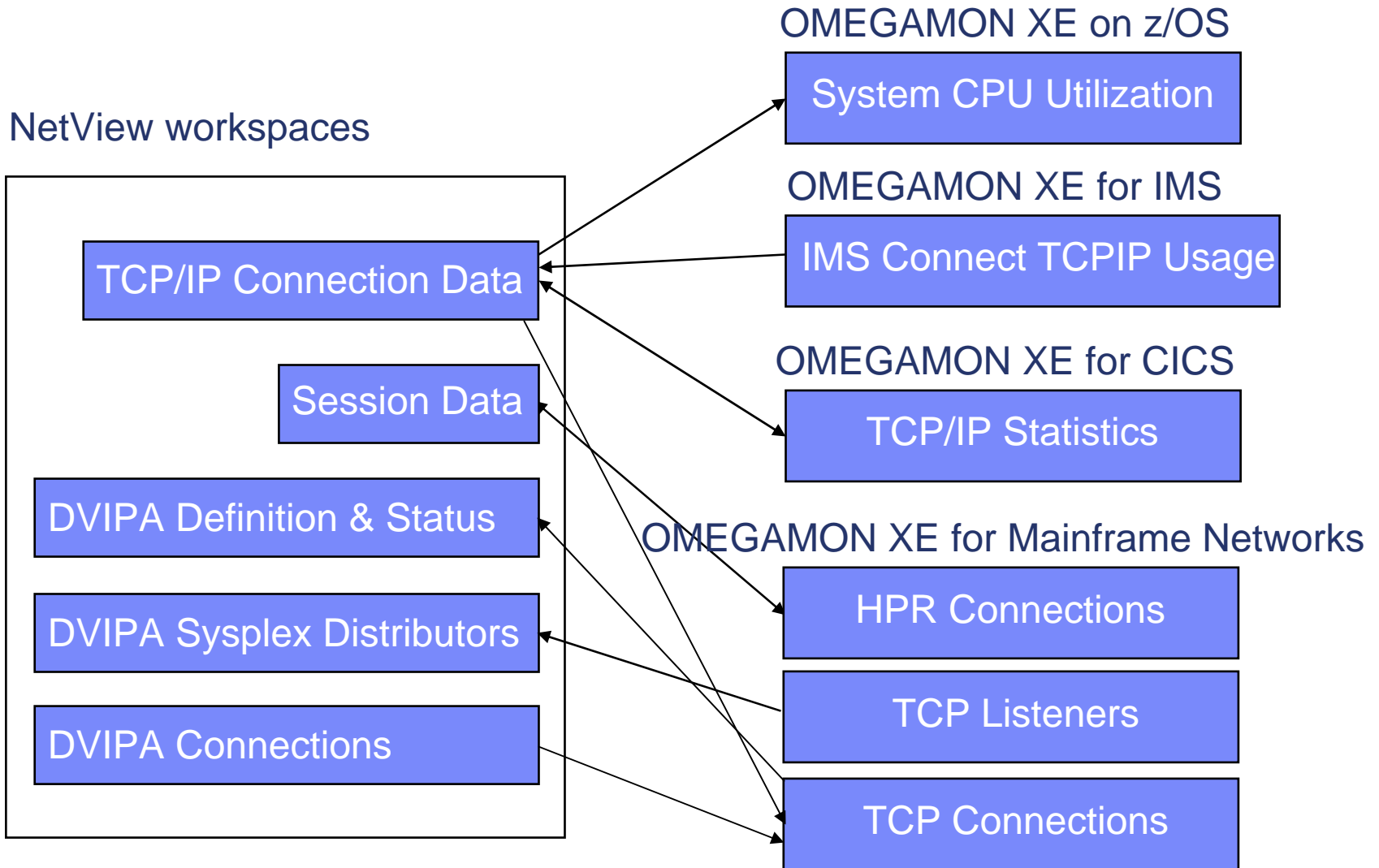


Additional Integration with the OMEGAMON Suite

- Correlated links between NetView and ...
 - OMEGAMON XE on z/OS
 - OMEGAMON XE for CICS®
 - OMEGAMON XE for IMS™
 - OMEGAMON XE for Mainframe Networks



Additional Integration with the OMEGAMON Suite



Cross-product Integration Example

Active TCPIP Connection Count

Collection Time	Total Active Connections
09/20/07 16:54:13	16

TCPIP Connection Data Summary

Collection Time	TCPIP Job Name	Local IP Address	Local Port	Remote IP Address	Remote Port	Connection Start Time	Last Activity Timestamp	Resource Name	Connection ID	Total Bytes Received	Total Bytes Sent
09/20/07 16:54:13	TCPIP	9.42.44.190	2243	9.42.45.10	4022	09/20/07 11:26:55	09/20/07 16:54:06	T530EENV	0X00017932	184775	17
09/20/07 16:54:13	TCPIP	9.42.44.190	2245	9.42.45.217	4022	09/20/07 11:26:56	09/20/07 16:54:04	T530EENV	0X00017936	180670	16
09/20/07 16:54:13	TCPIP	9.42.44.190	4022	9.42.45.10	1040	09/20/07 11:26:55	09/20/07 16:54:09	T530EENV	0X0001792F	169299	16
09/20/07 16:54:13	TCPIP	9.42.44.190	4022	9.42.45.217	1033	09/20/07 11:26:55	09/20/07 16:54:09	T530EENV	0X0001792E	169297	16

Hub Time: Thu, 09/20/2007 05:04 PM Server Available TCPIP Connection Data - NED - SYSADMIN

Cross-product Integration Example

The screenshot displays the 'TCPIP Connection Data - NED - SYSADMIN' window. The interface includes a menu bar (File, Edit, View, Help), a toolbar, and a main workspace divided into several panes:

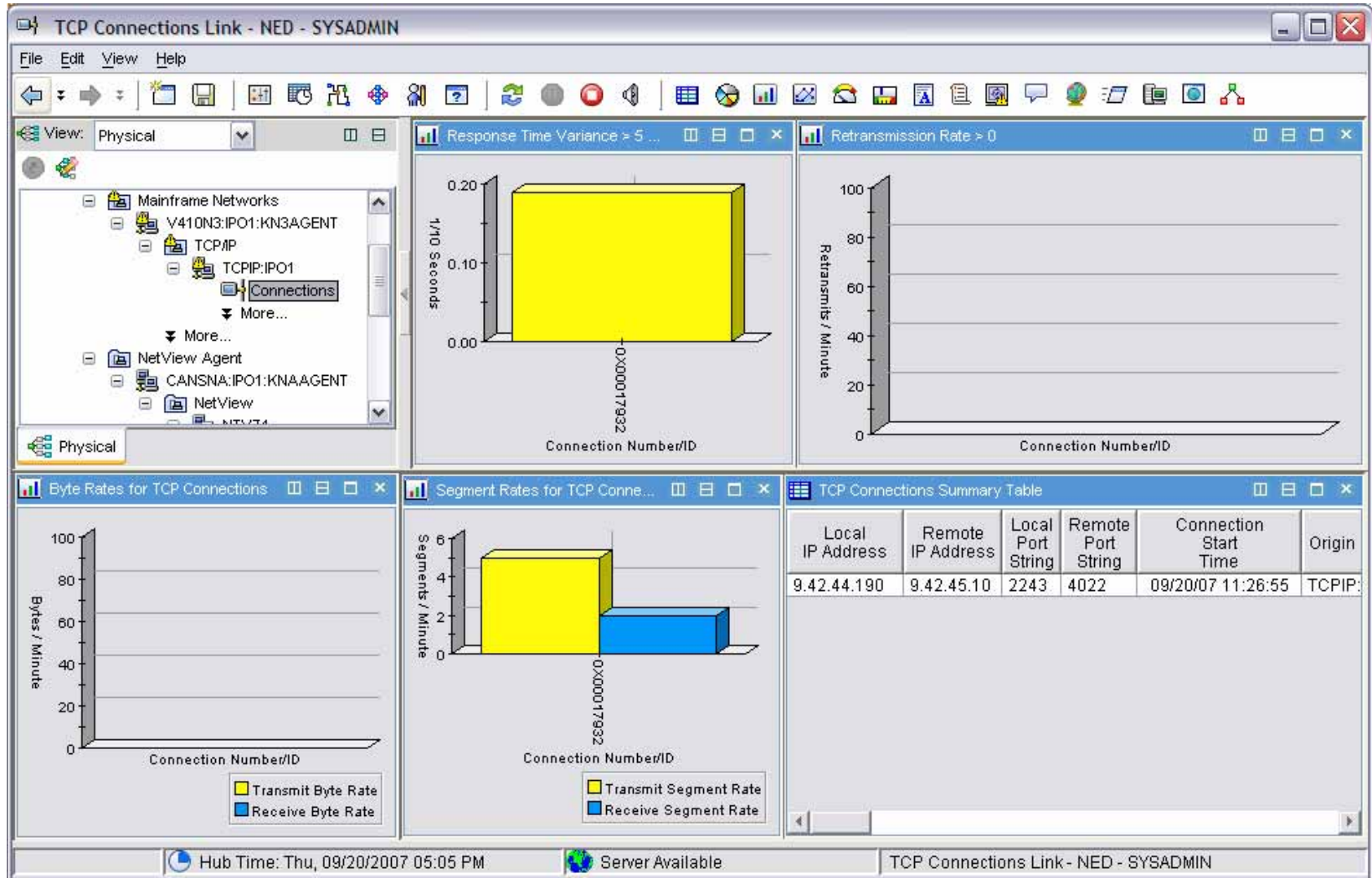
- Left Pane (Tree View):** Shows a hierarchy starting with 'NetView' and 'NTV74'. A context menu is open over the tree, listing options such as 'Mainframe Networks: TCP Connections Link', 'CICS: TCPIP Statistics', and 'z/OS: System CPU Utilization'.
- Top Right Pane (Graph):** Titled 'Percent Segments Retransmitted >= 3', it shows a line graph with the y-axis labeled 'Percent of Segments Retransmitted' ranging from 0 to 100. The x-axis is labeled 'Connection ID'. The graph shows a flat line at 0%.
- Bottom Right Pane (Table):** Titled 'Active TCPIP Connection Count', it contains a summary table:

Collection Time	Total Active Connections
09/20/07 16:54:13	16
- Main Table:** A detailed table of active connections with columns: Local Port, Remote IP Address, Remote Port, Connection Start Time, Last Activity Timestamp, Resource Name, Connection ID, Total Bytes Received, and Total Bytes Sent.

Local Port	Remote IP Address	Remote Port	Connection Start Time	Last Activity Timestamp	Resource Name	Connection ID	Total Bytes Received	Total Bytes Sent
4022	9.42.45.10	4022	09/20/07 11:26:55	09/20/07 16:54:06	T530EENV	0X00017932	184775	17...
2245	9.42.44.190	4022	09/20/07 11:26:56	09/20/07 16:54:04	T530EENV	0X00017936	180670	16...
1040	9.42.44.190	4022	09/20/07 11:26:55	09/20/07 16:54:09	T530EENV	0X0001792F	169299	16...
1033	9.42.44.190	4022	09/20/07 11:26:55	09/20/07 16:54:09	T530EENV	0X0001792E	169297	16...

The status bar at the bottom shows 'Hub Time: Thu, 09/20/2007 05:05 PM', 'Server Available', and the window title 'TCPIP Connection Data - NED - SYSADMIN'.

Cross-product Integration Example



Additional OMEGAMON Integration

- More correlated cross-product links
- **Command authorization with NetView**



Command Authorization with NetView

- For agents that do not have a command handler
 - ▶ Route OMEGAMON Take Action MVS commands to NetView for execution
- Command authorization at NetView leveraging NetView's command authorization
 - ▶ Table Authorization
 - ▶ SAF Authorization
 - ▶ TEP userID is used to determine the NetView operator whose command authority is checked. If command authorization passes, the command is executed on that NetView operator.
- Messages are written to NetView Log to provide audit trail of commands and user who issued them.



z/OS OMEGAMON Agents

- OMEGAMON XE for CICS on z/OS V3.1.0 and V4.1.0
- OMEGAMON XE for DB2® on z/OS V3.1.0 and V4.1.0
- OMEGAMON XE for IMS on z/OS V3.1.0 and V4.1.0
- OMEGAMON XE for Storage on z/OS V3.1.0 and V4.1.0
- OMEGAMON XE for Mainframe Networks V3.1.0 and V4.1.0
- OMEGAMON XE on z/OS V3.1.0 and V4.1.0
- OMEGAMON z/OS Management Console V1.1.0 and V4.1.0
- OMEGAVIEW® V3.1.0
- OMEGAVIEW II® for the Enterprise V3.1.0



APARs for OMEGAMON Product Family

Product	V1.1.0	V3.1.0	V4.1.0
IBM Tivoli OMEGAMON XE for CICS on z/OS		OA19124	OA19124
IBM Tivoli OMEGAMON XE for DB2 on z/OS		PK36349	PK36349
IBM Tivoli OMEGAMON XE for IMS on z/OS		OA19528	OA19556
IBM Tivoli OMEGAMON XE on z/OS		OA19227	GA's 1/2007
IBM Tivoli OMEGAMON XE for Storage on z/OS		OA19146	OA19146
IBM Tivoli OMEGAMON XE for Mainframe Networks		OA18911	OA18748
IBM Tivoli OMEGAMON z/OS Management Console	OA19022		GA's 1/2007
IBM Tivoli OMEGAVIEW		OA19229	
IBM Tivoli OMEGAVIEW II for the Enterprise		OA19420	

APARs for ICAT, OMEGAMON Platform V3.6.0, ITMS on z/OS V6.1.0

Component	OMEGAMON Platform V3.6.0	IBM Tivoli Monitoring on z/OS V6.1.0
ICAT framework V3.1.0 (CI310)	OA18174	OA18174
Candle Management Server V3.6.0 (DS360) Configuration	OA18378	
Candle Management Server V3.6.0 (DS360) FP6 HKDS360	OA14042	
CT/Engine V1.9.0 (LV190) FP6 HKLV190	OA16507	
IBM Tivoli Monitoring Tivoli Enterprise Monitoring Server V6.1.0 (DS610) Configuration		OA18378
IBM Tivoli Monitoring Tivoli Enterprise Monitoring Server V6.1.0 (DS610) FP4		OA17454
ITMS: Engine V6.1.0 (LV610) FP4 HKLV610		OA19090

NetView Log after Commands

```

Session B - [27 x 132]
File Edit View Communication Actions Window Help
STATMON.BROWSE ACTP NETWORK LOG FOR 11/29/06 (06333) COLS 017 146 13:34
DOMAIN: NTVAF SCROLL ==> CSR
---2---+---3---+---4---+---5---+---6---+---7---+---8---+---9---+---10---+---11---+---12---+---13---+---14---+
NTVAF 13:33:07 | END OF ERROR MSG
NTVAF 13:33:36 * BR NETLOGA
NTVAF 13:33:42 C BNH806I TAKE ACTION COMMAND 'LIST CNMTAMEL' RECEIVED FOR TASK SYSADMIN
NTVAF 13:33:42 | LIST CNMTAMEL
NTVAF 13:33:42 | TYPE: OPT TASKID: CNMTAMEL TASKNAME: CNMTAMEL STATUS: ACTIVE
NTVAF 13:33:42 | MEMBER: DUISFP
NTVAF 13:33:42 | HOSTNAME=NMPIPL47 HOSTID=9.42.44.47 PORT=4020
NTVAF 13:33:42 | LOADMOD: DSIZDST
NTVAF 13:33:42 | Task Serial: 650
NTVAF 13:33:42 | Messages Pending: 0 Held: 0
NTVAF 13:33:42 | WLM Service Class: Not Available
NTVAF 13:33:42 | END OF STATUS DISPLAY
NTVAF 13:33:42 C BNH807I TAKE ACTION RESPONSE SENT FOR COMMAND 'LIST CNMTAMEL' TASK SYSADMIN
IBMUSER 13:34:21 | BNH806I TAKE ACTION COMMAND 'MVS D T (00000003)' RECEIVED FOR TASK SYSADMIN
CANSNA 13:34:21 * MVS D T
NTVAF 13:34:21 E IEE136I LOCAL: TIME=13.34.21 DATE=2006.333 GMT: TIME=18.34.21 DATE=2006.333
NTVAF 13:34:48 - DSI020I OPERATOR NETOP2 LOGGED ON FROM TERMINAL NTAFLT03 USING PROFILE (DSIPROFB ), HCL ( )
NTVAF 13:34:48 - LOGPROF1
NTVAF 13:34:48 - DSI083I AUTOWRAP STOPPED
NTVAF 13:34:49 C CNM357I PFKDEF : PF KEY SETTINGS NOW ESTABLISHED. 'DISPFK' TO SEE YOUR PF KEY SETTINGS
NTVAF 13:34:50 * BR NETLOGA

CMD==>
TO SEE YOUR KEY SETTINGS, ENTER 'DISPFK'
MA b 26/009
Connected to remote server/host ralvmr.raleigh.ibm.com using port 23 usrtpl6z 2B13/02/510 on usrtpl6z

```

NetView Log in the TEP

The screenshot displays a Windows window titled 'nvlogta.bmp - Windows Picture and Fax Viewer'. The window contains a 'Message Count' chart and a 'NetView Log Summary Table'.

Message Count Chart: A 3D bar chart showing the count of messages over time intervals. The Y-axis is labeled 'Count' and ranges from 0 to 6. The X-axis is labeled 'Time Interval' and shows dates and times from 08/01/06 20:58:10 to 08/01/06 21:02:18.

Time Interval	Count
08/01/06 20:58:10	5
08/01/06 20:58:38	1
08/01/06 20:59:05	6
08/01/06 20:59:33	3
08/01/06 21:00:00	0
08/01/06 21:00:28	0
08/01/06 21:00:55	0
08/01/06 21:01:22	0
08/01/06 21:01:51	1
08/01/06 21:02:18	2

NetView Log Summary Table: A table with columns: SeqNum, Log, OperID, Message Domain, Routing, Date, Time, MTYPE, and Message. The table contains log entries from 08/01/06 20:58:10 to 21:02:46. A red box highlights a sequence of messages starting at SeqNum 4002.

SeqNum	Log	OperID	Message Domain	Routing	Date	Time	MTYPE	Message
3999	ACTS	NETOP1	NTVAF		08/01/06	20:58:31	*	NACMD HOSTDEST=9.76.102.203
4000	ACTS	NETOP1	NTVAF		08/01/06	20:58:31	C	BNH804I 'NETVIEW TIVOLI ENTERPRISE PORTAL AGENT' 'SIG-9-76-102-21
4001	ACTS	NETOP1	NTVAF		08/01/06	20:58:54	C	BNH804I 'NETVIEW TIVOLI ENTERPRISE PORTAL AGENT' 'SIG-9-76-102-21
4002	ACTS	NETOP1	NTVAF		08/01/06	20:59:32	C	BNH806I TAKE ACTION COMMAND 'NANVCMD COMMAND=STOP TASK=CH
4003	ACTS	NETOP1	NTVAF		08/01/06	20:59:32		stop task=cnmntamel
4004	ACTS	NETOP1	NTVAF		08/01/06	20:59:32		BNH232E 'SYSADMIN' IS NOT AUTHORIZED TO ISSUE COMMAND 'STOP'
4005	ACTS	NETOP1	NTVAF		08/01/06	20:59:32		BNH233E THE COMMAND 'STOP' IS PROTECTED BY COMMAND IDENTIFIE
4006	ACTS	NETOP1	NTVAF		08/01/06	20:59:32		DSI213I ACCESS TO 'stop' IS NOT AUTHORIZED
4007	ACTS	NETOP1	NTVAF		08/01/06	20:59:32	C	BNH807I TAKE ACTION RESPONSE SENT FOR COMMAND 'NANVCMD COI
4008	ACTS	NETOP1	NTVAF		08/01/06	20:59:51	C	BNH806I TAKE ACTION COMMAND 'NALBRW NETVIEWLOG= ID= AMT= BL
4009	ACTS	NETOP1	NTVAF		08/01/06	20:59:51		NALBRW NetViewLog= ID= AMT= BLOG=() BRPRMS=() SUBCMD=() INTVL=
4010	ACTS	NETOP1	NTVAF		08/01/06	20:59:52	C	BNH807I TAKE ACTION RESPONSE SENT FOR COMMAND 'NALBRW NETV
4011	ACTS	NETOP1	NTVAF		08/01/06	21:02:09	*	BR NETLOGA
4012	ACTS	NETOP1	NTVAF		08/01/06	21:02:46	C	BNH806I TAKE ACTION COMMAND 'NALBRW NETVIEWLOG= ID= AMT=18 E
4013	ACTS	NETOP1	NTVAF		08/01/06	21:02:46		NALBRW NetViewLog= ID= AMT=18 BLOG=() BRPRMS=() SUBCMD=() INTV

Core Functions

- **Dynamic Pipelines**
- Command Response Suppression
- NLDM: PIU Formatting
- Miscellaneous Enhancements



Dynamic Pipelines

- Allows for handling intermediate output from commands
 - ▶ Allows REXX to run while asynchronous, correlated messages are being returned.
 - ▶ For example, allows intermediate output from PING and TRACERTE
- Intended primarily for programmatic use, but can be used by operators
- New options on several commands
 - ▶ PIPE's PERSIST stage
 - ▶ ATTACH
 - ▶ TRAP clist command
- See CNMS1101 for example



Core Functions

- Dynamic Pipelines
- **Command Response Suppression**
- NLDM: PIU Formatting
- Miscellaneous Enhancements



Command Response Suppression

- Reduces number of responses to piped commands in the Syslog
- New option on DEFAULTS and OVERRIDE commands
 - ▶ SLOGCMDR (System LOG CoMmanD Responses)
 - ▶ Controls logging of WTOs inbound to NetView
 - Copies to CNMCSSIR are not affected
 - Keys on Console Name – not routecode
- New Message Revision Table (MRT) order
 - ▶ D4NV (“Destined for NetView”)



Core Functions

- Dynamic Pipelines
- Command Response Suppression
- **NLDM: PIU Formatting**
- Miscellaneous Enhancements

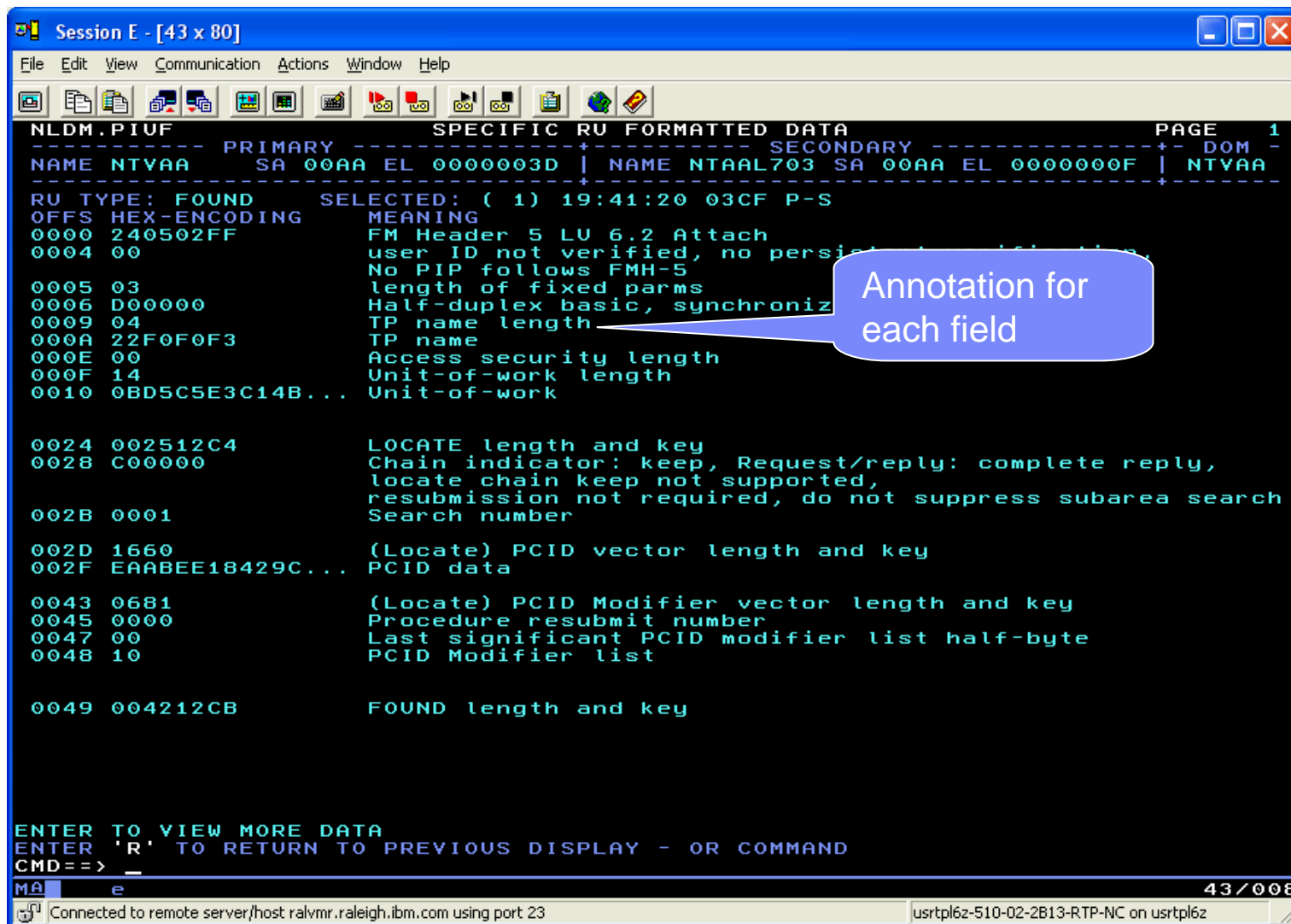


NLDM: PIU formatting

- Enhances existing NLDM functions that list PIUs and allows each to be expanded into “dump” format.
- New: if the PIU meets certain criteria (non-truncated LU 6.2 Attach), and “ F” is added to the selection number, NetView will format (interpret the data) the PIU.
- NetView also prompts for the “F” if there’s an eligible PIU on the PIUT screen.
- Can toggle between formatted screen and “in place” dump format via existing SET HEX ON|OFF command.



Formatted SNA PIU



```

Session E - [43 x 80]
File Edit View Communication Actions Window Help
NLDM.PIUF          SPECIFIC RU FORMATTED DATA          PAGE 1
----- PRIMARY -----+----- SECONDARY -----+ DOM
NAME NTVAA      SA 00AA EL 0000003D | NAME NTAAL703 SA 00AA EL 0000000F | NTVAA
-----+-----
RU TYPE: FOUND      SELECTED: ( 1 ) 19:41:20 03CF P-S
OFFS HEX-ENCODING  MEANING
0000 240502FF      FM Header 5 LU 6.2 Attach
0004 00            user ID not verified, no persist
0005 03            No PIP follows FMH-5
0006 D00000        length of fixed parms
0009 04            Half-duplex basic, synchroniz
000A 22F0F0F3      TP name length
000E 00            TP name
000F 14            Access security length
0010 0BD5C5E3C14B... Unit-of-work length
                                Unit-of-work

0024 002512C4      LOCATE length and key
0028 C00000        Chain indicator: keep, Request/reply: complete reply,
                                locate chain keep not supported,
                                resubmission not required, do not suppress subarea search
002B 0001          Search number

002D 1660          (Locate) PCID vector length and key
002F EAABEE18429C... PCID data

0043 0681          (Locate) PCID Modifier vector length and key
0045 0000          Procedure resubmit number
0047 00            Last significant PCID modifier list half-byte
0048 10            PCID Modifier list

0049 004212CB      FOUND length and key

ENTER TO VIEW MORE DATA
ENTER 'R' TO RETURN TO PREVIOUS DISPLAY - OR COMMAND
CMD==> _
MA  e
43/008
Connected to remote server/host ralmv.raleigh.ibm.com using port 23
usrtpl6z-510-02-2B13-RTP-NC on usrtpl6z

```

Annotation for each field

Formatted SNA PIU ...

```

Session E - [43 x 80]
File Edit View Communication Actions Window Help
NLDM.PIUF.HEX          SPECIFIC RU FORMATTED DATA          PAGE 3
NAME NTVAA           SA 00AA EL 0000003D | NAME NTAAL703 SA 00AA EL 0000000F | NTVAA
RU TYPE: FOUND      SELECTED: ( 1 ) 19:41:20 03CF P-S
OFFSET (HEX)        (0.1.2.3. 4.5.6.7. 8.9.A.B. C.D.E.F.) (0...4... B...C...)
160 (00A0)          291909A4 0008D5C5 E3C14040 404008C1      ...u..NE TA....A
176 (00B0)          D7D7D3F1 C1D8F108 D5C5E3C1 40404040      PPL1AQ1. NETA...
192 (00C0)          08C1D7D7 D3F1C1D8 F1291900 C00008D5      .APPL1AQ 1.....N
208 (00D0)          C5E3C140 40404008 C1D7D7D3 C1C1F140      ETA.... APPLAA1.
224 (00E0)          08D5C5E3 C1404040 4008C1D7 D7D3C1C1      .NETA... ..APPLAA
240 (00F0)          F140052F 0380401E 31010303 B1A03040      1.....
256 (0100)          00070000 87000000 00000000 00000000      ....g.....
272 (0110)          00000000 006E6306 80200400 000BB108      .....>.....a
288 (0120)          BA718BD0 2B37025E 5B824099 449FD41B      .....; $b.r..M.
304 (0130)          379AEF00 00000000 00000000 00000000      .....
320 (0140)          00000000 00000000 00000000 00000000      .....
336 (0150)          00000000 00000000 00000000 00000000      .....
352 (0160)          00000000 00000000 0000000B D5C5E3C1      .....NETA
368 (0170)          4BE2E2C3 D7F1C10B D5C5E3C1 4BE2E2C3      .SSCP1A. NETA.SSC
384 (0180)          D7C1C103 3F800565 00000006 5D04B140      PAA.....).a
400 (0190)          001A2B01 00164614 80150BD5 C5E3C14B      .....NETA.
416 (01A0)          E2E2C3D7 F1C12100 00000304 B20023      SSCP1A.. ..b...

AAU950I HEX MODE IS SET ON
ENTER 'R' TO RETURN TO PREVIOUS DISPLAY - OR COMMAND
CMD=> set hex on_
MA e
43/018
Connected to remote server/host ralmvr.raleigh.ibm.com using port 23
usrtpl6z-510-02-2B13-RTP-NC on usrtpl6z

```

SET HEX ON to see the complete hex for a field ending with "..."

Core Functions

- Dynamic Pipelines
- Command Response Suppression
- NLDM: PIU Formatting
- **Miscellaneous Enhancements**



Miscellaneous Enhancements

Check for CLIST Existence

- Check for CLIST existence before checking user authorization
- Avoids “false positive” indications of security violation
 - ▶ RACF messages
 - ▶ Security-violation SMF records

Re-establish RMTCMD Connections

- If IP connection between source and target is disrupted
 - ▶ Automatically re-establish connection

AON Execs

- AON execs are once again shipped as source code, not compiled



For More Information



For More Information

- **NetView web site**
 - ▶ <http://www.ibm.com/software/tivoli/products/netview-zos/>
 - ▶ Downloads (NMC, MSM agents, tools)
 - ▶ Release comparison
 - ▶ Link to online library
 - ▶ Link to Announcement letter
 - ▶ Links to other online information sources
 - ▶ More
- **NetView Documentation**
 - ▶ http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/index.jsp?toc=/com.ibm.itnetvie_wforzos.doc/toc.xml



Tivoli Software Training

- *Tivoli Enablement Development* produces training for *most* Tivoli products
 - ▶ **Differences training:** Covers most new and changed functions for a particular release of a product. (FREE)
 - ▶ **Web-based training (WBT):** Primary audience is distributed products. Topics generally are shorter in duration. Labs are usually a demonstration. Fees apply.
 - ▶ **Instructor-led training (ILT):** Traditional classroom training including lab exercises. Fees apply.
 - ▶ **Workshop:** Similar to ILT, but slides only. No additional student or instructor notes. Fees apply.
 - ▶ **Support Technical Exchange (STE):** Topics generally shorter in duration (less than 2 hours). No labs but demonstrations are possible. (FREE)
 - ▶ **IBM Education Assistant (IEA):** Similar to STEs, available on Boulder *infocenter* (FREE)
 - ▶ **White Paper:** Document related to a specific function of a product or how to use several products. Typically less than 50 pages. (FREE)

- All are available from the Tivoli Software Training Web page



Tivoli Software Training Web Page

1. Click **Product** tab

2. Select **N** for NetView for z/OS

Web site contains links to *product training roadmaps*, including prerequisite and supplemental training.

Classroom	
Title	Duration
→ AF/OPERATOR and OMEGACENTER Gateway Basics	5 Days
→ CIMS Server 4.3 Implementation and Administration	3 Days
→ Comprehensive Technical Training for IBM Tivoli	15 Days
→ Configuring WebSphere MQ using IBM Tivoli OMEGAMON XE for WebSphere MQ	As needed
→ Creating an ETL for Tivoli Data Warehouse 1.2	4 Days
→ Deploying an Integrated IBM Tivoli Security Solution	3 Days
→ Disaster Preparation and Recovery for IBM Tivoli Storage Manager 5.3	2 Days
→ Extending IBM Tivoli Identity Manager 4.6	4 Days
→ IBM OMEGAMON z/OS Management Console 1.1.0	As needed
→ IBM Tivoli Access Manager for Business Integration 5.1 System Administration	3 Days
→ IBM Tivoli Access Manager for e-business 6.0 Customization	4 Days

http://www.ibm.com/software/tivoli/education/edu_type.html

Where to Find Web Seminars

- Recordings of all Web Seminars presented through Tivoli Education are available at the STE Web page:
 - ▶ http://www.ibm.com/software/sysmgmt/products/support/supp_tech_exch.html
- Search *Previous Webcasts*
 - ▶ NetView for z/OS

The screenshot shows the IBM Technical Exchange Webcasts page. A red arrow points from the left side of the slide to a search box on the page. The search box is titled "Select Tivoli products with previous webcasts:" and contains a dropdown menu with "Select a product" and a "GO" button. The page also shows a navigation menu on the left, a search bar at the top, and a "Personalized support" section on the right.

NetView Webinars

- Presented and recorded throughout 2006
 - ▶ General NetView for z/OS issues
 - ▶ Installing and Using the NetView for z/OS Tivoli Enterprise Portal V6.1 Agent
 - ▶ TCP/IP Management, Part 1
 - ▶ TCP/IP Management, Part 2
 - ▶ NetView Automation Enhancements
 - ▶ Time to Value, Ease of Use, and Migration Considerations
 - ▶ End User Interface and Product Integration
 - ▶ Miscellaneous Enhancements
- Descriptions and Recordings
 - ▶ http://www.ibm.com/software/tivoli/education/edu_prd.html#N
- Presented and recorded in 2007
 - ▶ Top 10 z/OS Communication Server problems: Isolating them with OMEGAMON and NetView for z/OS - March 29, 2007
<http://www.ibm.com/software/os/zseries/telecon/mar29/>



New / Updated Classes

- Existing classes – under revision for NetView 5.3
 - ▶ “NetView Installation and Administration”
 - ▶ “NetView Customization Using Clists, Panels and Pipes”
- New classes under development
 - ▶ “NetView Fundamentals, Automation, REXX and Pipes”
 - Generally available: 1Q2008
 - ▶ “NetView V5.3 Differences”
 - Web-based
 - Available late October, 2007



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