Transaction Processing Facility

Library Guide with Master Index and Glossary

Version 4 Release 1

GH31-0146-16

Transaction Processing Facility

Library Guide with Master Index and Glossary

Version 4 Release 1

GH31-0146-16

Note!
Before using this information and the product it supports, be sure to read the general information under “Notices” on page vii.

Seventeenth Edition (June 2002)

This is a major revision of, and obsoletes, GH31-0146-15 and all associated technical newsletters.

This edition applies to Version 4 Release 1 Modification Level 0 of IBM Transaction Processing Facility, program number 5748-T14, and to all subsequent releases and modifications until otherwise indicated in new editions or technical newsletters. Make sure you are using the correct edition for the level of the product.

IBM welcomes your comments. Address your comments to:

IBM Corporation
TPF Systems Information Development
Mail Station P923
2455 South Road
Poughkeepsie, NY 12601-5400
USA

When you send information to IBM, you grant IBM a nonexclusive right to use or distribute the information in any way it believes appropriate without incurring any obligation to you.

Contents

Tables

Notices

References in this book to IBM products, programs, or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM product, program, or service in this book is not intended to state or imply that only IBM's product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any of IBM's intellectual property rights may be used instead of the IBM product, program, or service. Evaluation and verification of operation in conjunction with other products, except those expressly designated by IBM, is the user's responsibility.

IBM may have patents or pending patent applications covering subject matter in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
USA

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation
Department 830A
Mail Drop P131
2455 South Road
Poughkeepsie, NY 12601-5400
USA

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

Any pointers in this book to non-IBM Web sites are provided for convenience only and do not in any way serve as an endorsement. IBM accepts no responsibility for the content or use of non-IBM Web sites specifically mentioned in this book or accessed through an IBM Web site that is mentioned in this book.

Trademarks

The following terms are trademarks of the IBM Corporation in the United States or other countries or both:

ACF/VTAM
Advanced Peer-to-Peer Networking
APPN
AS/400
CICS
C/370
DATABASE 2
DB2
Distributed Relational Database Architecture
DRDA
EOCF/2

ESCON
IBM
MQSeries
MVS/XA
Operating System/2
OS/2
RISC System/6000
S/390
Sysplex Timer
VisualAge
VM/ESA
VTAM.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Other company, product, and service names may be trademarks or service marks of others.

About This Book

The *TPF Library Guide* provides reference material for the TPF system books. This cross-reference material is for all TPF system users.

The *TPF Library Guide* is used as a starting point to the TPF system library.

In this book, abbreviations are often used instead of spelled-out terms. Every term is spelled out at first mention followed by the all-caps abbreviation enclosed in parentheses; for example, Systems Network Architecture (SNA). Abbreviations are defined again at various intervals throughout the book. In addition, the majority of abbreviations and their definitions are listed in the master glossary in the *TPF Library Guide*.

Who Should Read This Book

This book is designed for all TPF system users.

How This Book is Organized

This book is structured in a very simple format and each part is independent of the other parts.

The first section is an introduction to the complete TPF library, with guidelines for understanding the organization and formats. The remainder of this book consists of the following cross-referencing tools:

- A *glossary* of major terms used in the TPF library
- A *master index* to the TPF library.

Conventions Used in the TPF Library

The TPF library uses the following conventions:

Conventions	Examples of Usage
italic	Used for important words and phrases. For example: A *database* is a collection of data. Used to represent variable information. For example: Enter **ZFRST STATUS MODULE** *mod*, where *mod* is the module for which you want status.
bold	Used to represent text that you type. For example: Enter **ZNALS HELP** to obtain help information for the ZNALS command. Used to represent variable information in C language. For example: **level**

`monospaced`	Used for messages and information that displays on a screen. For example:
	`PROCESSING COMPLETED`
	Used for C language functions. For example:
	`maskc`
	Used for examples. For example:
	`maskc(MASKC_ENABLE, MASKC_IO);`

Conventions	Examples of Usage
bold italic	Used for emphasis. For example: You ***must*** type this command exactly as shown.
Bold underscore	Used to indicate the default in a list of options. For example: **Keyword=OPTION1** | **DEFAULT**
Vertical bar |	Used to separate options in a list. (Also referred to as the OR symbol.) For example: **Keyword=Option1** | **Option2** **Note:** Sometimes the vertical bar is used as a *pipe* (which allows you to pass the output of one process as input to another process). The library information will clearly explain whenever the vertical bar is used for this reason.
CAPital LETters	Used to indicate valid abbreviations for keywords. For example: KEYWord=*option*

Scale	Used to indicate the column location of input. The scale begins at column position 1. The plus sign (+) represents increments of 5 and the numerals represent increments of 10 on the scale. The first plus sign (+) represents column position 5; numeral 1 shows column position 10; numeral 2 shows column position 20 and so on. The following example shows the required text and column position for the image clear card.
	`|...+....1....+....2....+....3....+....4....+....5....+....6....+....7...`
	`LOADER  IMAGE CLEAR`
	Notes:
	1. The word LOADER must begin in column 1.
	2. The word IMAGE must begin in column 10.
	3. The word CLEAR must begin in column 16.

Related Information

A list of related information follows. For information on how to order or access any of this information, call your IBM representative.

IBM Systems Application Architecture (SAA) Books

- *SAA Common Programming Interface C Reference - Level 2*, SC09-1308.

Online Information

- *IBM TPF Product Information Center*, SK2T-8062
- *Messages (Online)*
- *Messages (System Error and Offline)*

How to Send Your Comments

Your feedback is important in helping to provide the most accurate and highest quality information. If you have any comments about this book or any other TPF information, use one of the methods that follow. Make sure you include the title and number of the book, the version of your product and, if applicable, the specific location of the text you are commenting on (for example, a page number or table number).

When you send comments to IBM, you grant IBM a nonexclusive right to use or distribute your comments in any way it believes appropriate without incurring any obligation to you.

- If you prefer to send your comments electronically, do either of the following:
  - Go to http://www.ibm.com/tpf/pubs/tpfpubs.htm.

    There you will find a link to a feedback page where you can enter and submit comments.
  - Send your comments by e-mail to tpfid@us.ibm.com
- If you prefer to send your comments by mail, address your comments to:

  IBM Corporation
  TPF Systems Information Development
  Mail Station P923
  2455 South Road
  Poughkeepsie, NY 12601-5400
  USA
- If you prefer to send your comments by FAX, use this number:
  - United States and Canada: 1 + 845 + 432 + 9788
  - Other countries: (international code) + 845 + 432 +9788

About the TPF Library

This section provides the following information:

- A high-level product overview
- TPF product information sources
- A guide for finding information in the TPF library
- Information about the book reference codes used in the master index.

Product Overview

The TPF system is a licensed program product that includes the base product and the following licensed features:

- High Performance Option (HPO)
- Multi-Processor Interconnect Facility (MPIF)
- TPF Application Requester (TPFAR).

Note: The Softcopy Publications feature is no longer available. Beginning with program update tape (PUT) 16, the *IBM TPF Product Information Center* CD-ROM is now available. See “TPF Product Information Sources” for more information about this CD-ROM.

See *TPF Licensed Program Specifications* for more information about the TPF product and its licensed features.

TPF Product Information Sources

A few pieces of the TPF product information are shipped to you as hardcopy with the TPF product tape or are available for order as hardcopy through the IBM Publications Center for a fee, but you can access ***all*** TPF product information in Hypertext Markup Language (HTML) format and Portable Document Format (PDF) from any of the information sources described in this section.

The IBM Publications Center Web site offers customized search functions to help you find the TPF product information that you need. To place an order or browse the IBM Publications Center, go to: http://www.elink.ibmlink.ibm.com/public/applications/publications/cgibin/pbi.cgi. Some of the TPF product information is available for you to view or download free of charge. You can also order additional copies of the *IBM TPF Product Information Center* CD-ROM and a hardcopy version of *TPF Licensed Program Specifications* by providing your name, address, e-mail address, and credit card information. The IBM Publications Center search results will display prices in your local currency, and taxes will be calculated when you submit your address information

IBM TPF Product Information Center

The IBM TPF Product Information Center provides:

- Improved access to all TPF product information
- A new look and feel to the TPF product information:
  - Easy to use central navigation
  - Browser-based presentation
  - Expanded search capabilities that include quick lookup, advanced searches, and save and recall search results

- Customization of user preferences that include controlling the presentation of syntax diagrams and images, bookmarking frequently visited pages, and modifying HTML files
- Convenient printing using PDF files
- A help section that provides answers to frequently asked questions
- Links to other IBM resources
- A simple installation process.

The IBM TPF Product Information Center is available from the TPF Web site (go to http://www.ibm.com/tpf/pubs/tpfpubs.htm) and the *IBM TPF Product Information Center* CD-ROM. Although IBM encourages you to use an information source that best matches your working style and environment, the IBM TPF Product Information Center is the preferred information source.***You will always find the most recent version of the TPF product information on the TPF Web site.***

The TPF Web site contains a link to the **TPF Family Libraries** Web page, which allows you to access the IBM TPF Product Information Center. Once in the IBM TPF Product Information Center, you will have easy access to all TPF product information, including TPF 4.1, IBM Transaction Processing Facility Database Facility (TPFDF), IBM Extended Operations Console Facility/2 (EOCF/2), IBM TPF Operations Server, and IBM Internet Inter-ORB Protocol Connect for TPF (IIOP Connect for TPF). You can also access different PUT levels of the TPF information. To view this information on the TPF Web site, go to http://www.ibm.com/tpf/pubs/tpfpubs.htm.

Note: The IBM TPF Product Information Center has been tested on the Microsoft Windows 2000 and Windows NT operating systems using Microsoft Internet Explorer browser version 5.0 or later. If you are using Microsoft Internet Explorer browser version 5.0 with service pack 2 or later, use Adobe Acrobat Reader 5.0 to avoid experiencing difficulties with PDFs.

You can also access the IBM TPF Product Information Center from the *IBM TPF Product Information Center* CD-ROM, which also contains the necessary tools to use the TPF product information. See the information that is provided with the CD-ROM for more detailed information about the contents of the CD-ROM and installation instructions.

IBM CD-ROMs

TPF product information is available in BookManager BOOK format on the following IBM CD-ROMs, which are available from the IBM Publications Center:

- *IBM Online Library Omnibus Edition: OS/390 Collection*, SK2T-6700
- *IBM Online Library: Transaction Processing and Data Collection Kit*, SK2T-0730
- *z/OS Software Products Collection*, SK3T-4270.

OS/390 Internet Library

The OS/390 Internet Library provides various IBM product information in HTML format. To access this library, go to http://www.ibm.com/servers/s390/os390/bkserv/

Summary of TPF Product Information

Table 1 on page 3 summarizes the ways that you can access TPF product information. Some TPF product information is not available in book format. For those particular pieces of TPF product information, a form number is not provided.

Table 1. Locating Different Pieces of the TPF Product Information

TPF Product Information	Form Number	Included in the IBM TPF Product Information Center	Included on Other IBM CD-ROMs	Provided as Hardcopy with the Product Tape	Hardcopy Available for Order
General Topics					
TPF Concepts and Structures	GH31-0139	X	X		
TPF Library Guide	GH31-0146	X	X		
TPF General Information	GH31-0147	X	X		
TPF Licensed Program Specifications	GH31-0150	X	X	X	X
C Language Support					
TPF Application Programming	SH31-0132	X	X		
TPF C/C++ Language Support User's Guide	SH31-0121	X	X		
Communications					
TPF ACF/SNA Data Communications Reference	SH31-0168	X	X		
TPF Data Communications Services Reference	SH31-0145	X	X		
TPF Non-SNA Data Communications Reference	SH31-0161	X	X		
SSL for the TPF 4.1 System: An Online User's Guide	Not Applicable	X			
Control Program					
TPF Main Supervisor Reference	SH31-0159	X	X		
TPF Multi-Processor Interconnect Facility Reference	SH31-0155	X	X		
File Storage					
TPF Database Reference	SH31-0143	X	X		
TPF System Generation	SH31-0171	X	X		
Installation					
TPF ACF/SNA Network Generation	SH31-0131	X	X		
TPF Application Requester User's Guide	SH31-0133	X	X		
TPF Memo to Licensees	GI10-0687			X	
TPF Memo to Licensees for HPO Feature	GI10-0688			X	
TPF Memo to Licensees for MPIF Feature	GI10-0689			X	
TPF Memo to Licensees for TPFAR Feature	GI10-0690			X	
TPF Program Directory	GI11-0418			X	
TPF Program Directory for HPO Feature	GI11-0419			X	
TPF Program Directory for MPIF Feature	GI11-0420			X	
TPF Program Directory for TPFAR Feature	GI11-0421			X	
TPF System Generation	SH31-0171	X	X		

Table 1. Locating Different Pieces of the TPF Product Information (continued)

TPF Product Information	Form Number	Included in the IBM TPF Product Information Center	Included on Other IBM CD-ROMs	Provided as Hardcopy with the Product Tape	Hardcopy Available for Order
TPF System Installation Support Reference	SH31-0149	X	X		
Migration					
TPF Migration Guide: Program Update Tapes	GH31-0187	X	X		
TPF Migration Guide: TPF 3.1 System to TPF 4.1 System	GH31-0186	X	X		
Operations					
Messages (Online)	Not Applicable	X			
Messages (System Error and Offline)	Not Applicable	X			
TPF Operations	SH31-0162	X	X		
Performance					
TPF System Generation	SH31-0171	X	X		
TPF System Performance and Measurement Reference	SH31-0170	X	X		
Programming and Development					
TPF Application Programming	SH31-0132	X	X		
TPF Application Requester User's Guide	SH31-0133	X	X		
TPF C/C++ Language Support User's Guide	SH31-0121	X	X		
TPF General Macros	SH31-0152	X	X		
TPF Program Development Support Reference	SH31-0164	X	X		
TPF Programming Standards	SH31-0165	X	X		
TPF System Macros	SH31-0151	X	X		
TPFDF and TPF Structured Programming Macros	SH31-0183	X	X		
TPF Transmission Control Protocol/Internet Protocol	SH31-0120	X	X		
XML User's Guide	Not Applicable	X			

Finding TPF Product Information in the Library

The following tables provide an overview of the TPF product information by task and topic. Use this overview to determine which TPF product information to use to complete a task. Some TPF product information falls into more than one category. If you are a new TPF system user, begin with *TPF Concepts and Structures* and then proceed to other TPF product information based on your individual objective and the task you are performing.

Table 2. General Topics

TPF Product Information	Purpose	Form Number
TPF General Information	Obtain a high-level overview of the TPF operating system, describing the characteristics, functions, and features that allow it to grow. This information is intended for executives, managers, and system analysts.	GH31-0147

Table 2. General Topics (continued)

TPF Product Information	Purpose	Form Number
TPF Concepts and Structures	Obtain a comprehensive technical overview of the TPF system for your initial technical evaluation. This information is intended for executives and technical personnel, system programmers, and application programmers.	GH31-0139
TPF Library Guide	Obtain an overview of the TPF library as well as a functional cross-reference to the main storage resident control program CSECTs. A glossary of major terms used in the TPF library and a master index are also provided. This information is intended for anyone who uses the TPF system.	GH31-0146
TPF Licensed Program Specifications	Contains information about the warranty of licensed programs and supplemental terms related to the licensed programs. In addition, this information describes the specified operating environment of the TPF system.	GH31-0150

Table 3. C Language Support

TPF Product Information	Purpose	Form Number
TPF Application Programming	Apply your knowledge of the assembler, C, and C++ languages when programming in the TPF system environment. This information unit describes IBM C and C++ language support for TPF application programming and includes information about writing TPF application programs in assembler, C, and C++ languages, coding library functions, and debugging in the TPF system environment. If you are a webmaster who wants to use the TPF system as a Web server site, this information unit offers guidance on how to use Internet server applications, how to port an application to the TPF system that is compliant with the Portable Operating System Interface for Computer Environments (POSIX) standards, and how to start a TPF application from the Internet. You can use this information with the *TPF C/C++ Language Support User's Guide* for information about C and C++ language functions referenced here, with *TPF Transmission Control Protocol/Internet Protocol* for information about the TCP/IP C language functions, and with *TPF General Macros* for information about assembler language macros. This information is intended for application programmers; however, introductory and reference sections will also be of interest to system programmers, middleware programmers, and tools providers.	SH31-0132
TPF C/C++ Language Support User's Guide	Write TPF programs in C or C++ language. This information unit describes IBM C/C++ language support for TPF application programming. Use this information unit with *TPF Application Programming* and your compiler books at compile time, and with *TPF Transmission Control Protocol/Internet Protocol* for information about the TCP/IP C language functions. This information is intended for application programmers, although some functions will also be of interest to system programmers, middleware programmers, and tools providers.	SH31-0121

Table 4. Communications

TPF Product Information	Purpose	Form Number
TPF ACF/SNA Data Communications Reference	Understand the functions provided for the Systems Network Architecture (SNA) data communications area of the TPF system. This information is intended for system programmers.	SH31-0168
TPF Data Communications Services Reference	Learn about data communications support in the TPF system. This information is intended for system programmers.	SH31-0145
TPF Non-SNA Data Communications Reference	Understand the functions provided for the non-SNA data communications area of the TPF system. This information is intended for system programmers.	SH31-0161

Table 5. Control Program

TPF Product Information	Purpose	Form Number
TPF Main Supervisor Reference	Understand the functions performed by the main supervisor in coordinating the use of resources and maintaining processing unit operations by performing initialization, service and control, and error processing. The main supervisor is a component of the control program (CP). You will find information about system startup, online system operations, the high performance option (HPO), system errors, and checking system internals. This information is intended for system programmers.	SH31-0159
TPF Multi-Processor Interconnect Facility Reference	Design system or utility programs that interface with the Multi-Processor Interconnect Facility (MPIF). This information unit provides information about system-level coding for system services and support for utility programs that require MPIF services. This information is intended for system programmers.	SH31-0155

Table 6. File Storage

TPF Product Information	Purpose	Form Number
TPF Database Reference	Understand the planning, programming, and operations required to access data in an application and operating environment. Use this information with *TPF Concepts and Structures* for an overview of the TPF system and with *TPF Migration Guide: Program Update Tapes* for information about supported hardware and support for the TPF system. This information is intended for system programmers.	SH31-0143
TPF System Generation	Plan for and install the TPF system. If you are migrating from a TPF 3.1 system to a TPF 4.1 system, use this information with *TPF Migration Guide: Program Update Tapes*. See the *TPF System Installation Support Reference* for more information about installing the TPF system. This information is intended for system programmers.	SH31-0171

Table 7. Installation

TPF Product Information	Purpose	Form Number
TPF ACF/SNA Network Generation	Define a Systems Network Architecture (SNA) data communications network for use with the TPF system. This information is intended for system programmers.	SH31-0131
TPF Application Requester User's Guide	Install the TPF Application Requester (TPFAR) feature and write TPFAR application programs using structured query language (SQL). This information is intended for application programmers.	SH31-0133
TPF System Generation	See Table 6.	SH31-0171
TPF System Installation Support Reference	Install the TPF system and run offline support packages, and learn about user exits, global areas, loaders, the record ID attribute table (RIAT), multiple assembly/compilation print program, macro cross-reference program, system allocator (SALO), and the variable cross-reference listing. See *TPF System Generation* for more information about installing the TPF system. This information is intended for system programmers.	SH31-0149

Table 8. Migration

TPF Product Information	Purpose	Form Number
TPF Migration Guide: Program Update Tapes	Apply changes and updates in the form of program update tapes (PUTs) and small programming enhancements (SPEs) to the TPF 4.1 system. This information is designed as a planning guide and is intended for system programmers, console operators, and application programmers.	GH31-0187
TPF Migration Guide: TPF 3.1 System to TPF 4.1 System	Migrate or plan your migration from a TPF 3.1 system to a TPF 4.1 system because this information describes changes between the TPF 3.1 system and the TPF 4.1 system, and provides general information to help you plan for your TPF system migration. This information does not contain specific directions about planning for your migration or information about installing the TPF 4.1 system. See *TPF System Installation Support Reference* and *TPF System Generation* for more information about installation and system generation This information is intended for system programmers, console operators, and application programmers.	GH31-0186

Table 9. Operations

TPF Product Information	Purpose	Form Number
Messages (Online)	Perform problem determination in the TPF system by reviewing online messages. This information is designed to be used with other information in the library as part of the problem determination process. This information is intended for system support personnel, console operators, system programmers, and coverage programmers.	Not Applicable
Messages (System Error and Offline)	Perform problem determination in the TPF system by reviewing system errors and offline messages. This information is designed to be used with other information in the library as part of the problem determination process. This information is intended for system support personnel, console operators, system programmers, and coverage programmers.	Not Applicable
TPF Operations	Obtain information about the commands you can use for computer room operations and control program (CP) management. This information is intended for system console operators, functional console operators, and system programmers.	SH31-0162

Table 10. Performance

TPF Product Information	Purpose	Form Number
TPF System Generation	See Table 6 on page 6.	SH31-0171
TPF System Performance and Measurement Reference	Understand online data collection and offline data reduction, which is the performance and measurement package provided by the TPF system. This information provides specifics about analyzing the reports to improve system performance. Diagrams and sample reports are also provided as well as specifics about installing the data collection and data reduction programs. This information is intended for system programmers.	SH31-0170

Table 11. Programming and Development

TPF Product Information	Purpose	Form Number
TPF Application Programming	See Table 3 on page 5.	SH31-0132
TPF Application Requester User's Guide	See Table 7 on page 6.	SH31-0133
TPF C/C++ Language Support User's Guide	See Table 3 on page 5.	SH31-0121

Table 11. Programming and Development (continued)

TPF Product Information	Purpose	Form Number
TPF General Macros	Review the descriptions of general macros that provide system services (such as performing alphabetic scans, using tape drives, or handling input and output), that control application programming processing (such as entry creation), and that control events for resource sharing (such as posting and waiting, queuing and dequeuing). The TPF Advanced Program-to-Program Communications (TPF/APPC) macros are also described here. This information and *TPF System Macros* are the primary references for assembler language macro usage under the TPF system. Use this information with *TPF System Macros*, which documents macros restricted for use by the TPF system, macros requiring authorization, and macros for use in the control program (CP) only. This information is intended for application programmers.	SH31-0152
TPF Program Development Support Reference	Obtain information about tools provided by the TPF system to assist in testing application programs designed to run on the TPF system. These tools help you to control the test environment and progressively test each application program under various conditions. This information is intended for application programmers.	SH31-0164
TPF Programming Standards	Understand the programming standards used by TPF development. This information contains details, methods, and examples for implementing user programs compatible with the TPF system. This information is intended for application programmers and system programmers.	SH31-0165
TPFDF and TPF Structured Programming Macros	Understand the two sets of structured programming macros (SPMs) that are provided with the TPF Database Facility (TPFDF) product and the TPF system, and how to use them. This information is intended for application programmers.	SH31-0183
TPF System Macros	Review the descriptions of macros restricted for use by the TPF system, macros requiring authorization, and macros for use in the control program (CP) only. This information and *TPF General Macros* are the primary references for assembler language macro usage under the TPF system. Use this information with *TPF General Macros*, which documents macros that provide system services, control application programming processing, and control events for resource sharing. This information is intended for system programmers.	SH31-0151
TPF Transmission Control Protocol/Internet Protocol	Understand the Internet and its relationship to the TPF system, the TPF system implementation of Transmission Control Protocol/Internet Protocol (TCP/IP), TCP/IP offload support, TCP/IP native stack support, and the socket application programming interface (API) functions that application programmers can use. This information is intended for application programmers.	SH31-0120

TPF Product Information Reference Codes

Reference codes have been assigned to each piece of TPF product information. These reference codes are simply a shorthand method of referring to the TPF product information in indexes.

For a complete list of reference codes and the applicable piece of TPF product information and component for each, see “Master Index to the TPF Library” on page 89.

Glossary

This glossary defines terms commonly used in the Transaction Processing Facility (TPF) system information that are not common to data processing in general, or data processing terms common to other systems that are uniquely defined by the TPF system. Some of these terms may have other meanings in other contexts or in other data processing systems. Commonly defined data processing terms are not usually included here; however, some such terms that are widely used in the TPF system, and critical to its understanding, are included.

This glossary includes terms and definitions from:

- The *IBM Dictionary of Computing* (New York: McGraw-Hill, 1994).
- *Information Technology—Portable Operating System Interface for Computer Environments (POSIX)*, from the POSIX series of standards for applications and user interfaces to open systems, copyrighted by the Institute of Electrical and Electronics Engineers (IEEE). Copies of all POSIX drafts and standards may be purchased from the IEEE by calling 1-800-678-IEEE.
  - Definitions identified by (POSIX.0) are from Part 0: Standards Project, Draft Guide to the POSIX Open System Environment, P1003.0 Draft 15 (June 1992), an unapproved draft subject to change.
  - Definitions identified by (POSIX.1) are from Part 1: System Application Program Interface (API) C Language, approved September 28, 1990, as IEEE Std 1003.1-1990 by the IEEE Standards Board, and adopted in 1990 as an International Standard (ISO/IEC 9945-1: 1990) by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC).
  - Definitions identified by (POSIX.2) are from Part 2: Shell and Utilities, P1003.2.
- The *American National Standard Dictionary for Information Systems*, ANSI X3.172-1990, copyright 1990 by the American National Standards Institute (ANSI). Copies may be purchased from the American National Standards Institute, 11 West 42nd Street, New York, New York 10036. Definitions are identified by the symbol (A) after the definition.
- The *Information Technology Vocabulary*, developed by Subcommittee 1, Joint Technical Committee 1, of the International Organization for Standardization and the International Electrotechnical Commission (ISO/IEC JTC1/SC1). Definitions of published parts of this vocabulary are identified by the symbol (I) after the definition; definitions taken from draft international standards, committee drafts, and working papers being developed by ISO/IEC JTC1/SC1 are identified by the symbol (T) after the definition, indicating that final agreement has not yet been reached among participating National Bodies of SC1.
- The *Open Software Foundation (OSF)*. These definitions are identified by the symbol (OSF) after the definition. Copies of OSF documents may be obtained from the Open Software Foundation, Inc., 11 Cambridge Center, Cambridge, MA 02142.

The following cross-references are used in this glossary:

Contrast with. This refers to a term that has an opposed or substantively different meaning.

Synonym for. This indicates that the term has the same meaning as a preferred term, which is defined in its proper place in the glossary.

Synonymous with. This is a backward reference from a defined term to all other terms that have the same meaning.

See. This refers the reader to a more commonly used term or to multiple-word terms in which the term appears.

See also. This refers the reader to terms that have a related, but not synonymous, meaning.

Deprecated term for. This indicates that the term should not be used. It refers to a preferred term, which is defined in its proper place in the glossary.

A

AAA. Agent assembly area.

absolute address. In IBM ESA modes, an address that exists after translation and prefixing but before configuration occurs. See also *logical address*, *physical address*, *real address*, and *virtual address*.

absolute path name. The name of a directory or file expressed as a sequence of directories followed by a file name, beginning from the root directory. Absolute path names begin with a slash (/). (POSIX.1) See also *relative path name*, *path name*.

absolute time. The total elapsed time since 00:00 a.m. January 1, 1900 coordinated time (UTC). UTC differs from Absolute Time by the accumulated number of leap seconds since 00:00 a.m. January 1, 1900 UTC.

abstract class. A class that has no objects belonging to it that do not also belong to an additional subclass.

accept. The process by which the base or allocated versions of programs get permanently replaced (updated) with the newly loaded E-type loader versions of these programs.

accept function. The E-type loader function that replaces the programs at the allocated addresses with the programs contained in a specified loadset.

accepted status. The condition where a central processor complex's (CPC) time-of-day clock is synchronous with a synchronization source that is not compatible with the master synchronization source in the complex.

access. To obtain the use of a computer resource. (T) The way in which files are referred to by the computer. The ability to obtain the use of a protected resource. (OSF) To obtain data from or to put data in storage. In computer security, a specific type of interaction between a subject and an object that results in the flow of information from one to the other.

access list. A list that directs the TPF Internet mail server to selectively accept or reject mail from or to specific hosts, domains, networks, host addresses, or mail addresses.

access control. In computer security, ensuring that the resources of a computer system can be accessed only by authorized users in authorized ways.

access control list (ACL). In TPF Internet mail server support, a list that specifies the users and their access rights for mailboxes.

access mode. A form of access permitted to a file. (POSIX.1)

access permissions. A group of designations that determine whether and how a user can access a file. Types of access permission are read, write, and search.

ACF. Advanced Communications Function.

ACF/VTAM. Advanced Communications Function for Virtual Telecommunications Access Method.

acknowledge message label (AML). A type of link control block (LCB) that is sent across an SLC link to indicate that all blocks of a multiblock message have been correctly received and acknowledged.

ACL. Access control list.

ACP. Airlines Control Program.

action code. One or more characters at the beginning of a message that identify the type of message to follow.

activate function. The E-type loader function that makes the programs in specified loadsets available for use by new ECBs.

activation level. See *activation number*.

activation number. A number assigned to every ECB in the system. When entering a program, the activation number determines which version of the program is to be entered. An activation number is also assigned to all programs in a loadset. This allows a user to determine which version of a program is entered.

active entry. The ECB currently in control of the CPU or I-stream engine.

active queue. A mail queue of mail items that have been accepted for delivery, but for which delivery has not yet been attempted.

active user. A user that has been identified to MPIF.

adaptive rate-based (ARB) pacing. A flow control protocol that regulates the flow of data over a high-performance routing (HPR) rapid transport protocol (RTP) connection by adjusting the send rate based on feedback from the receiver. This protocol allows for high link utilization and prevents congestion before it occurs.

address space. A collection of storage that is allocated, and in many ways managed, as a single entity by the TPF system. Each byte in an address space is identified by a unique address. An address space represents an extent of storage available to a program.

adjacent link station (ALS). The hardware and software that establish a connection between the TPF system and a channel-attached network controller. The adjacent link station is a type 2.1 low-entry node that uses an exchange identification format 3 (XID3) exchange to establish a connection, and sends FID2 PIUs across the connection.

adjunct area. An area in a list entry that is used to hold as many as 64 bytes of data with coupling facility (CF) support. You can use this area to maintain control information about the contents of a data entry. See also *data entry* and *list entry*.

Advanced Communications Function (ACF). A function that allows the TPF system to communicate with other systems, including other TPF systems with the ACF function, using either the SNA Multisystem Networking Facility (MSNF) or the Network Extension Facility (NEF) licensed program.

Advanced Communications Function for Virtual Telecommunications Access Method (ACF/VTAM). An IBM licensed program that controls communications and flow of data in an SNA network. It provides single-domain, multiple-domain, and interconnected network capabilities.

Advanced Program-to-Program Communications (APPC). See *TPF Advanced Program-to-Program Communications (TPF/APPC)*.

Advanced Program-to-Program Communications (APPC) macro. An assembler macro in an application or program that uses the APPC communications protocol.

AET. Asynchronous event table.

agent. A terminal or workstation user in an airline system; can also indicate any terminal or workstation user.

agent assembly area (AAA). The terminal control block used to pass information among related messages of a transaction. The AAA was created before SNA support as a terminal control block in an airlines line control (ALC) network.

aggregate. (1) In programming languages, a structured collection of data objects that form a data type. (2) An array, a structure, or a union.

Airlines Control Program (ACP). The name for earlier versions of the Transaction Processing Facility (TPF).

airlines line control (ALC). The synchronous line protocol used to control transmission from or to a cluster of terminals attached to terminal interchange units. ALC is also known as SABRE line control.

ALC. Airlines line control.

alias queue object. An MQSeries object, the name of which is an alias for a base queue defined to the local queue manager. When an application or a queue manager uses an alias queue, the alias name is resolved and the requested operation is performed on the associated base queue.

alive timer. A timer used by the TPF system to detect failures for idle rapid transport protocol (RTP) connections in a high-performance routing (HPR) network.

allocator. The program deck that is used as input to the SALO program which, in turn, creates a system allocator table (SAL) and a program allocation table (IPAT). These tables define where each real-time program will reside on DASD.

ALS. Adjacent link station.

ALT. The symbolic name for an alternate tape. See *alternate (ALT) tape*.

alternate CRAS. A terminal other than the prime or R/O computer room agent set (CRAS) that is designated to direct and monitor system operations.

alternate dispense mode. In a migration stage in which the FACE table supports 2 different FARF modes, the FARF address type that is not currently being dispensed.

alternate key path. An additional key path other than the primary key path that can be used for searching and accessing data. See also *primary key path*.

alternate routing. A communications procedure where a message is routed to a substitute receiver when the normal receiver is inoperative or busy.

alternate (ALT) tape. A logical tape to which any currently active output tape may be switched. An alternate tape is also known as an ALT tape.

ALU. Arithmetic and logic unit.

American National Standard Code for Information Interchange (ASCII). The code developed by ANSI for information interchange among data processing systems, data communications systems, and associated equipment. The ASCII character set consists of 7-bit control characters and symbolic characters.

AML. Acknowledge message label.

AMQ. Application message queue.

AMSG. Application message format.

ANR. Automatic network routing

ANR labels. Automatic network routing labels.

ANR node. Automatic network routing node.

ANSI. American National Standards Institute.

answerback. The input message that acknowledges the successful receipt of a message segment sent to an ALC device.

ANT. Application name table.

API. Application programming interface.

APPC. Advanced Program-to-Program Communications. See *TPF Advanced Program-to-Program Communications (TPF/APPC)*.

application. A function to which a network user may log on. Each application is represented by an application name. Every input message is directed to a particular application. In coupling facility (CF) support, any subsystem, system product, or authorized application running on a TPF system in a multisystem environment or processor configuration.

Typically, multiple instances of the application, distributed across the processor configuration, work together to perform a set of functions. For example, a database product could be installed on several systems in the processor configuration. On each system, an instance of the application accesses and manages the data that it shares with the other instances of the application.

application I-stream engine. Any instruction stream engine other than the main I-stream engine in a tightly coupled processor complex. Contrast with *main I-stream engine*.

application macros. Macros that generate a sequence of inline machine instructions or imbedded macros to perform generalized functions. Contrast with *control program macros*.

application message format (AMSG). The prescribed format for messages input to and output from TPF systems.

application message queue (AMQ). The data structure on which SENDCK macro processing places message blocks that are to be transmitted across an SLC link.

application name table (ANT). The system table consulted by the communication control program to find the routing control application table (RCAT) pointer for a particular application name.

application program work area. The entry control block (ECB) area reserved for exclusive use by application programs.

application programming interface (API). The formally defined programming language interface between an IBM system control program or licensed program and its user.

application recovery package (ARP). A facility that enables users to add additional or different message recovery facilities other than those built into TPF.

application recovery table (ART). A table used by the application recovery programs that permits users to add additional or different message recovery facilities than those built into TPF systems.

application requester (AR). A Distributed Relational Database Architecture (DRDA) component that transforms a database request into communication protocols for a distributed relational database system.

application server (AS). A Distributed Relational Database Architecture (DRDA) component that receives and processes database requests from an application requester.

application set. A collection of programs associated with a particular ECB in that ECB's virtual memory.

Application Support Class Library. A set of C++ classes. The TPF system supports the following subset of Application Support Class Library classes: `IBinaryCodedDecimal`, `IDate`, `IException`, `IString`, `ITime`, `ITimeStamp`, and `IOString`.

application time-out switch. The switch that is reset every 500 milliseconds by the control program to ensure that ECB-controlled programs are not caught in a tight loop. (Also called the *loop protection switch*.)

AR. Application requester.

ARB pacing. Adaptive rate-based pacing.

argument. In a function call, an expression that represents a value the calling function passes to the function specified in the call.

arithmetic and logic unit. A part of a computer that performs arithmetic operations, logic operations, and related operations.

arithmetic object. An integral object, a bit field, or objects having the type `float`, `double`, or `long double`.

ARP. Application recovery package.

array. A variable that contains an ordered group of data objects. All objects in an array have the same data type.

array collection. A type of collection with ordered, nonunique elements that are not accessible by key. Elements are ordered by ascending position (index). Elements cannot be inserted or deleted before an existing element.

ART. Application recovery table.

AS. Application server.

ASCII. American National Standard Code for Information Interchange.

assembler language. A symbolic programming language in which the set of instructions includes the instructions of the machine and whose data structures correspond directly to the storage and registers of the machine.

assignment conversion. A change to the form of the right operand that makes the right operand have the same data type as the left operand.

assignment expression. An operation that stores the value of the right operand in the storage location specified by the left operand.

associativity. The order for grouping operands with an operator (either left-to-right or right-to-left).

asynchronous event table (AET). A record cache subsystem (RCS) control table used to monitor I/O operations that request asynchronous completion notification.

asynchronous messaging. A method of communication between programs in which programs place messages on message queues. With asynchronous messaging, the sending program proceeds with its own processing without waiting for a reply to its message. Contrast with *synchronous messaging.*

ATA-IATA. Air Transport Association and International Air Transport Association.

attention message. An asynchronous notification mechanism used by DASD caching control units to present the status of an operation requested with the Set Subsystem Mode or Perform Subsystem Function CCWs. A message buffer can be read with the Prepare to Read Subsystem Data order and a Read Subsystem Data command that contains the status of the operation.

attribute. (1) A named property of an entity. A characteristic or property of one or more objects. For example, the attribute for a displayed field could be blinking (OSF). (2) In Extensible Markup Language (XML), additional data included with an “element” on page 32. An attribute must be defined in the “schema” on page 69 and can be used with empty elements as well as with elements that contain data. For example, `countryCode`, `areaCode`, and `pNumber` are all attributes of the element `PhoneNumber`:

```
<PhoneNumber countryCode="44" areaCode="340" pNumber="635 3343" />
```

automatic network routing (ANR). In high-performance routing (HPR), a highly effective routing protocol that minimizes cycles and storage requirements for routing network layer packets (NLPs) through intermediate nodes on the route.

automatic network routing (ANR) labels. Labels contained in the network layer header (NHDR) of a network layer packet (NLP) that identify the path of the NLP through the high-performance routing (HPR) network. ANR labels are assigned during the exchange identifier (XID).

automatic network routing (ANR) node. An intermediate node in a high-performance routing (HPR) network that has ANR support applied.

automatic tape mounting. The ability of the tape control program to load and mount alternate (ALT) tapes on devices or convert ALT tapes to active tapes without operator intervention.

auxiliary loader. A program that loads TPF components to a disabled image. The auxiliary loader is capable of loading a complete set of the TPF system software (full load) or selected components (short load). It consists of an offline and online portion. See also *E-type loader* and *general file loader*.

available state. The state a coupling facility (CF) is in when all CF commands are processed normally. Contrast with *nonavailable state*. See *coupling facility (CF)*.

B

back-end processor. A TPF processor that receives input messages routed from a front-end processor; that is, a back-end processor has no communication support in it. A back-end processor provides application program processing and database management functions, usually on a large database. In a loosely coupled complex, multiple back-end processors share a common database. Contrast with *front-end processor*.

backup record. See *duplicate record*.

bag collection. A type of collection with unordered, nonunique elements. There is no access by key.

band number. In a FARF3 file address, a unique random value between 0 and 4095 that is associated with a fixed file record type.

base class. A class from which all instances are inherited.

basic subsystem (BSS). The primary subsystem that contains the control program and all support programs necessary for a stand-alone TPF system. All system-related tasks, including I/O processing, are processed by the BSS.

BBT. Buffer block table.

BCC. Block check character.

BDW. Block descriptor word.

Berkeley Software Distribution (BSD) socket. A standard interface for user application programs. Programs written to this standard can interface with sockets to access the Internet. The BSD socket interface was developed at the University of California at Berkeley.

big endian. A method of representing data such that the lower numbered bytes of the data are more significant. IBM S/390 and AS/400 machines use this format.

binary. (1) A base two numbering system; the binary digits are 0 and 1. (2) Involving a choice of two conditions, such as on-off or yes-no.

binary expression. An expression containing two operands and one operator.

binary file. A file that is not organized as lines of text that can be read by a human. A binary file is intended to be interpreted by a program.

binary large object (BLOB) collection. A type of collection with ordered, nonunique elements that are 1 byte each. There is no access by key. Elements are ordered by ascending relative byte address (RBA). Elements cannot be inserted or deleted before an existing element. Operations can be performed in the range from 1 to 32 000 bytes at a time. Synonymous with *byteArray collection*.

binary synchronous communication (BSC). A communication protocol that uses synchronous transmissions to support multipoint and point-to-point half-duplex lines.

Bind. (1) Establishes access paths on DB2 for each SQL statement (2) in an application.

binding. A method that allows processes to refer to a socket by using a name. Communicating processes are bound by an association. The binding system call allows a process to specify half of the association; that is, the local name.

bit field. A member of a structure or union that contains a specified number of bits.

BLOB collection. Binary large object.

block check character (BCC). The BCC provides longitudinal even parity for each bit column (b7 to b1), excluding parity bits.

block descriptor word (BDW). The first 4 bytes of a variable block length (format-VB) physical block.

block statement. Any number of data definitions, declarations, and statements that appear between the symbols { and }. The block statement is considered to be a single C-language statement.

blocked records. See *blocked tape*.

blocked tape. A tape recorded with nonspanned variable block length (format-VB) blocks. The logical records on the tape are usually referred to as *blocked records*. A tape of physical records that can be composed of several contiguous logical records or parts of logical records. Physically, the blocked tape is read one record at a time; logically, the TPF system manages the blocked tape record by record. Contrast with *unblocked tape*.

blocking mode. A program may be suspended indefinitely until data requested using a socket API function, for example `read` or `write`, is available. See *nonblocking mode*.

boundary alignment. The position in main storage of a fixed-length field (such as halfword or doubleword) on an integral boundary for that unit of information. For example, a word boundary is a storage address evenly divisible by four.

breakpoint. When a C program is compiled using the TEST option, the computer generates a breakpoint, or an EX instruction with a hook statement as its subject. The EX instruction is initialized to a no-operation instruction. An entry breakpoint is generated at the beginning of a function. An exit breakpoint is generated at the completion of a function. Other breakpoints are generated under control of the suboptions of the compiler TEST option, for example, the PATH suboption generates path breakpoints.

browse support. Support that allows TPF persistent collections classes, methods, and collections to be located, displayed, interrogated, dumped, and validated.

BSC. Binary synchronous communication.

BSC message routing. The process that directs an input message to a particular application through the use of the RCPL associated with the message.

BSD socket. Berkeley Software Distribution socket.

BSN. Byte sequence number.

BSS. Basic subsystem.

BSS resident. An application or resource that may be allocated only to the basic subsystem.

buffer block table (BBT). A table containing the addresses of all 4K (KB) working storage blocks currently in use as part of a buffer for a tape in blocked mode.

build script. A file that defines the module type and specifies the components of a dynamic link library (DLL), dynamic load module (DLM), or library load module (LLM), and is used by the CBLD program to create the finished DLL, DLM, or LLM.

built-in function. A function call that the compiler replaces with an in-line object code expansion. Because a built-in function call does not generate any linkage, no prolog or epilog code is invoked when the built-in function executes. Built-in functions provide more efficient code by reducing the instruction path length.

byte. A unit of measure. For IBM C compilers, 8 bits equal 1 byte.

byteArray collection. A type of collection with ordered, nonunique elements that are 1 byte each. There is no access by key. Elements are ordered by ascending relative byte address (RBA). Elements cannot be inserted or deleted before an existing element. Operations can be performed in the range from 1 to 32 000 bytes at a time. Synonymous with *binary large object (BLOB) collection*.

byte sequence number (BSN). A number in the transport header (THDR) of a network layer packet (NLP) that indicates the order in which data was transmitted by the sending node.

C

cache. A random access electronic storage medium in selected storage controllers used to retain data for faster access by the channel.

cache fast write (CFW). A form of fast write where the data is written directly to cache without using nonvolatile storage and is available for later destaging. The data is not placed on the DASD surface until a destage is performed.

cache fast write duplex (CFWD). A user-specified caching attribute that allows a data record to be written as cache fast write data to both the prime and duplicate modules. All read operations are queued to the prime module. Access to data with this attribute has performance benefits for both read and write errors. This attribute is specified for a given record ID through the RIAT.

cache fast write identifier (CFWID). An identification used to insure that a channel program does not access data in a cache that is downlevel.

cache fast write simplex (CFWS). A user-specified caching attribute that allows a data record to be written as cache fast write data to the prime module only of a TPF prime and duplicate module pair. All read operations are queued to the prime module. Access to data with this attribute has performance benefits for both read and write errors. This attribute is specified for a given record ID through the RIAT.

cache fast write identifier. See *CFWID*.

cache fast write simplex. See *CFWS attribute*.

cache structure. See *coupling facility cache structure*.

canned message. In earlier TPF applications, the term given to output messages in which text is predefined and restricted to 13 characters.

capture. The utility that copies online storage to 2 sets of logical tapes: one set contains online files as they exist at the moment of capture; a second set, the exception tapes, collects a copy of any record that was altered after it was captured. Together, these tapes contain a static copy of the database as it existed at the time the capture utility completed processing.

capture/restore. See *capture* and *restore*.

case clause. In a `switch` statement, a `case` label followed by any number of statements.

case label. The word `case` followed by a constant expression and a colon.

cast. An expression that converts the type of the operand to a specified scalar data type (the operator).

catastrophic error. A system error that forces processing to end and necessitates a re-IPL of the TPF system.

catch block. A block associated with a try block that receives control when an exception matching its argument is thrown.

CBRW. Core block reference word.

CCB. Conversation control block.

CC code. Each CodesetRegistry-CodesetEncoding name is assigned a 2 character name. If the first byte of the CC code is a letter then it is reserved for IBM.

CCCTIN. A control program CSECT handling key main storage initialization procedures. Also called the initializer program.

CCP. Communications control program.

CCSID. A CCSID is a number from 0 to 65535 that describes how character data is represented on a machine. A single CCSID will describe 3 major features of a machines character data: ESID, Code Set number Code Page number. In many cases but not all, CCSID = Code Page number.

CCT. Common frame control table.

CDC. Continuous data collection.

CDT. CLAW device table.

central processing unit (CPU). The part of a computer that includes the circuits that control the interpretation and execution of instructions.

Note: *A CPU is the circuitry and storage that executes instructions. The centrality of a processor or processing unit depends on the configuration of the system or network in which it is used*.

central processor complex (CPC). (1) A configuration that consists of all the machines required for operation. See *processor complex*. (2) A system configuration consisting of main storage, one or more CPUs, and a channel subsystem containing logical subchannels and channel paths. Main storage in one CPC is not directly accessible by the CPUs and channel subsystem of another CPC. Not all I-stream engines of a CPC will necessarily be logically enabled to access the devices attached to the channel subsystem.

centralized list handling (CLH). A set of centralized routines used for dispatching system tasks.

C function trace. Enables ISO-C programs compiled using the TEST option of the compiler to trace information on entry to, exit from, and within C functions, dynamic load modules (DLMs), and C library functions.

CFCB. Coupling facility connection block.

CFCT. Coupling facility control table.

CFLF. Concurrency filter lock facility.

CFRB. Coupling facility request block.

CFSB. Coupling facility structure block.

CFST. Coupling facility status table.

CFTT. Coupling facility trace table.

C function trace. Enables ISO-C programs compiled using the TEST option of the compiler to trace information on entry to, exit from, and within C functions, dynamic load modules (DLMs), and C library functions.

CFVB. Coupling facility vector block.

CFW. Cache fast write.

CFWD. Cache fast write duplex.

CFWID. Cache fast write identifier.

CFWS. Cache fast write simplex.

chain chasing. The act of accessing every fixed record and main storage table that might refer to pool records and, in turn, reading those records and any more pool records referred from them. The phase during recoup when defined record chains are read to determine pool usage.

change number of sessions (CNOS). TPF/APPC verbs that are used to change the (LU,mode) session limit. This session limit controls the number of LU-LU sessions per mode name that are available between two LU 6.2 types for allocation to conversations.

char specifier. The words `char` or `unsigned char`, which describe the type of data a variable represents.

character constant. A character or an escape sequence enclosed in single quotation marks.

character set. (1) A group of symbols shown on a terminal. A character set used in the USA might have the letters A-Z in both capital and small. A character set used in Japan, however, might have Katakana characters instead. (2) A group of characters used for a specific reason; for example, the set of characters a printer can print or a keyboard can support.

character translation table. An item that has a 1 for 1 character mapping from one code page to another code page.

character variable. A data object whose value can be changed during program execution and whose data type is `char` or `unsigned char`.

checkpoint. (1) A time when significant information is written on the log. (2) In MQSeries on UNIX systems, the point in time when a data record described in the log is the same as the data record in the queue. Checkpoints are generated automatically and are used during the system restart process.

child process. A process that is created by a parent process. See also *parent process* and *process*.

child server. Transmission Control Protocol/Internet Protocol (TCP/IP) support provides the `activate_on_receipt` function, which defines a new program called the child server program. The child program is activated when an incoming message arrives from a client.

CID. TPF C implementation data.

CIMR area. Core image restart area.

CINFC tag. The symbolic name of a main storage resident system table.

CIO. Common input/output (I/O).

C language. A general-purpose high-level programming language.

class. A C++ aggregate that can contain members such as functions, types, and user-defined operators in addition to data. A class can be defined hierarchically, allowing one class to be derived from another, and can restrict access to its members. A user-defined data type. A class data type can contain both data representations (data members) and functions (member functions). The internal representation of a collection implementation. See *object class*.

class ID. An identifier in the object header that indicates the most detailed classification of the object.

CLAW. Common Link Access to Workstation.

CLAW API. The application programming interface that provides restricted ISO-C interface functions to communicate with any CLAW workstation, such as the TCP/IP offload device.

CLAW device interface. See *TPF CLAW device interface*.

CLAW device table (CDT). A control block structure located in main storage in the TPF system. It contains information about each CLAW device defined in the system.

CLAW host application. An application on a TPF host processor that is used to establish a Common Link Access to Workstation (CLAW) connection with an application on a CLAW workstation.

CLAW host name. A name assigned to a TPF host processor that is used by a CLAW workstation to identify that TPF host processor.

CLAW protocol. Common Link Access to Workstation protocol.

CLAW workstation. A device that communicates with the TPF system using the Common Link Access to Workstation (CLAW) protocol. The IBM 3172 Model 3 Interconnect Controller is an example of a CLAW workstation.

CLAW workstation application. An application on a CLAW workstation that is used to establish a Common Link Access to Workstation (CLAW) connection with a CLAW host application on a TPF host processor.

CLH. Centralized list handling.

client. In TCP/IP, a program at one site requesting services from a program at another site. See also *server*.

C load module. A type of load module. For historical reasons, load modules on the TPF system were referred to as C load modules.

CLU. Control point logical unit.

CMC. Communications management configuration.

CNOS. Change number of sessions.

Code Page. For every value of a character byte, (00 to FF or 0 to 255) there is a unique meaning. The definition of all 255 possible characters is known as its code page.

Codeset Name. See *CodesetRegistry-CodesetEncoding name*.

Codeset Name Conversion Table. A table that provides conversions from codeset name to CC code.

CodesetRegistry-CodesetEncoding name. A code page number might be 500 or 1047. IBM will give it a name such as IBM-500 or IBM-1047. Names prefixed with *IBM-* are supported by IBM.

collection. The primary entity in TPF collection support (TPFCS).. A collection consists of a related group of elements organized within a data store. Collections are created by applications and can be temporary or persistent.

collection parts. See *collection part objects*.

collection part objects. In TPF collection support (TPFCS), objects used to represent the same collection that are unrelated in terms of inheritance.

COMM SOURCE. Communication source program.

comma expression. An expression that contains two operands separated by a comma. Although the compiler evaluates both operands, the value of the right operand is the value of the expression. If the left operand produces a value, the compiler discards this value.

command. (1) A request to perform an operation or run a program. When parameters, arguments, flags, or other operands are associated with a command, the resulting character string is a single command. (2) Operator messages, accepted only from CRAS terminals, that are used to communicate with the control program to request services or modify system parameters. They are sometimes called functional messages or Z-messages because the first character of the message is always Z.

comment. A comment contains text that the compiler ignores. Comments begin with the `/*` characters, end with the `*/` characters, and span any number of lines. Comments cannot be nested.

commit. In TPF transaction services, to apply all of the file changes that were made inside of a commit scope.

commit scope. A unit of work that groups together a set of database updates.

common block. A TPF block that is allocated within a common frame. A common block is visible to all ECBs at the same address.

common frame. 4KB of storage that are allocated in the pool of storage that is visible to all ECBs at the same address.

common frame control table (CCT). A control table that keeps track of which common frames are in use, what block type they are being used for, and the ECB that obtained the block.

common I/O (CIO). A TPF control program routine that manages I/O operations through a macro interface that permits the set of CIO macros supporting each I/O function to make use of a centralized service structure. See also *preemptive input/output (PIO)*.

common I/O handler. The first-level I/O interrupt handler. It saves the current environment, passes control to the appropriate device handler, and performs I/O initiation in response to requests from the control program.

Common Link Access to Workstation (CLAW) protocol. Input/output (I/O) protocol that provides interactive interfaces to workstations. This set of functions is provided through C functions. In the TPF system, CLAW interfaces are restricted interfaces provided by the system and not written by users.

common symbol table. In expression enhancements for the TPF debuggers, a table that contains symbols that are considered common to real-time assembler programs. Use of the common symbol table eliminates the need for multiple copies of the DSECT and symbol information for each real-time assembler program being retained and loaded to the TPF system. Instead, only one copy of the common DSECTs or symbols is kept in the TPF system. You use the common symbol table user exit (UCST) to add the DSECTs and symbols to the table.

communication domain. A name space or an address space that shares common communication properties, such as naming conventions and protocol address formats.

communication macros and statements. Macros or statements used in applications or programs that use any of the various aspects of TPF communications support.

communication source program (COMM SOURCE). The first ECB-controlled program to be given control for routing input messages to the intended destination.

communications control program (CCP). The system program that controls all non-SNA communication between external users of the system and the application programs.

communications management configuration (CMC). The networking configuration where a single host, known as a CMC host node, owns and manages all network resources except those resources that are channel-attached to data hosts in the network. In a TPF environment, VTAM acts as the CMC host node and TPF is a data host node. The term CMC is often used interchangeably with VTAM.

compact resident. A description for a collection in which TPF collection support (TPFCS) stores data using a compact structure. See also *compact structure*.

compact structure. An object that contains both the actual data elements that an application has stored in a collection, as well as control information that TPF collection support (TPFCS) uses to sort or retrieve those elements. The MemKey object of the StructureMem class is just one example of several kinds of compact structures.

compilation time. The time during which a source program is translated from a high-level language (such as the C language) into a machine language.

compile. The action required to transform a source file into an object file.

compiler. A program that translates instructions written in a high-level programming language (such as the C language) into a machine language.

complex name. The user-specified name of a loosely coupled complex or stand-alone TPF processor; it forms the second part of the system ID.

computer room agent set (CRAS). A terminal on which TPF system operators perform supervisory functions and respond to output messages generated internally by the system.

concurrency controls. A way of providing data access controls. TPF collection support (TPFCS) provides three levels of access control: none, optimistic, and pessimistic concurrency.

concurrency filter lock facility (CFLF). The TPF support for the multi-path lock facility (MPLF).

condition. A relational expression that can be evaluated to a value of either true or false.

conditional compilation statement. A preprocessor statement that causes the preprocessor to omit specified C source code in the file depending on how a specified condition evaluates.

conditional expression. A compound expression that contains a condition (the first expression), an expression to be evaluated if the condition has a nonzero value (the second expression), and an expression to be evaluated if the condition has the value `0`.

confirmed status. The term *confirmed* has two meanings regarding the clocks in loosely coupled processors: *local* or *remote*.

If a processor is confirmed local, its clock is internally synchronous but is not synchronous with the complex. If a processor is confirmed remote, the processor clock is continually being verified through the TOD RPQ or a Sysplex Timer (STR). As a condition for operation, a tightly coupled processor complex must be *internally synchronous*; that is, all the I-stream engines must be synchronous with the main I-stream engine. The master processor is defined to be locally confirmed if the TOD RPQ is used. The master processor is defined to be remotely confirmed if a Sysplex Timer (STR) is used.

CONKC tag. The symbolic name of a system configuration variable.

connect token. A token that identifies a connection to the coupling facility (CF) list structure and is unique for each connection in the processor configuration.

connection. A virtual circuit or session established between two MPIF users for passing data or commands between themselves. A connection has a specific pair of tokens that identify the MPIF resources used for the connection.

connection services. Services that allow authorized programs and subsystems to use the coupling facility (CF) to share data in a processor configuration.

connections. See *user*.

connector. See *user*.

constant. A data object with a value that does not change during program execution.

constant expression. An expression having a value that can be determined during compilation and that does not change during program execution.

continuous data collection (CDC). An application that gathers online system performance data relating to TPF production system environments and stores the data in a relational database by using the TPF Application Requester (TPFAR) feature.

control point logical unit (CLU). Control LUs (CLUs) are the mechanisms used to establish LU-LU sessions in an SNA PU 2.1 and PU 5 environment. A VTAM application program, called the logon manager, has a session with a TPF CLU to exchange session initiation requests.

control program (CP). A computer program designed to schedule and to supervise the execution of programs of a computer system.

control program macros. Macros that link an application to the system service routines, or activate internal control program functions. Contrast with *application macros*.

control record. A pool record that serves as the anchor to which all of the parts that represent an associated collection are chained.

control station. In a BSC network, the station (usually a processor) in a multipoint data communications system that controls network traffic by means of polling and selection. On a centralized multipoint network, tributary stations can communicate only with the control station when polled or selected by the control station.

control statement. A C language statement that changes the path of execution.

control transfer. The facility used to move from the control program environment to the ECB-controlled environment. The interface is the CXFRC macro.

control vector (CV). A field containing certain information in an SNA path information unit (PIU). Multiple SNA commands can share the same control vector.

conversation. A logical connection between 2 programs over an SNA LU 6.2 session that allows them to communicate with each other while processing a transaction. A conversation provides a short-term connection between 2 particular programs, while a session is a long-term connection between a particular pair of LUs.

conversation control block (CCB). An area in main storage used to identify and control an LU 6.2 conversation.

conversation state. The condition of a conversation that reflects what the past action on that conversation has been and that determines what the next set of actions may be.

conversion. A change in the type of a value. For example, when you add values having different data types, the compiler converts both values to a common form before adding the values.

copy member. A file that is copied into a control section (CSECT). For example, CICR40 is a copy member of CCNUCL.

core allocation lists. See *main storage allocation lists*.

core block reference word (CBRW). An 8-byte field in the entry control block (ECB) that is used to hold the main storage address and dynamic information about main storage blocks in use while the entry is active. Every ECB has 16 CBRWs, one for each ECB data level. Additional CBRWs are available by using data event control blocks (DECBs).

core image records. The system records placed in main storage by IPL during system restart.

core image restart area. An area that contains TPF load modules that must be loaded into contiguous storage. It consists of the CP, FCTB, RIAT, SIGT, ICDF, ACPL, IPAT, USR1, and USR2. The CP is not self-relocating and must therefore be loaded into a fixed storage location. The remaining load modules are self-relocating.

core resident program. An ECB-controlled program that is brought into main storage when it is entered and remains in main storage. Core resident programs reside in an area called the core resident program area (CRPA).

core resident program area (CRPA). The area of main storage in which core resident programs reside.

coupling facility. A special processor used to centralize storage for all attached processors in a processor configuration by providing shared storage management functions.

coupling facility cache structure. A named piece of storage on the coupling facility (CF) that enables the TPF system to share information. A coupling facility cache structure allows high-performance sharing of frequently referenced data.

coupling facility connection block (CFCB). A dynamic coupling facility (CF) control block that represents a single connection to a CF structure.

coupling facility control table (CFCT). A coupling facility (CF) table that contains information such as pointers to other tables and locks for CF resources that are global to CF support.

coupling facility lock. A lock that is used to by coupling facility (CF) support. See *lock*.

coupling facility list structure. A named piece of storage on the coupling facility (CF) that enables TPF systems to share information. A CF list structure contains a set of lists and an optional lock table that can be used for serializing resources in the list structure. Each list contains a queue of list entries.

coupling facility name. A 5- to 8-character alphanumeric name, that begins with an alphabetic character, that is used by the TPF system to identify the coupling facility (CF).

coupling facility request block (CFRB). A dynamic coupling facility (CF) area that monitors the progress of a CF macro call.

coupling facility status table (CFST). A coupling facility (CF) table that contains multiple entries. Each entry contains information particular to a CF in the processor configuration.

coupling facility structure. See *coupling facility list structure* and *coupling facility cache structure*.

coupling facility structure block (CFSB). A dynamic coupling facility (CF) area maintained in both main storage and fixed file records that contains information about a CF structure.

coupling facility trace table (CFTT). A coupling facility (CF) table that contains CF trace data for use by IBM service representatives.

coupling facility vector block (CFVB). A dynamic coupling facility (CF) area that is used to handle the completion of CF requests and to monitor list transitions.

CP. Control program.

CPC. Central processor complex.

CPGID. CPGID is another word for the numerical part of the CodesetRegistry-CodesetEncoding name.

CPU. Central processing unit.

CPU affinity. An attribute assigned to a program that is restricted to run on a particular I-stream engine in a tightly coupled processor complex.

CPU ID. The symbolic ID given to a CPU, which is also used to distinguish different processors in a loosely coupled processor complex. The CPU ID forms the third part of the system ID.

CPU loop. The routines that sequentially interrogate system queues and clocks to determine what work the CPU will process next. The CPU loop is also known as the *system task dispatcher*.

CPU loop list. One of the queues interrogated by the CPU loop routines to determine which work items are to be dispatched. These queues are commonly called *CPU lists*. The queues interrogated, in the order of processing priority, are: cross list, ready list, input list, and deferred list.

CRAS. Computer room agent set.

CRAS state. One of 5 system states. CRAS state supports clock management and keypoint update. Disk lost interrupt is active.

CRAS table (CRAT). A list of CRAS terminals and their attributes. The CRAT defines the functions each CRAS terminal can perform and provides its address.

CRAS terminal. Variation of computer room agent set.

CRAT. CRAS table.

CRC. Cyclic redundancy check.

created entry. An entry (ECB) established through the use of a create macro, as opposed to an entry (ECB) associated with a given input message.

create macro. An application macro that allows independent entries (ECBs) to be created.

create-type macro. See *create macro*.

cross-domain takedown. A deactivation request between domains.

cross list. The highest priority CPU loop list, used for dispatching entries among several I-stream engines.

CRPA. core resident program area.

C task communications area (CTCA). (1) A global data area that is used by the standard C library. (2) Part of the library function work area in the first stack frame attached to an ECB. The CTCA is used by IBM C/370 compiler-generated code. This area contains a set of pointers to the current C locale, a set of floating point constants used by the string conversion functions, and other data needed by various C library functions.

CTCA. C task communications area.

CTKX. Image pointer record. Synonymous with *IPR*.

CTL dump. The dump produced when processing stops because the control program or hardware has detected an error. For example, a catastrophic error will initiate a CTL dump.

C-type program. (1) A control program CSECT that always resides in main storage and does not require an ECB. (2) A TPF control program CSECT that always resides in main storage, does not require an ECB, and is not required to conform to standard fixed block sizes.

current directory. The directory a user is working with. Synonymous with *current working directory*, *working directory*.

current NCB directory records. The node control block (NCB) directory records that are currently being used by the TPF system.

current working directory. The directory a user is working with. Synonymous with *current directory*, *working directory*.

cursor. In TPF collection support (TPFCS), a temporary marker that is used to iterate through collections and establish locks on collections.

CV. Control vector.

cycle-down. The process of bringing the system to a lower system state; this implies a decrease in the number of active system resources and a more limited operating condition.

cycle-up. The process of bringing the system to a higher system state; this implies an increase in the number of active system resources and an expanded operating condition.

cyclic redundancy check (CRC). A method of error detection used to improve the reliability of communication lines.

D

daemon. A program that runs unattended to perform a standard service. Some daemons are triggered automatically to perform their task; others operate periodically.

DASD. Direct access storage device.

DASD fast write (DFW). A form of fast write where the data is written concurrently to cache and nonvolatile storage, and is destaged to DASD when buffer space is needed or by operator-initiated command.

DAT. Dynamic address translation.

data. Any type of information, not just information contained in a database.

data area. An attribute (field) of an object used to store data. This data can be other objects.

data area attribute. An field in an object used to store generic data. Synonymous with *data area*.

database ID (DBI). The ECB field that identifies which subsystem and subsystem user databases are being used by a particular ECB.

database identification. See *database ID (DBI)*.

database management system (DBMS). A software system that has a catalog describing the data it manages. The DBMS controls access to the data stored in it.

database ordinal number (DBON). The logical or relative record number of a record in a database.

database reorganization (DBR). The process whereby the user captures all or selected fixed file and pool records from one system and reloads them on a different or reconfigured system.

database request module (DBRM). A DB2 data set member containing information about SQL commands. The DBRM is created by the precompiler and used in the bind process. This file contains information about all SQL commands in the user application program, and includes information about how the SQL commands are processed and the DB2 access strategy.

DATABASE 2 (DB2). An IBM relational database management system for MVS operating systems.

data collection programs. The online programs that collect the system activity data used to analyze system performance.

Data collection/reduction. The TPF utility used to tune the system and manage the sensitive balance between utilization of resources and response to the users. See *data collection programs* and *data reduction programs*.

data definition. (1) In TPF collection support (TPFCS), a list of characteristics that are assigned to a collection when the collection is created. The characteristics include record IDs, shadowing, and collection lifetime. (2) A data definition describes a data object and reserves storage. A data definition can also provide an initial value. Definitions appear outside a function or at the beginning of a block statement.

data element. A unit of storage in a data entry for a coupling facility (CF). See also *data entry*.

data entry. A part of a list entry that holds user-defined data in a coupling facility (CF). A data entry contains units of storage called data elements. See also *data element* and *list entry*.

data event control block (DECB). A control block dynamically allocated from the private area of the entry control block (ECB). A DECB is a logical extension of an ECB and ECB data levels, and is used like a data level in FIND/FILE processing. See also *entry control block* and *ECB data levels*.

datagram. In TCP/IP, the basic unit of information passed across the Internet environment. A datagram contains a source and destination address along with the data. An Internet Protocol (IP) datagram consists of an IP header followed by the transport layer data. See also *packet*.

data host. Synonym for *data host node*.

data host node. In a CMC configuration, a type 5 host node that is dedicated to processing applications and does not control network resources, except for its channel-attached devices. Synonymous with *data host*.

data link control (DLC). The SNA protocols that initiate, control, check, and stop data transfer over a data link between 2 adjacent nodes.

data loader. The program that loads pilot tape data onto the online modules.

data loss exposure. A term describing the potential for a fast write data loss condition. An exposure exists as long as there is fast write data in the cache for a device attached to a 3990 caching control unit with the record cache subsystem RPQ.

data macro. A declarative macro that generates dummy control sections (DSECT)s defining records that may be called by any TPF source program by using the data macro name.

data object. A storage area used to hold a value.

data record. A pool record where the actual data elements for the collection are stored. A data record often contains more than one data element for a given collection.

data record information library (DRIL). A file, used by the system test compiler (STC), containing an entry for all system data records and message formats.

data reduction programs. The offline programs that process data collection records stored on the data collection tape to generate the reports required for system performance analysis.

data save area (DSA). An area in the ISO-C stack that is dynamically allocated at function entry and deallocated on return. It contains a register save area, all of the automatic storage for the function, and other data.

data store. A repository for persistent collections. A data store name is subsystem-common, but the data in a data store is subsystem-unique.

data type. (1) A generic description of an elementary unit of information in a particular software system. Common data types include whole numbers, decimal numbers, dollar amounts, dates, and text. Higher-level data types may also be defined if abstract data types are supported. (2) A category that specifies the interpretation of a data object such as its mathematical qualities and internal representation.

DATXPAGE envelope. A record that serves as a package in which TPF collection support (TPFCS) stores all the other objects it wants to file in that record.

DB2. DATABASE 2.

DBCS. Double-byte character set.

DBF. A symbolic name, reserved to TPF, for a general tape denoting the database reorganization capture tape for fixed files.

DBI. Database ID.

DBMS. Database management system.

DBON. Database ordinal number.

DBP. A symbolic name, reserved to TPF, for a general tape denoting the database reorganization capture tape for pool files.

DBR. Database reorganization.

DBRM. Database request module.

DCL. Dispatch control list.

DCR. Dispatch control record.

DDM. Distributed Data Management is an architected data management interface used for data interchange between like or unlike systems.

DDR. Dynamic device reconfiguration.

deactivate. The process by which all programs in a particular active E-type loader loadset become inactive.

deactivate function. The E-type loader function that prevents new ECBs from entering the programs contained in specified loadsets.

dead-letter queue (DLQ). A queue to which a queue manager or application sends messages that it cannot deliver to their correct destination.

deadlock. An error condition in which processing cannot continue because each of two elements of the process is waiting for an action by or a response from the other. Unresolved contention for the use of a resource. An impasse that occurs when multiple processes are waiting for the availability of a resource that does not become available because it is being held by another process that is in a similar wait state. A condition that occurs if processes simultaneously attempt to get semaphores (locks) held by the other.

DECB. Data event control block.

debug. To detect, locate, and correct mistakes in a program.

decimal. A base 10 numbering system; decimal digits range from `0` to `9`.

decimal constant. A number containing any digits `0` to `9` that does not begin with `0`.

declaration. A description that makes an external object or function available to a function or a block.

declarator. An identifier and optional symbols that describe the data type.

dedicated resources. The resources owned by one processor in a loosely coupled complex. Dedicated resources are not shared or switched to other processors. VFA is an example of this type of resource.

default. A value that is used when no alternative is specified by the programmer.

default clause. In a `switch` statement, a `default` label followed by one or more statements. When the none of the conditions of the specified case clauses are met, the default clause is executed.

default initialization. The initial value of the data object if an initializer is not specified. `extern` and `static` variables receive 0 as their default initial values. `auto`and `register` variables receive undefined default initial values.

deferred list. The lowest priority CPU loop list; used to delay processing of an entry (ECB) until higher priority work is completed.

deferred queue. A mail queue of mail items for which delivery has been attempted but was unsuccessful. Delivery will be attempted again.

define. See #define.

definition. A data description which reserves storage and may provide an initial value.

definition side-deck. A directive file that contains an `IMPORT` control statement for each function and variable exported by the dynamic link library (DLL). When you build a DLL, a definition side-deck is automatically created and written to the `SYSDEFSD DDname` by the prelinker. You must include this definition side-deck when you prelink a DLL application that imports any of those functions or variables from a DLL.

delay-file. A VFA attribute. When a file-type macro is issued for a record that has the delay-file attribute, the record is not written out to DASD until (1) the record is not currently accessed by 1 or more Entries and space is needed in the VFA buffer, (2) the system is cycling down, or (3) cycle up after a catastrophic software error has occurred and recovery is a software IPL. Contrast with *immediate-file*.

demand counter. An area that indicates the number of entries (ECBs) currently using a particular program. The higher the demand count the more likely that the program will remain in main storage.

descriptor. A small, nonnegative integer that is used to identify an object such as a file or other input/output (I/O) stream.

destage. The asynchronous writing of new or updated data from cache or nonvolatile storage to DASD.

device driver. A collection of subroutines that control the interface to an input/output (I/O) device (such as a line printer), a logical subdevice (such as a large section of a disk drive), or a pseudo-device (such as the null file, `/dev/null`). User-defined device drivers can be written to access data that exists in a TPF database.

device level selection (DLS). A DASD function available with 3380 DASD. With DLS, 2 DASD strings can each be attached to 2 storage paths on a DASD control unit. Using this configuration, any 2 devices on the same DASD string can read or write data simultaneously.

device level selection enhanced (DLSE). A DASD function available with 3390 DASD. With DLSE, a DASD string can be attached to 4 storage paths on a DASD control unit. Using this configuration, as many as 4 devices on the same DASD string can read or write data simultaneously.

device type. As many as 4 physically different DASD device types can be used in a TPF system. The logical device types of DEVA, DEVB, DEVC, and DEVD are assigned to physical device types 1, 2, 3, and 4 respectively at system generation time.

DFAD. FACE driver.

DFW. DASD fast write.

DFW attribute. A user-specified caching attribute that allows a data record to be written as DASD fast write data. Access to data with this attribute has performance benefits for both read and write operations. This attribute is specified for a given record ID through the RIAT.

diagnostic output formatter (DOF). The programs that convert the system error data on RTA tapes and RTL tapes into readable dump listings used for debugging purposes.

digit. Any of the numerals from `0` through `9`.

direct access storage device (DASD). A device on which access time is effectively independent of the location of the data.

direct attachment support. The support of a computer console directly attached to a subchannel.

directional capability. The capability of data flow on a communication line: simplex transmissions flow in one direction; half-duplex transmissions flow in either direction at a time; full-duplex transmissions flow in both directions simultaneously.

directory. (1) A type of file containing the names and controlling information for other files or other directories. (2) A construct for organizing computer files. As files are analogous to folders that hold information, a directory is analogous to a drawer that can hold a number of folders. Directories can also contain subdirectories, which can contain subdirectories of their own. (3) A file that contains directory entries. No two directory entries in the same directory can have the same name. (POSIX.1) (4) A file that points to files and to other directories. (5) An index used by a control program to locate blocks of data that are stored in separate areas of a data set in direct access storage. (6) In coupling facility (CF) cache support, a directory for the CF cache structure where the TPF system keeps control information about data shared among cache users. The directory contains one directory entry for each piece of data that users share.

directory entry. A field with two formats. The first format is used mainly to contain the file addresses of both the primary as well as the shadow copy of a record. The second format contains the next available relative record number (RRN) that TPF collection support (TPFCS) will use for the associated collection.

directory-only cache. A coupling facility (CF) cache structure that contains directory entries but no pieces of shared data. Directory-only cache users do not store data in the CF cache structure. The directory-only users use the CF cache structure to maintain the consistency of data in their local caches.

directory record. A special type of pool record used to store directory entries.

directory reordering. See *directory replenishing*.

directory replenishing. The storage management process that retrieves a new pool directory record when the pool directory record currently in use is nearly depleted. Synonymous with *directory reordering*.

directory update program. The offline program that creates input records required to update the online file copies of the pool directory records. This procedure returns pool records no longer needed to the list of available pool records.

dirty-read cursor. A nonlocking type of cursor for read-only operations.

disk formatter. An offline program used to format a disk module to TPF system requirements.

disk pack initialization. The system initialization program that checks the tracks assigned to each disk pack and initializes the necessary volume labels.

dispatch control list (DCL). The 3rd-level record in the centralized list handling (CLH) routines. There is 1 DCL for each CPU list; it contains the addresses of work items to be dispatched.

dispatch control record (DCR). The 2nd-level record in the centralized list handling (CLH) routines. There is 1 DCR for each CPU list. This record contains a pointer to the DCL as well as status information for that list.

dispatch management table (DMT). The 1st-level record in the centralized list handling (CLH) routines. There is 1 such record in a system. This record contains pointers to the 2nd-level information for each of the CPU loop list types in the system.

dispense mode. In a FACE table that supports FARF3/FARF4 addresses or FARF4/FARF5 addresses, the file address format (FARF3, FARF4, or FARF5) that is returned to you when the system requests a file address.

Distributed Relational Database Architecture (DRDA). A relational database connection protocol consisting of protocols for communication between an application and a remote database, and communications between databases.

DLC. Data link control.

DLL. Dynamic link library.

DLM. Dynamic load module.

DLQ. Dead-letter queue.

DLS. Device level selection.

DLSE. Device level selection enhanced.

DMT. Dispatch management table.

DNS. Domain Name System.

DOBT. Dynamic override bitmap table.

Document Object Model (DOM). The specification that allows an application to interact with XML data in memory as a tree structure. It allows you to dynamically traverse and update the XML document.

Document Type Definition (DTD). A type of schema. See also *Schema*.

DOF. Diagnostic output formatter.

DOM. Document Object Model.

domain name. In the Internet suite of protocols, a name of a host system. A domain name consists of a sequence of subnames separated by a delimiter character. For example, if the fully qualified domain name (FQDN) of a host system is ralvm7.vnet.ibm.com, each of the following is a domain name:

- ralvm7.vnet.ibm.com
- vnet.ibm.com
- ibm.com

Domain Name System (DNS). In the Internet suite of protocols, the distributed database system used to map domain names to IP addresses.

dormant subsystem user. A subsystem user that was included at initialization but has been deactivated because of an unsuccessful global load. A dormant subsystem user cannot be reactivated without reinitializing the system.

do statement. A C-language looping statement that contains the word `do` followed by a statement (the action), the word `while`, and an expression in parentheses (the condition).

DOT. Dump override table.

dot. A symbol (.) that indicates the current directory in a path name. The file name consisting of a single dot character (.). This file name refers to the directory specified by its predecessor. (POSIX.1)

dot-dot. A symbol (..) in a path name that indicates the parent directory. The file name consisting solely of two dot characters (..). This file name refers to the parent directory of its predecessor directory. For the TPF file system, dot-dot in the root directory refers to the root directory itself.

dotted decimal notation. A common notation for Internet host addresses that divides the 32-bit address into four 8-bit fields. The value of each field is specified as a decimal number and the fields are separated by periods (for example, 010.002.000.052 or 10.2.0.52). See also *network byte order*.

double-byte character set (DBCS). A set of characters in which each character is represented by two bytes. Languages such as Japanese, Chinese, and Korean, which contain more symbols than can be represented by 256 code points, require double-byte character sets. Since each character requires two bytes, entering, displaying, and printing DBCS characters requires hardware and supporting software which are DBCS capable.

double precision. Pertaining to the use of two computer words to represent a number in accordance with the required precision.

DRDA. Distributed Relational Database Architecture.

DRIL. Data record information library.

DSA. Data save area.

DTD. Document Type Definition.

dump override table (DOT). A table containing both the static override bitmap table (SOBT) and the dynamic override bitmap table (DOBT). These tables contain information that determines which large storage areas are to be included in dumps for particular system errors.

duplicate module. In a fully duplicated system or a partially duplicated system, the disk module that contains the duplicate copies of records from the corresponding prime module.

duplicate record. When DASD records are duplicated, the two copies of a data record are called the duplicate record and the primary record. A duplicate record is synonymous with *backup record*.

DWARF. A debugging information format used to standardize the software interface for development tools across multiple operating environments.

dynamic address translation (DAT). In IBM virtual storage systems, the change of a virtual storage address to a real storage address during the processing of an instruction.

dynamic device reconfiguration (DDR). The process of recovering the contents of a tape control unit buffer so that the data can be written to a new tape.

dynamic link library (DLL). A collection of one or more functions or variables gathered in a load module and executable or accessible from a separate DLL application load module.

dynamic link library (DLL) application. An application that can reference imported functions or imported variables in a DLL.

dynamic load module (DLM). A load module with a single entry point.

dynamic load module (DLM) stub. A small object-code file that allows a DLM to call another real-time program. A DLM stub is created by the DLM stub generator tool (STUB).

dynamic LU resource. A remote LU resource that is defined to the TPF system using dynamic LU support.

dynamic LU support. Support that enables the TPF system to automatically create resource definitions for new remote LU resources and new ALS resources.

dynamic override bitmap table (DOBT). A table containing dump override bitmaps used to override the static override bitmap table. Entries in the DOBT are created by the ZIDOT command.

E

EAT. ECB activation table.

EBCDIC. Extended binary-coded decimal interchange code.

ECB. Entry control block.

ECB activation table (EAT). The structure used by the E-type loader that keeps track of how many ECBs exist for each activation number.

ECB-controlled program. (1) A program that requires an entry control block (ECB) for processing. It must be assigned a name; the BEGIN and FINIS macros must be the first and last source code statements, respectively. (2) A TPF program that is associated with the entry control block that it requires for execution. (Also known as an *E-type program*.)

ECB control table. The entry control block (ECB) control table keeps track of which ECBs are in use and the system virtual memory (SVM) address of each ECB.

ECB data levels. One of 16 pairs of data fields used by the ECB for I/O or main storage block manipulation.

ECB origin. An identifier that is used with selective activate user exits that allows you to limit the use of an E-type loader (ELDR) loadset. This identifier can be a terminal address, communication line number, port number, user ID, network control program (NCP), adjacent link station (ALS), NCP name, and others.

ECB private area (EPA). A segment of an address space that is allocated for the exclusive use of an ECB and its application set.

ECB register. The hardware register that contains the address of the ECB for an entry. By convention, the ECB register is register 9.

ECB virtual address (EVA). A location inside the virtual memory of an ECB.

ECB virtual memory (EVM). An address space that provides the only view of storage available to ECB-controlled programs. Each ECB runs in its own address space and has its own ECB virtual memory. Control program code may run in the EVM when acting for the ECB. (For example, enter/back is control program code that runs in the address space of the ECB.)

ECR. E-type loader control record.

ECT. ECB control table.

effective group ID. The group ID associated with the last `setgid` or `setegid` function. This is the group ID that is used to verify access permissions.

effective user ID. The user ID associated with the last `setuid` or `seteuid` function. This is the user ID that is used to verify access permissions.

electronic mail (e-mail). See *e-mail*.

element. (1) In TPF collection support (TPFCS), a subunit of a persistent collection. An element can consist of any data type, including binary strings and references to TPF files and other persistent collections. (2) A data object in an array. (3) In Extensible Markup Language (XML) an opening tag, a closing tag, and the contents between the two in an XML document. In the following example, there are three elements: `name`, `first`, and `last`:

```
<name>
    <first>Mickey</first>
    <last>Mouse</last>
</name>
```

element equality. A state in which two elements are equal in length and equal in bit sequence for an entire collection.

ELF. Executable and linking format.

else clause. The part of a C-language `if` statement that contains the word `else` followed by a statement. The `else` clause provides an action that is executed when the `if` condition evaluates to zero (false).

ELT. E-type loader record table.

e-mail. (1) Correspondence in the form of messages transmitted between user terminals or workstations over a computer network. (2) The generation, transmission, and display of correspondence and documents by electronic means. (A) (3) See *Internet mail*.

empty directory. A directory that contains, exclusively, directory entries for dot (.) and dot-dot (..).

empty string. A character array whose first element is a null character. (POSIX.1)

EMR. E-type loader master record.

emulator program (EP). A program that permits 37x5 transmission control unit hardware to run as a 270x transmission control unit.

end-of-message-complete (EOM). The message delimiter that indicates that the last or only segment of data in a message has been received or sent. Synonymous with *EOC (end-of-message-complete)*.

end-of-message-incomplete (EOI). The message delimiter that indicates that the message segment currently being sent or received is not the last.

end-of-message/pushbutton (EOP). The message delimiter, sent from special terminals that have this end-of-message function key, that indicates that the message is complete.

end-of-unsolicited message (EOU). The message delimiter that indicates that the last character of an unsolicited message has been received or sent.

enter/back macros. Macros used to transfer control to other ECB-controlled programs.

enterprise name. The user-specified name of an enterprise or operations center that forms the first part of the system ID.

entry. The term used to refer to the ECB created for each input message and all the processing required by that message. Entries can also be created by programs using create-type macros.

entry control block (ECB). A control block assigned to each input message/entry. It defines all resources allocated to process that entry and allows programs to be reentrant.

entry life. The amount of time an entry exists, measured from when the entry is made until its ECB is deleted.

entry point (EP). In TCP/IP offload support, a program entered by TPF CLAW system services when an asynchronous (unsolicited) event is generated by a CLAW workstation.

enumeration constant. An identifier (that has an associated integer value) defined in an enumerator. You can use an enumeration constant anywhere an integer constant is allowed.

enumeration data type. A type that represents integers and a set of enumeration constants. Each enumeration constant has an associated integer value.

enumeration tag. The identifier that names an enumeration data type.

enumerator. An enumeration constant and its associated value.

Environmental Record Editing and Printing (EREP) program. A program that makes the data (such as machine checks) contained in a system recorder file available for further analysis.

environment block. In TPF collection support (TPFCS), a temporary block that is created and returned by the `T02_createEnv` C function. A pointer to this block must be passed on every TPF collection support function call. The environment block specifies which data store and application to use to access collections.

EOC. End-of-message-complete. Synonym for *EOM (end-of-message-complete)*.

EOCF/2. Extended Operations Console Facility/2.

EOI. End-of-message-incomplete.

EOM. End-of-message-complete.

EOP. End-of-message/pushbutton.

EOU. End-of-unsolicited message.

EP. Emulator program. Entry point.

EPA. ECB private area.

EPD. E-type loader program directory.

epilog. The code that gets executed each time a return from a function is processed. The epilog deallocates the storage allocated by the prolog, restores the calling program's registers, and returns to the calling function.

equate macros. Declarative macros that assign values to system parameters during the assembly process.

ERA. Error recovery action.

ERD. E-type loader rules database.

EREP. Environmental Error Record Editing and Printing.

error monitor mode. The condition that causes all errors that occur on a terminal interchange to be logged as they occur.

error recovery action (ERA) code. A code returned by a tape control unit describing the recommended error recovery action.

escape sequence. A representation of a character. An escape sequence contains the \ symbol followed by one of the characters: `a`, `b`, `f`, `n`, `r`, `t`, `v`, `'`, `"`, `\`, or followed by one to three octal digits.

E-type loader. A program that loads E-type programs to the online system. It consists of an online and offline portion. Unlike the general file loader and the auxiliary loader, once you have loaded programs with the E-type loader, you can begin using the newly loaded programs without a re-IPL of the TPF system.

E-type loader control record (ECR). A processor-unique record containing the active loadsets for a processor.

E-type loader master record (EMR). A structure that is a type of work list used to serialize and keep track of E-type loader operations. The EMR is also used as a communication vehicle between processors.

E-type loader program directory (EPD). A structure used by the E-type loader that contains information about each program in a particular loadset.

E-type loader record table (ELT). A structure that contains the ordinal number of each available #OLDx fixed file record that can be dispensed to the E-type loader.

E-type loader rules database (ERD). A record that contains the default values for the E-type loader. These values can be altered to change the E-type loader for different environments.

E-type loader working record table (WRT). A structure that resides in main storage and acts as a cache for the E-type loader #OLDx fixed file records that are being dispensed or returned.

E-type program. An ECB-controlled program.

EVA. ECB virtual address.

event facility. A method for ECB-controlled programs to define an event that can be waited for or posted by all ECBs knowing the name of the event.

EVM. ECB virtual memory.

exchange identification (XID). During link activation for an SNA physical unit (PU-PU) session, IDs are exchanged for node identification. Negotiated link characteristics are then established.

exception handler. A catch block in a C++ application that catches an exception when it is thrown from a function enclosed in a try block. Try blocks, catch blocks, and throw expressions are the constructs used to implement formal exception handling in C++ applications. A set of routines used to detect deadlock conditions or to process abnormal conditions. An exception handler allows the normal running of processes to be interrupted and resumed.

exclude. The process by which a program is marked as being excluded from an E-type loader loadset. This effectively removes the program from the loadset.

exclusive lock. A means to inform a process that another process has access to a file and does not want to share access.

exclude function. The E-type loader function that removes 1 or more programs from a specified loadset.

executable and linking format (ELF). A portable object file format that is used to standardize the binary object interface across multiple operating environments.

executable file. A file suitable for execution. An executable file may be a program that has been compiled and link-edited, or it may be a shell script. A file that contains programs or commands that perform operations on actions to be taken. A regular file acceptable as a new process image file by the equivalent of the POSIX.1 exec family of functions, and, thus usable as one form of a utility. The standard utilities described in POSIX.1 as compilers can produce executable files, but other unspecified methods of producing executable files may also be provided. The internal format of an executable file is unspecified, but a conforming application shall not assume an executable file is a text file. (POSIX.2) A REXX exec.

executable script. In the TPF system, a type of executable file that can be used by the `tpf_fork` function to start a TPF application. An executable script is a file that contains readable text and statements that are interpreted. When the `tpf_fork` function is used to call an executable script, the first line of the executable script is parsed for the name of the TPF segment. The line must start with the #! characters, which is a UNIX shell convention. The access permission for the file must be set to execute. Internet servers typically use `tpf_fork` and executable scripts to run TPF applications.

exit vector. A user exit vector can consist of a SWISC expansion to an E-type program or an entry point address to a C-type program. User exit vectors are specified by MPIF functions (such as IDENTIFY and CONNECT).

exponent. A number, indicating the power to which another number is to be raised.

export. To make a function or variable available for dynamic access by other load modules. Dynamic link libraries (DLLs) export functions and variables. Exporting is accomplished in three ways: by specifying the EXPORTALL compiler options, by coding the `#pragma export` recompiler directive, or by qualifying a function or variable declarator with the `_Export` keyword.

expression. A representation of a value. For example, variables and constants appearing alone or in combination with operators.

extended binary-coded decimal interchange code (EBCDIC). A set of 256 8-bit characters.

extended locales. The locale definition files based on the localedef utility that is supplied with IBM C/C++ compilers on the IBM System/390 platform.

Extended Operations Console Facility/2. An IBM licensed program designed to provide licensed customers of the TPF system with enhanced console operations, such as the capability for automation and the ability to control and monitor multiple TPF host systems using a single workstation in an IBM Operating System/2 (OS/2) environment.

extended resident. A description for a collection in which TPF collection support (TPFCS) stores data using an extended structure. See also *extended structure*.

extended structure. An object containing only control information and pointers that TPF collection support (TPFCS) uses to sort or retrieve the data elements that an application has stored in a collection. The data elements themselves are contained in pool file records that are chained to the extended structure. The DASDINDEXPool object of the StructureDasd class is just one example of several kinds of extended structures.

Extensible Markup Language (XML). A metamarkup language that is used by the universal data display (UDD) to describe record layouts. It specifies each variable name, type, and length. XML uses user-defined tags and is similar to HTML. However, it addresses some of the limitations in the HTML language and is ideal for marking up data without regard to presentation. (The presentation is defined separately.) XML can be used for both publishing and data retrieval. Go to the W3C Web site at http://www.w3.org/ to view the XML specification.

external data definition. A definition appearing outside a function. The defined object is accessible to all functions that follow the definition and are located within the same source file as the definition.

external function. A TPF E-type file resident application program written in C language.

external locking facility (XLF). A facility that is used by the TPF system to synchronize the updating of data records on its shared DASD database. The XLF has to be connected to and shared by all CPCs in a TPF loosely coupled complex. There are currently 2 XLFs supported by the TPF system. They are hardware features for the DASD control units. One of the features is the limited lock facility (LLF) and the other is the multi-path lock facility (MPLF) RPQ. TPF software support for MPLF is the concurrency filter lock facility (CFLF).

F

FACE. File address compute program.

FACE driver (DFAD). An offline program that is invoked to (1) compute the file address associated with a specific ordinal number and record type, or (2) print all computable file addresses with a specific version of the FACE table.

FACE table (FCTB). The main storage resident table used by the FACE program to calculate the address associated with a specific record type and ordinal number on fixed file storage.

FACE table generator. The offline module used to create the FACE table and other associated macros.

fallback. The E-type loader process of discontinuing the use of newly loaded programs and using the most recently activated version of the programs. See also *deactivate function*.

FANR field. Forward automatic network routing field.

FARF. File address reference format.

FARF3. A device-independent file addressing scheme used by the TPF system. FARF3 means file address reference format 3.

FARF4. A device-independent file addressing scheme that utilizes format type indicator (FTI) and universal format type (UFT) combinations allowing up to 1G (2^{30}) addresses. FARF4 means file address reference format 4.

FARF5. A device-independent file addressing scheme that uses format type indicator (FTI) and universal format type (UFT) combinations allowing up to 4G (2^{32}) addresses. FARF5 means file address reference format 5.

FARF6. A device-independent file addressing scheme that uses format type indicator (FTI) and universal format type (UFT) combinations allowing up to 64-petabyte (2^{56}) addresses. FARF6 means file address reference format 6.

FARW. File address reference word.

fast write. In 3990 caching control units, a write operation at cache speed that does not require immediate transfer of data to DASD. The data is written directly to cache, or to both cache and nonvolatile storage, and is available for later destaging.

FCT. Frame control table.

FCTB. FACE table.

FCTBG. FACE table generator.

FDOCA. Formatted Data Object Content Architecture provides data with a descriptor relevant to the data type and its representation.

FDT. File descriptor table.

FID. Format identification.

FIFO. First-in-first-out.

FIFO special file. (1) A type of file with the property that data written to such a file is read on a first-in-first-out format. (POSIX.1) (2) A named permanent pipe that allows two or more unrelated processes to exchange information through a pipe connection. Synonymous with *named pipe*.

file. A collection of data that is stored and retrieved by an assigned name.

file address compute (FACE) program. The system program that converts a fixed record type and ordinal number into a file address that can be used to retrieve the record.

file address reference format (FARF). The generic term for the TPF file address reference format, of which there have been several; for example, FARF3, FARF4, FARF5, and FARF6.

file address reference word (FARW). An 8-byte field in the entry control block (ECB) that is used to pass a file address reference between application and system programs. Every ECB has 16 FARWs, one for each data level. Additional FARWs are available by using data event control blocks (DECBs). DECBs contain 12-byte FARW fields that hold 8-byte file addresses.

file capture. See *capture*.

file collector. The data collection program that records (1) tape activity and (2) traffic between programs and the data stored in VFA, main storage, or disk files. This data is recorded on the data collection RTC tape for offline data reduction and analysis.

file creation mask. An object whose bits are used to prevent access permissions of a new file from being set when a file is created. If a bit is set in the file creation mask, the corresponding bit in the access permissions cannot be set. If a bit is not set in the file creation mask, the corresponding bit in the access permissions can be set.

file descriptor. In the TPF file system, a nonnegative integer used to identify a file. A file descriptor is created by opening a TPF file system file. See also *standard error* (`stderr`), *standard input* (`stdin`), *standard output* (`stdout`). See also *socket descriptor*.

file descriptor table (FDT). A control block structure located in main storage in the TPF system that contains status information about each socket descriptor obtained by TCP/IP offload support through `socket` and `accept` function calls. A control block structure located in main storage in the TPF system that contains status information about each file descriptor obtained by opening a TPF file system file.

file handle. Any identifier of a file, such as a path name or file descriptor.

file lock. A means to inform a process that another process has access to a file.

file mode. An object containing the file permission bits and other characteristics of a file. (POSIX.1)

file mode creation mask. See *file creation mask*.

file name. (1) A name consisting of 1 to NAME_MAX bytes used to name a file. The characters composing the name may be selected from the set of all character values excluding the slash character (/) and the null character. The file names dot (.) and dot-dot (..) have special meaning. Synonymous with *path name component*. See also *dot (.)*, *dot-dot (..)*. (POSIX.1) The final component of a path name. The file identifier stored in a directory entry. (2) The name used to identify a file.

file offset. The byte position in the file where the next input/output (I/O) operation begins. Each open file description associated with a regular file, block special file, or directory has a file offset.

file owner. The owner of a file as identified by the user ID (UID).

file permission bits. Information about a file that is used, along with other information, to determine if a process has read, write, or search permission to a file. The bits are divided into three parts: owner, group, and other. These bits are contained in the file mode. (POSIX.1)

file position indicator. Synonymous with *file offset*.

file recoup. See *recoup*.

file resident program. An ECB-controlled program that resides on file and is brought into main storage for online processing.

file restore. See *restore*.

file status table (FSTB). See *module file status table (MFST)*.

file system. A collection of files and directories. The collection of files and file management structures on a physical or logical mass storage device, such as a disk or disk partition. A single device can contain several file systems. A collection of files and some of their attributes.

File Transfer Protocol (FTP). In Transmission Control Protocol/Internet Protocol (TCP/IP), an application protocol used for transferring files to and from host computers. FTP requires a user ID and possibly a password to allow access to files on a remote host system. FTP assumes that the Transmission Control Protocol (TCP) is the underlying protocol.

finite state machine (FSM). A component of the TPF/APPC support that controls the sequence of verbs issued for a conversation.

first-in-first-out (FIFO). A queuing technique in which the next item to be retrieved is the item that has been in the queue for the longest time. (A)

fixed file records. Data records that are permanently assigned to specific functions (record types) and are accessed through the FACE/FACS programs, which use the FACE table.

fixed keypoint area. The area on each online module containing all the working records required to initialize the system.

fixed record. A variation of *fixed file record*.

fixed record type. The records associated with a set of data. The symbolic name given to the records associated with a set of data.

fixed storage. Refers to those areas of main storage in which sizes are determined at system generation. (In previous versions of the TPF system, this was known as *permanent core*). Contrast with *working storage*.

float constant. A constant representing a non-integral number.

FMMR. Functional management message router.

format identification (FID) field. The field in an SNA path information unit (PIU) that is used to identify the format in which the PIU was encoded.

format type indicator (FTI). A variable-sized bit field in FARF4, FARF5, and FARF6 address formats. See *universal format type.*

Formatted Data Object Content Architecture (FDOCA). An architecture that provides data with a descriptor relevant to the data type and its representation.

forward automatic network routing (FANR) field. A list of automatic network routing (ANR) labels that represent the path from one rapid transport protocol (RTP) endpoint to another for an RTP connection.

frame. A 4K (KB) unit of real memory that corresponds to a page. It does not have a format flag and is not a TPF block.

frame control table (FCT). In virtual storage, 128-, 381-, 1055-, and 4095-byte working storage blocks are allocated from a single pool of 4K frames. The frame control table keeps track of which frames are in use, how blocks are allocated in each frame, and which of the blocks in each frame are in use.

fresh load. The part of restart that is activated on the first IPL, after a load of the SNA pilot tape, or upon failure of a nonfresh load. Various SNA tables are reloaded and reinitialized. Contrast with *nonfresh load*.

front-end processor. A TPF system attached to the data communications network. The front-end processor routes some or all input messages to other front-end, back-end, or non-TPF systems; it may perform some message recovery processing, typically has few DASD, does little I/O, and maintains short path lengths. In addition, a front-end processor has limited requirements for a database. Contrast with *back-end processor*.

FSC. Functional support console.

FSM. Finite state machine.

FSTB. See *module file status table (MFST)*.

FTI. Format type indicator.

FTP. File Transfer Protocol.

full load. A software load where every system component is loaded.

full scale. In program test vehicle (PTV), a gradient of program testing that allows multithread testing with simulation of the full environment in which the application programs operate. Also see *package unit* and *transaction unit*.

full-duplex. In data communication, a mode in which data can be sent and received at the same time.

fully duplicated file. A database where all fixed and pool records are duplicated across modules. Contrast with *selectively duplicated files* and *nonduplicated files*.

function. A named group of statements that can be invoked and evaluated and may can return a value to the calling statement.

functional message. See *command*.

function declarator. The part of a function definition that names the function, provides additional information about the return value of the function, and lists the function parameters.

function definition. The complete description of a function. A function definition contains an optional storage class specifier, an optional type specifier, a function declarator, optional parameter declarations, and a block statement (the function body).

function descriptor. An internal control block that contains the function address and its associated writable static area (WSA). In the TPF system, a function descriptor can be thought of as a dynamic linkage call stub in contrast to the static linkage call stubs that are generated offline by the dynamic load module (DLM) stub generator tool (STUB) and the library interface tool (LIBI) before link-edit time.

function management message router (FMMR). A system facility used to forward messages to remote TPF hosts.

functional support console (FSC). CRAS terminals designated to receive messages related to a specific function; sometimes called a functional CRAS console.

G

GDS. General data set.

general data set (GDS). An MVS BSAM data set that provides a data interface between offline and online system components; records are allocated sequentially; compatible with an MVS data set in the same module. The data set is allocated and initialized by MVS and is read and updated by the TPF system.

general file (GF). A TPF general file is used to maintain one or more groups of logically related records organized in a sequential manner. It is created offline under MVS control but is not compatible with any MVS data structure. There are three types of general files: loader, pool, and recoup.

general file loader. A program that loads TPF components to the loader general file in order to initialize or update the online TPF system. The general file loader is capable of loading a complete set of the TPF system software (full load) or selected components (short load), but can only be used to copy items into image number 1. It consists of an offline and online portion; the offline portion creates the loader general file, and the online portion copies the contents of that file into the online modules of the TPF system. See also *auxiliary loader* and *E-type loader*.

general file pack. A disk pack that contains 1, 2, or 3 general file data sets.

general macros. Macros that provide system services (such as performing alphabetic scans, using tape drives, or handling input and output), control application programming processing (such as entry creation), and control events for resource sharing (such as posting and waiting, queuing and dequeing).

general tapes. Input and output tapes that allow an application to create consecutive files and scan records according to logical sequence. These tapes may be concurrently accessed by multiple ECBs, but are under the exclusive control of only 1 ECB at a given time.

general use C/C++ language header files. Header files that are available for general use and include function prototypes and related definitions that may be used by any application program.

get file storage (GFS). A macro for requesting pool file addresses. For TPF collection support (TPFCS), the TPF system must have GFS pools enabled before the ZBROW and ZOODB commands can be used. The system must be cycled above CRAS state before pools are enabled.

GF. General file.

GID. Group ID.

global area. A portion of fixed main storage for storing critical, frequently accessed data. It provides efficient access by the control program or applications. Each global area is assigned a symbolic name, the first character of which is the @ character. Also referred to as *globals*.

global field. An addressable unit of storage in the global area.

global macros. The macros that allow applications to access and update data held in the global area.

global records. Blocks of data in the global area divided by function (type of data) or by the size of the physical file record from which the data is loaded into main storage.

globals. In TPF, the concept of shared, protected, system-allocated main storage designed to permit sharing of values between application and/or system components. See *global area*.

global symbol sharing. Global areas sharing global information throughout the system while restricting the number of areas where information resides.

global synchronization. The process where global fields and records shared by 2 or more active I-streams in a multiprocessor system (tightly coupled or loosely coupled) are dynamically maintained to contain the same values.

GMT. Greenwich mean time.

Greenwich mean time (GMT). The time broadcast by the National Bureau of Standards. Also known as Universal Time, Coordinated (UTC).

group. A collection of users who can share access authorities for protected resources. (OSF)

group code. Term used to define the routing indicator or address that designates more than 1 receiver or terminal.

group ID (GID). A nonnegative integer that is used to identify a group of related users.

H

handle. A number that uniquely identifies an object. For a dynamic link library (DLL), the number uniquely identifies the requested DLL for subsequent explicit requests for that DLL. A different handle is returned for each successful call to the `dllload` function.

hardening. In TPF transaction services, the process in which data is written to DASD and any locks that were held by the commit scope are released.

hard error. An error condition detected by hardware or software that remains an error after a predetermined number of retries. Contrast with *soft error*.

hard link. A directory entry to a file. A directory must have one, and only one, hard link to it other than dot (.) and dot-dot (..). Other files must have one but may have more hard links to each of them.

hard IPL. The loading of the TPF system; activated from the service processor. Contrast with *software IPL*.

HCT. Hotcon table.

head. The first of a chain of records.

header file. A file that contains commonly used definitions and declarations. The file is included in application source code by means of the `#include` preprocessor directive. The `#include` statement is replaced with the contents of the header file (also known as the include field) at compile time.

heap private area. Contiguous storage above the 16-MB line that is available to ECBs through the use of the CALOC, MALOC, REALLOC, and FREEC assembler macros and their corresponding C language functions.

heap storage. The total memory pool from which an application may obtain memory through a dynamic allocation request. The TPF system uses heap storage for the heap private area in the ECB virtual memory above the 16-MB line.

heterogeneous collection. A collection in which all elements have the same displacement to the persistent identifier (PID) or file address and can be recouped in the same way.

hexadecimal. A base sixteen numbering system; hexadecimal digits range from 0 through 9 and uppercase or lowercase A (ten) through F (fifteen).

hexadecimal constant. The characters `0x` or `0X` (zeroX) followed by any digits `0` to `9` and uppercase or lowercase letters `A` to `F`.

hierarchical file system. A file system where each directory must have one, and only one, hard link to it and, as a result of this restriction, the directories are organized in a hierarchy (rather than a mesh).

High Performance Option (HPO). A TPF feature that consists of the loosely coupled facility and the multiple database function (MDBF).

high-performance routing message table (HPRMT). A core-resident table used to save output messages sent over rapid transport protocol (RTP) connections so the output messages can be retransmitted if the remote RTP endpoint makes this request.

High-performance routing session address table (HPRSAT). A core-resident table used to map the session address (SA) from a network layer packet (NLP) to the appropriate session resource vector table (RVT) entry. There is one entry in the HPRSAT for each LU-LU session started using HPR support.

high-performance routing (HPR) support. An addition to TPF Advanced Peer-to-Peer Networking (TPF/APPN) support that enhances data-routing performance and session reliability.

high-speed. High-speed lines are used in the TPF system to refer to ALC and SLC lines that operate at 9600 baud, in contrast to low-speed lines that operate at rates as low as 75 baud.

home page. The initial Web page that is returned by a Web site when a user specifies the uniform resource locator (URL) for the Web site. For example, if a user specifies the URL for the IBM Web site (http://www.ibm.com), the Web page that is returned is the IBM home page. Essentially, the home page is the entry point for accessing the contents of the Web site. The home page may sometimes be called the *welcome page* or the *front page*.

homogeneous collection. A collection in which not all elements contain an embedded file address or persistent identifier (PID) or the displacements are different; that is, not all elements can be recouped in the same way.

hop. A link crossed on a path from 1 host or NCP subarea to another.

hop count. The number of links crossed on a path from 1 subarea to another.

horizontal allocation. When allocating record space on DASD, logically adjacent records are allocated to different physical devices. Contrast with *vertical allocation*.

host application. An application on a TPF host processor that is used to establish a Common Link Access to Workstation (CLAW) connection with an application on a CLAW workstation.

host byte order. The order in which the bytes of all binary integers are stored in a particular machine. In the TPF system, the host byte order used for integers being sent across a TCP/IP network is the same as the network byte order. See also *network byte order*.

host name. A name assigned to a TPF host processor used in a TCP/IP network to identify that TPF host processor.

host node. An SNA term indicating a combination of a CPU and an associated channel attachment that hosts functions for other processors.

host node LU. An SNA logical unit (application) residing in a host processor as contrasted with a peripheral logical unit that resides in a cluster controller or network control program.

hotcon. Hot conversation or hot connection, depending on the communication protocol used.

In LU 6.2, a TPF Advanced Program-to-Program Communications (TPF/APPC) conversation that remains allocated and active past the completion of the transaction. The TPF/APPC conversation parameters between TPF Application Requester (TPFAR) and the DB2 system are saved in an entry in the hotcon table (HCT). When another entry control block (ECB) requests a conversation with the same remote application server, TPFAR reuses the active conversation.

In Transmission Control Protocol/Internet Protocol (TCP/IP), a TCP/IP connection that remains active past the completion of the transaction. The socket descriptors are saved in an entry in the hotcon table (HCT). When another entry control block (ECB) requests a connection with the same remote application server, TPF Application Requester (TPFAR) reuses the active connection.

HPO. High Performance Option.

HPRMT. High-performance routing message table.

HPRSAT. High-performance routing session address table.

HPR support. High-performance routing support.

I

IA. Interchange address.

IATA. Interchange address/terminal address.

IBMPAL. IBM program allocator list.

IBM program allocator list. A list of IBM-supplied programs to be loaded into the online TPF system (previously called the system allocator list [SAL]).

IBM 3172 Model 3 Interconnect Controller. An offload device between the TPF system and local area networks (LANs). The 3172 Model 3 Interconnect Controller provides interfaces from the TPF system to the transport and internet layers of Transmission Control Protocol/Internet Protocol.

ICDF. In-core dump formatter.

ICELOG. A TPF macro that is used to generate an epilog in C library functions written in assembler. ICELOG is used to return from a C library function. The macro generates code to restore the registers saved in the preceding ICPLOG macro call. If a stack frame was allocated, it is released.

ICL. ISO-C link table.

ICLANC. A TPF macro that has two functions: (1) to produce the secondary directory, which contains the entry points to the secondary library routines (the GEN option); and (2) to generate linkage to a secondary library routine (the LINK option).

ICPLOG. A TPF macro that is used to generate a prolog in C library functions written in assembler. ICPLOG must be coded immediately after the BEGIN statement. The generated prolog is used to store registers and allocate a stack frame.

ICR. Image control record.

IDCF. Internet daemon configuration file.

IDCT. Internet daemon configuration table.

IDL. Interface definition language.

identifier. A sequence of letters, digits, and underscores used to designate a data object or function.

IHR. Image history record.

image. One of a number of selectable versions of the TPF system software, consisting of an IPL area, core image restart (CIMR) area, E-type program area, CTKX, and keypoint staging area.

image control record (ICR). A record containing image and processor status information that resides at fixed location record 2, cylinder 0, track 1 on each pack.

image history record (IHR). A record containing the current load status for IPLA, IPLB, CTKX, and all of the CIMR components for all of the images.

image pointer record (IPR) (CTKX). An image-unique structure that contains information on keypoints and core image restart area (CIMR) components.

IMAP. Internet Message Access Protocol.

immediate-file. A VFA attribute. When a file-type macro is issued for a record that has the immediate-file attribute, the record is written out to DASD immediately. Contrast with *delay-file*.

implementation-specific C/C++ language header files. Header files used by only IBM and the TPF system. These header files are internal to the implementation of certain C/C++ functions.

import. To dynamically access a function or variable that is exported by a dynamic link library (DLL). DLL applications and DLLs import functions and variables. Ordinarily, importing is handled implicitly by the compiler, prelinker, and the C run-time environment. You can also call run-time library functions to explicitly load and unload DLLs, and import functions or variables from them.

in-core dump formatter (ICDF). A program that formats main storage dumps online when the system error options indicate that dumps are to be routed to the system printer.

inactive processor. A loosely coupled processor that is temporarily not being used. An inactive processor can be reactivated.

inactive subsystem. A subsystem that was included during initialization but is currently not in use because of a system error. The error condition must be corrected before the subsystem can be reactivated.

include. See `#include`.

include file. See header file.

index. For persistent collections, a relative offset into a collection.

index record. See *key record*.

in-doubt unit of recovery. In MQSeries, a sender channel in the TPF system requests confirmation from a remote receiver channel that all messages in the current batch were received on the remote side. Until the remote channel sends confirmation of the batch being received, the sender channel is considered in doubt.

inheritance. A technique that allows you to use an existing class as the base for creating other classes. Objects inherit attributes from the top (or base) class.

initialize. To set the starting value of a data object.

initializer. The assignment operator followed by an expression (or multiple expressions, for aggregate variables) used to set the initial value of a data object.

i-node. An object in a file system that represents a file. There is a one-to-one correspondence between an i-node and a file.

input. Data to be processed.

input list. A CPU loop list containing work items for new input messages that need an ECB in order to be processed. The CPU loop interrogates the input list after the ready list processing has completed.

input/output block (IOB). A control block created by the control program to schedule, control, and hold information required to process a DASD I/O operation. See also *system work block*.

instance. A specific existing example of an object.

instruction-stream. See *I-stream*.

instruction-stream engine. See *I-stream engine*.

integer. A positive or negative whole number or zero.

integer constant. A decimal, octal, or hexadecimal constant.

integral object. A character object, an object having an enumeration type, an object having variations of the type `int`, or an object that is a bitfield.

interchange address (IA). The term used to identify the terminal interchange that controls a cluster of terminals. The IA is a part of the ALC address format.

interface definition language (IDL). In RPC, the language that describes the set of procedures (the interface definition) that is contained in the .idl file.

internal data definition. A description of a variable appearing at the beginning of a block that causes storage to be allocated for the lifetime of the block.

internal function. See *static function*.

internally synchronous. The condition when each clock on an I-stream in a CPC is synchronous with the master clock on the CPC.

Internet. The worldwide collection of interconnected networks that use the Internet suite of protocols and permit public access.

Internet daemon. A daemon that monitors the Internet Protocol (IP) network for incoming traffic, such as Transmission Control Protocol/Internet Protocol (TCP/IP) and User Datagram Protocol (UDP).

Internet daemon configuration file (IDCF). The #IBMM4 fixed file records that contain definitions for all the Internet server applications defined to the Internet daemon. The IDCF is subsystem unique and processor shared. The IDCF is created and managed using the ZINET commands.

Internet daemon configuration table (IDCT). A table in the system heap that contains entries for each Internet server application that the Internet daemon has started. The IDCT contains all the information found in the Internet daemon configuration file (IDCF) plus additional fields to maintain Internet daemon state information.

Internet daemon listener. A major component of the Internet daemon in the TPF system that creates and monitors a socket for the Internet server application for a specify Internet Protocol (IP) address. See also *Internet daemon* and *Internet daemon monitor*.

Internet daemon monitor. A major component of the Internet daemon in the TPF system that is responsible for starting and stopping the Internet daemon listeners for Internet server applications and for error recovery when an Internet daemon listener fails. See also *Internet daemon* and *Internet daemon listener*.

Internet mail. Correspondence in the form of messages transmitted over the Internet. Synonym for *e-mail*.

Internet Message Access Protocol (IMAP). In the Internet suite of protocols, an application protocol that allows a client to access and manage Internet mail on a server. It permits management of remote message folders (mailboxes) in a way that is functionally equivalent to local mailboxes. IMAP includes operations for creating, deleting, and renaming mailboxes and submailboxes; checking for new messages; permanently removing messages; searching; and selective fetching of message attributes, texts, and portions thereof. It does not specify a means of posting mail; this function is handled by a mail transfer protocol such as Simple Mail Transfer Protocol (SMTP). See also *Simple Mail Transfer Protocol (SMTP)* and *Post Office Protocol (POP)*.

Internet Protocol (IP). A protocol that provides the interface between higher-level protocols, such as TCP, and the physical-level protocols, also referred to as the network interfaces.

Internet Protocol address processor shared table (IPAST). A table that contains information about each active native stack Internet Protocol (IP) address in the loosely coupled complex and is used by Domain Name System (DNS) server support.

Internet Protocol address table (IPT). The Internet Protocol table is a control block structure located in main storage in the TPF system. It contains information about each TCP/IP offload device and their associated interfaces with the internet or IP addresses. An IPT entry is obtained whenever the TPF system issues a `claw_connect` function call to an offload device.

Internet Protocol message table (IPMT). A table that contains the input and output messages for sockets that use TCP/IP native stack support.

Internet Protocol routing table (IPRT). A table that associates a TPF client local IP address with a specific remote IP address or a subset of remote IP addresses.

Internet router. A device that enables an Internet Protocol (IP) host to act as a gateway for routing data between separate networks that use a specific adapter.

internetworking. Communication between two or more networks.

Interprocedural Analysis (IPA). A process for performing optimizations across compilation units.

interprocessor communications (IPC). The program facility used to transfer system data, control commands, and messages between CPCs or I-streams in a loosely coupled complex. In the TPF system, IPC uses the Multi-Processor Interconnect Facility (MPIF) feature as a transport medium for system data, control commands, or messages being sent to a different CPC.

interrupt stack. The list of information fields that describe I/O interrupts that have occurred but have not been analyzed.

inter-user communication vehicle (IUCV). A facility, defined by a specific structure, for passing data between programs.

intranet. A secure, private network that integrates Internet standards and applications (such as Web browsers) with an organization's existing computer networking infrastructure.

IOB. Input/output block.

IP. Internet Protocol.

IPA. Interprocedural Analysis.

IPAST. Internet Protocol address processor shared table.

IPC. Interprocessor communications.

IPL virtual memory (IVM). This virtual memory is used by IPL and CCCTIN. It is essentially the same as the system virtual memory (SVM). The SVM is built from the IPL virtual memory during CCCTIN processing. The primary distinction between SVM and IVM is the address of the I-stream unique globals.

IPMT. Internet Protocol message table.

IPR. Image pointer record.

IPRT. Internet Protocol routing table.

IPT. Internet Protocol address table.

ISA. ISO-C assembler function table.

ISC. ISO-C source table.

ISO-C assembler function table (ISA). A table that is built by coding the SPPBLD macro. It contains all ISO-C assembler function file names with their associated version numbers.

ISO-C link table (ICL). A table that is built by coding the SPPBLD macro. It contains all ISO-C load module names (library and application) with their associated version numbers.

ISO-C source table (ISC). A table that is built by coding the SPPBLD macro at SIP time. It contains all ISO-C source file names with their associated version numbers. This table is used to create the MASM jobs needed to compile the ISO-C source code.

ISO-C stub table (IST). A table that is built by coding the SPPBLD macro; it contains all the program names that can be entered by any C load module. The names are 4 characters in length, without the 2-character version. The table is entered into the stub generator, which produces object library entries for each program.

IST. ISO-C stub table.

I-stream. An IBM central processing unit (CPU). Although there is a conceptual distinction between I-stream and I-stream engine, in the TPF system the terms are used synonymously.

I-stream engine. Synonym for *I-stream*.

I-stream engine 2. In a multiprocessing environment, the I-stream engine assigned to handle input/output for the MPIF feature.

iteration order. The order in which elements are visited by using cursor C functions such as `TO2_allElementsDo` and `TO2_next` in a persistent collection.

IUCV. Inter-user communication vehicle.

IVM. IPL virtual memory.

J

Job Control Language (JCL). Control language used to describe a job and its requirements to an operating system.

K

key. In persistent collections, a key is an identifier that helps to organize and access elements in a collection.

key bag collection. A type of collection with unordered, nonunique elements that are accessible by a nonunique key.

key-controlled protection. When key-controlled protection applies to a storage access, a user may store information into a location only when the storage key matches the access key associated with the request for storage. A user may fetch information only when the keys match or when the fetch-protection bit of the storage key is zero.

keyed log collection. A type of collection with ordered, nonunique elements that are accessible by a nonunique key. Elements are ordered by arrival sequence. The collection cannot be expanded and the elements will wrap when the collection becomes full; that is, the newest element will replace the oldest element in the collection.

key path. A structure that allows a particular element to be quickly accessed by a field value, and allows sequential access to elements, by a field, when iterating through a collection.

key path field. A field specified by the displacement to, and length of, contiguous bytes within the data elements of a collection that will be used as a key for an alternate key path.

keypoint. A critical control program record, or field in a record, with a backup on DASD. To update the DASD copy of a keypoint record.

keypointable. The attribute of any data field or data record that can change dynamically during online operations. Therefore, the data must be saved; that is, keypointed in the event of system outage.

keypoint backup area. An image-shared area used to save a copy of the working area when keypoints are moved from the staging area to the working area.

keypoint staging area. An image-unique area used to preload keypoints. The contents of this area can be moved into the working area of keypoints prior to an IPL.

keypoint working area. An image-shared area that contains the working copy of all of the keypoints.

key record. A pool record that is arranged in a tree-like structure by which TPF collection support (TPFCS) sorts the keys and locates the data record containing the data element that corresponds to each key. Synonymous with *index record*.

key set collection. A type of collection with unordered, nonunique elements that are accessible by a unique key.

key sorted bag collection. A type of collection with elements with nonunique keys. The keys are sorted in ascending binary order.

key sorted set collection. A type of collection (also known as dictionary) with ordered elements that are accessible by a unique key. The element values are nonunique. Elements are ordered in ascending sequence by the key.

keyword. A reserved C language word.

L

label. An identifier followed by a semicolon and is the target of a goto statement.

labeled statement. A C language statement that contains one or more identifiers each followed by a colon and a statement.

LAN. Local area network.

language work area (LWA). An I-stream unique work area used by C language secondary library routines.

LC. Loosely coupled.

LCB. Link control block.

leap seconds. The adjusted difference between Greenwich mean time (GMT) and the time established as Absolute Time by the National Bureau of Standards.

LEID. In communications, the logical endpoint identifier. In coupling facility (CF) support, the list entry identifier.

LFW. Library function work area.

LGF. Loader general file.

library. A collection of functions, function calls, subroutines, or other data.

library function. A function available to all C application programs that provides the programmer with a generic service, such as determining the length of a string of characters. Library functions are provided so that C application programs can link to generally available service routines to perform their tasks.

library function work area (LFW). Part of the first stack frame attached to an ECB that is used by C library functions.

library interface scripts. Files that list functions contained in a library and provide an index number for that function. These files are used by the library interface tool (LIBI) to create library stubs.

library members. Files of object code that are components of library load modules (LLMs) or dynamic link libraries (DLLs). For example, CASSART is a library member file of CISO.

library work space. A performance-critical macro area that is used by library functions that need storage to build macro expansions and do not give control to any other real-time segments while macros are running.

LIBVEC. A vector of library function addresses defined by the library interface script and linked into the library load module. It is used in the call linkage to library functions.

limited lock facility (LLF). A hardware RPQ required for DASD control units shared among multiple CPCs in a loosely coupled multiprocessing environment. It is used to synchronize the modification of the shared database. See also *external locking facility (XLF)*.

limited resource session. An SNA session that traverses a switched link and can be deactivated by the LU when it is no longer being used by a conversation.

line multiplexing. The ability to support multiple terminals on a communication line.

line status table (LSTB). The system table that contains entries for every non-SNA communication line in the network. The system uses this table to control I/O from non-SNA sources in the network.

link. In the TPF file system, a connection between one or more file names and an associated i-node. Synonym for *directory entry*. To interconnect items of data or portions of one or more computer programs; for example, the linking of object programs by a linkage editor or linking data items by pointers. (T)

linkage editor. A program that resolves cross-references between separately compiled object modules and then assigns final addresses to create a single load module.

link control block (LCB). A record used to indicate correct or incorrect reception of an SLC data message block and to provide information regarding the status of an SLC link.

link-edited modules. The files of load module code produced by the linkage editor.

list entry. An entry on a list in a coupling facility (CF) list structure. A list entry consists of list entry controls and can also include a data entry, an adjunct area, or both. See also *adjunct area* and *data entry*.

list entry controls. Items that contain control information that is associated with a list in a coupling facility (CF) list structure. See *list entry*.

list entry identifier (LEID). An identifier assigned by the coupling facility (CF) to each list entry that is in use in the CF list structure.

list header. A header that anchors the list to the coupling facility (CF) list structure and contains control information (known as list controls) that is associated with the list. See also *list controls*.

list notification vector. An array of bits that contain an indication of whether a monitor list in a coupling facility (CF) is in an empty state or a nonempty state.

list processing. The cyclic dispatching routine performed by the CPU loop that allocates system resources to entries on a first-in-first-out basis.

lists. Queues of work to be processed by the CPU loop.

list structure. See *coupling facility list structure*.

listener. A TCP/IP application that monitors information about incoming network connections.

little endian. A method of representing data such that the lower numbered bytes of the data are less significant. Intel-based personal computers (PCs) and IBM RISC System/6000 machines use this format.

live testing. The online testing procedure that uses terminal input rather than simulated batch input.

LLF. Limited lock facility.

LM. Logon manager.

LMA. Long message assembly.

LMT. Long message transmitter.

LNIATA. The line number, interchange address, and terminal address used to address a remote device in an ALC network.

load. The process by which programs are read from an input device by one of the loaders. See *auxiliary loader*, *E-type loader*, *general file loader*, and *data loader*.

load balancing. The system routine that decides which I-stream engine is to process an entry based on the activity in all I-stream engines in the CPC.

load deck. The control cards or card image input used to create all load media (including loader general files).

loader general file (LGF). The disk module that contains programs and keypoints required to initialize a system. It is a sequential collection of records created offline under MVS control.

load function. The E-type loader function that reads sets of programs from an input device.

load module. All or part of a computer program in a form suitable for loading into main storage for execution. A load module is usually the output of a linkage editor.

loadset. A group of programs identified by a unique name on which E-type loader functions can be performed.

loadset directory (LSD). The structure used by the E-type loader that contains information about every loadset in the system.

local area network (LAN). A computer network located within a limited geographical area.

local cache buffers. Buffers allocated by logical record cache support that contain copies of data that is shared among cache users. Users read data from permanent storage to their local cache buffers and write data from their local cache buffers to permanent storage.

local cache vector. An array of bits that contain an indication of whether data in the local cache buffer is valid. There is one local cache vector for each cache user.

local symbol table. In expression enhancements for the TPF debuggers, a table that contains all symbols included in the assembler program and the data macros (DSECTS) the program invokes except for those symbols that are defined in the common symbol table. The TPFSYM offline program extracts DSECT or symbol definitions from the SYSDATA file that is generated by the assembler and saves the definitions in the ADATA file. The offline loader then loads the ADATA file to the TPF system.

locale. Characteristics of the geographic area, such as time zone, character editing, monetary symbols and formatting, and nonmonetary formatting. The locale definition is built using the EDCLOC assembler macro. The `setlocale` function is used to select alternate locales.

localedef utility. A utility that processes locale definition files and produces the locale load modules.

locate. A modified REQTAIL logon manager private protocol RU used by the TPF system to solicit a SESINIT session initiation RU. See *locate reply*.

locate reply. A modified SESINIT logon manager private protocol RU used by the VTAM logon manager to respond to a TPF Locate request. It contains a BIND image for the TPF system to send on the link specified as the last tail in the tail vector.

lock. A serialization mechanism by which a specific resource is restricted for the use of the holder of the lock.

lock holder. A processor or processors that currently hold a lock.

lock table. An array of exclusive locks that you can use to serialize access to coupling facility (CF) list structure resources such as lists or list entries. See *coupling facility (CF) list structure*.

lock waiter. A processor or processors waiting to obtain a lock.

log. (1) A file that contains messages issued from an application or system program. (2) To record; for example to log all messages to tape. (3) See also *syslog daemon*.

log collection. A type of collection with ordered, nonunique elements that are not accessible by a key. Elements are ordered by arrival sequence. The collection cannot be expanded and the elements will wrap when the collection becomes full; that is, the newest element will replace the oldest element in the collection.

log manager. A manager that controls the recovery log and recovery actions.

log processor. In TPF transaction services, the program that allows a user to log on to an application.

LOGI state. The state a terminal is in when it is not connected (logged in) to an application.

logical address. The address found in the instruction address portion of the program status word (PSW). If address translation is off, the logical address is the real address. If address translation is on, the logical address is the virtual address. See also *absolute address*, *physical address*, *real address*, and *virtual address*.

logical record cache. A cache that provides high-speed access to data, which enables you to develop data sharing programs with improved performance. You can use a logical record cache for data consistency, which ensures the validity of the data that is shared, and to keep track of data that resides in permanent and local storage, but is not stored in the cache itself.

logical DASD subsystem. A subsystem consisting of 2 storage directors, attached to the same DASD strings, together with those DASD strings.

logical endpoint identifier (LEID). An identifier that is used to give a resource a pseudo line, interchange address, and terminal address.

logical link. A path for data to be transmitted between an adapter on a CLAW workstation and the TPF system.

logical processor. The symbolic identification assigned to a processor in a loosely coupled complex.

logical storage block. Temporary main storage requested by an E-type program, dispensed in fixed sizes of 128, 381, 1055, and 4095 bytes. See also *TPF block*.

logical unit of work. See *unit of work.*

logon manager (LM). A VTAM application that provides logon services for the TPF system. The TPF system communicates with the logon manager regarding the status of its applications on CLU sessions.

long constant. An integer constant followed by the letter `l` (el) or `L`.

long message assembly (LMA). The process by which segmented SNA and non-SNA input messages are assembled into one unit.

long message transmitter (LMT). A program package that is used to queue and transmit long, non-SNA messages to ALC printer devices. LMT is also known as the SENDL postprocessor.

long-term pool records. Pool records that are maintained for an indefinite period of time, at least longer than the life of a transaction.

longevity. The length of time (seconds, hours, days, weeks, months) during which file pool records are maintained.

lookaside storage buffer. A temporary storage area where a copy of the data is saved to avoid refetching the data on every access. The data is retrieved from the temporary storage area instead of its permanent residence.

loosely coupled complex. Two or more CPCs sharing a common set of DASD and using an external lock facility (XLF) to synchronize multiple CPC access to the DASD records.

loosely coupled (LC) facility. A function in the High Performance Option (HPO) feature that allows multiple CPCs to share a common database.

low address protection. A hardware facility that provides protection against the destruction of main storage information used by the CPU during interrupt processing; accomplished by prohibiting instructions from storing with effective addresses in the 0–511 range.

LSD. Loadset directory.

LSTB. Line status table.

LUWID. Logical unit of work identifier.

lvalue. An expression that represents a data object that can be both examined and altered.

LWA. Language work area.

LWS. Library work space.

M

macro. Synonym for macroinstruction.

macro decoder. The program that interprets SVC requests for control program services.

macro identifier. The byte in an SVC macro instruction used by the TPF system to locate appropriate control program services.

macroinstruction. An instruction that when executed causes the execution of a predefined sequence of instructions in the same source language.

macro invocation. An identifier followed by a parenthesized list of arguments that the preprocessor replaces with the replacement code located in a preprocessor define statement.

`main` function. A function that has the identifier `main`. In non-TPF systems, each program must have exactly one function named `main`, which is the first user function that gets control when program execution begins. TPF does not allow the use of a `main` function, and will flag it as an error, if defined.

mail. See *e-mail* and *Internet mail*.

mail account. In TPF Internet mail server support, a user with a mailbox.

mailbox. A file storage area that holds electronic mail (e-mail).

mail item. A single piece of electronic mail (e-mail).

mail queue. A list used for Internet mail that keeps track of mail items to be delivered.

main I-stream engine. In a CPC with multiple I-stream engines, the I-stream that executes most non-DASD-related I/O commands and the only I-stream engine that can be IPLed. When the MPIF feature is installed and 2 or more I-stream engines exist, MPIF I/O commands are executed on the second I-stream. Contrast with *application I-stream engine*.

main storage allocations lists. The lists of available block addresses, in each block type, that are used by the control program when programs request or release main storage.

major device number. A number that locates a device driver.

mapping. (1) A data organization procedure that binds application data to a unique hardware address. (2) The programs that permit a user to format and control the data routed between a terminal and an application, or between applications.

MASM. Multiple assembler.

master clock processor. The processor that controls the complex's TOD time and date changes in a loosely coupled system. The master clock processor is usually the first active processor in a loosely coupled system. In 1052 state, the processor where the ZATIM TOD command is entered becomes the master clock processor.

master extra program record. The record used to control the pool of extra program records. Extra program records are the fixed file records within the #XPRGn record type.

master synchronization source. The originator of the oscillator pulses that keep all the TOD clocks in a loosely coupled complex synchronized.

matrix. An array arranged in rows and columns.

MBI. Message block identifier.

MCA. Message channel agent.

MCR. Message control record.

MDBF. Multiple database function.

member. (1) A data object in a structure or a union. (2) A file of object code that is a component of a dynamic load module (DLM), dynamic link library (DLL), or library load module (LLM).

messages. Transactions or entries received by a TPF system for immediate action. TPF system messages (system errors) such as dump messages, and online and offline messages are intended for operators and system programmers responsible for operating and maintaining the TPF system.

message block identifier (MBI). A field found in the SLC link keypoint that permits chaining of SLC data message blocks.

message channel. In distributed message queuing, a mechanism for moving messages from one queue manager to another. A message channel comprises two message channel agents (a sender at one end and a receiver at the other end) and a communication link. Contrast with *MQI channel.*

message channel agent (MCA). A program that transmits prepared messages from a transmission queue to a communication link, or from a communication link to a destination queue. See also *Message Queue Interface (MQI).*

message collector. The data collection program that records network message traffic data.

message control record (MCR). A record used to preserve SLC message references until they are acknowledged.

Message Queue Interface (MQI). The programming interface provided by the MQSeries queue managers. This programming interface allows application programs to access message queuing services.

message recovery. A facility used to retain messages on file until the message is completely processed.

message router. A data communication procedure that directs data messages from or to a host network, to or from a specified terminal, station, application program, or another host network.

message switching (MESW) state. The system state in which message switching entries are the only entries processed. All other entries are queued to be processed when the system reaches NORM state.

MESW state. Message switching state.

method. A procedure contained within a collection object that is made available to other collections for the purpose of requesting the services of that collection. Most communication between collections takes place through methods.

MFST. Module file status table.

minor device number. An optional number that can be passed to a device driver subroutine.

mode. A collection of attributes that specifies a file's type and its access permissions. (POSIX.1)

module file status table (MFST). The index of online disk assignments for all direct access storage devices (DASD).

module-to-module duplication. A method of allocating duplicate files whereby the duplicate record in a record type (fixed or pool) is assigned to the same relative position on an alternate disk module.

movable virtual IP address. A virtual Internet Protocol address (VIPA) that can be moved from one processor to another in the same loosely coupled TPF complex.

MPIF. Multi-Processor Interconnect Facility.

MPIF complex. Multiple TPF complexes that are channel connected.

MPIF user. One or more programs associated with one or more functions.

MPLF. Multi-path lock facility.

MQI. Message Queue Interface.

MQI channel. Connects an MQI client to a queue manager on a server system, and transfers only MQI calls and responses in a bi-directional manner.

MQI channel directory. The TPF system implementation of an MQSeries channel definition file. The MQI channel directory contains client connection channel type (CLNTCONN) definitions stored in #MQICD fixed file records.

MQ series. Part of an MQSeries product that allows a queue manager to service MQI client systems.

MQI trace table. The TPF system implementation of an MQI function trace facility.

MQSeries. A family of IBM licensed programs that provides message queuing services.

MQSeries client. Part of an MQSeries product that can be installed on a system without installing the full queue manager. The MQSeries client accepts MQI calls from applications and communicates with a queue manager on a server system.

MQSeries server. A queue manager that provides queuing services to one or more clients. All the MQSeries objects (for example, queues) exist only on the queue manager system; that is, on the MQI server machine. A server can support normal local MQI applications as well.

MSRB. Multiple system request block.

multibyte characters. Multibyte characters are a mixture of SBCS and DBCS characters.

multi-path lock facility (MPLF). A hardware locking facility that can be optionally installed on 3990 Model 3 DASD control units. This facility, or the limited lock facility (LLF), is required in loosely coupled complexes.

Multi-Processor Interconnect Facility (MPIF). A feature of the TPF system that allows an installation to implement the interconnection of CPCs through the use of channel-to-channel support.

multiple assembler (MASM). The program that can assemble many programs in partitioned data sets with minimal use of JCL.

multiple assembly print. An offline program that produces one or more printed listings retrieved from the tape or disk data set produced by the multiple assembly program (MASM).

multiple central processing complexes. Several central processing complexes, which can be either uniprocessors or multiprocessors, that are explicitly identified to the channel subsystem by device addresses. See also *central processing complex*.

multiple database function (MDBF). A facility in the HPO feature that allows concurrent processing of multiple applications, each with dedicated database support.

multiple images. A facility that allows an installation to define as many as 8 images of the TPF system on a single processor. Maintaining multiple and separate TPF images allows an installation to perform loads while the TPF system is processing messages and to have the ability to fall back immediately to a previous program base without reloading the previous program versions.

multiple inheritance. A design characteristic of an object-oriented database in which a given class can inherit directly from more than one immediate superclass.

multiple release. A pool address that has been released more than once without being dispensed again. See also *online multiple release* and *offline multiple release*.

multiple system request block (MSRB). A data definition describing the format of the request block used to ship each MPIF request type to the appropriate destination. The MSRB contains information defining the sending and receiving MPIF user as well as information describing the specific request type.

multiple TPF image. See *image*.

multiprocessing. (1) A mode of operation for parallel processing by 2 or more processors of a multiprocessor. (2) Pertaining to the simultaneous processing of 2 or more computer programs or sequences of instructions by a computer.

multiprocessor. (1) A computer including 2 or more processors that have common access to shared main storage. (2) A system of 2 or more processing units, ALUs, or processors that can communicate without manual intervention.

N

named pipe. Synonym for *FIFO special file* (so named because it is a pipe that is located in the file system by its name so that different processes can find it).

namespace. A unique identifier used for qualifying element and attribute names used in XML. A namespace allows you to retain unique element names by simply providing a two-part naming system through the use of element names associated with a Universal Resource Identifier (URI). The specific location may not actually contain any data about the tags, but simply allows more than one use of a specific tag name. For example, if you are using more than one DTD and both have a `<firstname>` element, you can distinguish between the two by using namespaces. For more information, go to the W3C Web site (http://www.w3.org/).

NAT. Network address table.

native console. A locally attached system console.

NAU. Network addressable unit.

NCB. Node control block.

NCB control record. A fixed-file record that contains information about the node control block (NCB) directory records.

NCB directory record. A fixed-file record that contains the names of dynamic LU resources and the addresses of the 381-byte long-term pool file node control block (NCB) records assigned to those resources.

NCB reconciliation function. A function that returns to the TPF system the node control block (NCB) directory record entries and NCB records that are no longer being used.

NCB reorganization function. A function that changes the number of node control block (NCB) directory records in the TPF system.

NCB slot. A field in an node control block (NCB) directory record entry that contains the address of a 381-byte long-term pool file NCB record for a dynamic LU resource. There are 8 NCB slots for each dynamic LU resource.

NCE. Network connection endpoint.

NCP. Network Control Program.

NEF. Network extension facility.

nested scope. In TPF transaction services, a commit scope within a commit scope. A nested commit scope begins when a higher-level commit scope is already active.

network address table (NAT). The SNA table that contains the network addresses of all local TPF LUs and remote LUs that the TPF system has discovered dynamically.

network addressable unit (NAU). In SNA, a logical unit, physical unit, or system services control point; it is the origin or the destination of information transmitted by the path control network.

network byte order. The byte order required for all binary integers in TCP/IP headers as they traverse a network. In this format, the 4 bytes in a 32-bit value are transmitted in the following order: bits 0–7 first, then bits 8–15, then bits 16–23, and bits 24–31 last. Machines that store binary integers in other formats must convert the header values into the network byte order before transmitting the data. See also *host byte order* and *dotted decimal notation*.

network connection endpoint (NCE). The component in a high-performance routing (HPR) endpoint that processes network layer packets (NLPs) received over rapid transport protocol (RTP) connections. The last label in the automatic network routing field (ANRF) is always an identifier for an NCE in the destination node.

Network Control Program (NCP). An IBM licensed program that provides communications controller support for single-domain, multiple-domain, and interconnected network capability.

network extension facility (NEF). An extension of ACF/NCP/VS (a separate IBM licensed program) that allows ALC devices to attach to a 37x5 running under NCP control.

network layer header (NHDR). The part of the network layer packet (NLP) that contains the automatic network routing (ANR) labels, among other information, and is used by the network to route the NLP from one rapid transport protocol (RTP) endpoint to another.

network layer packet (NLP). A message unit used to carry data between high-performance routing (HPR) nodes. An NLP contains a network layer header (NHDR), transport header (THDR), and optionally data.

new-line character. A control character that causes the print or display position to move to the first position on the next line. This control character is represented by '\n' in the C language.

NHDR. Network layer header.

NLP. Network layer packet.

node. An endpoint of a link or a junction common to two or more links in a network. Nodes can be processors, controllers, or workstations, and they can vary in routing and other functional capabilities. (OSF) In a tree structure, a point at which subordinate items of data originate. (A) In SNA, an endpoint of a link or a junction common to two or more links in a network. Nodes can be distributed to host processors, communication controllers, or terminals. Nodes can vary in routing and other functional capabilities. In ACF/VTAM, a point in a network defined by a symbolic name.

node control block (NCB) record. A record that contains information about the message queues for an LU resource.

nonavailable state. The state a coupling facility (CF) is in when only certain CF commands are processed normally; all other CF commands are suppressed. Contrast with *available state*. See *coupling facility (CF)*.

nonblocking mode. Control is returned to the caller of a socket API function even if its request is not satisfied. For example, for a `read` or `recvfrom` function call, the operating system does not suspend the application program if data is not available to satisfy the request. However, a return code of -1 is returned to the application program. See *blocking mode*.

nonduplicated file. A design for a TPF database where none of the records have duplicate copies.

nonfresh load. The part of SNA restart that is activated on most hardware and software IPLs. All SNA tables will be reloaded from their file copies. Contrast with *fresh load*.

nonpersistent message. A message that does not survive a restart of the queue manager. Contrast with *persistent message.*

nonunique collections. Collections that can contain elements that have the same value (such as bags and logs) or the same key (such as dictionaries and key bags).

NORM state. The most active of the 5 system states. All functions are available, communication lines are active, and all types of entries are processed.

notify lock structure. On a coupling facility (CF) this structure maintains lock granted and lock contention information.

NPSI. X.25 NCP Packet Switching Interface.

NSI. Next sequential instruction.

NULL. A pointer guaranteed not to point to a data object.

null character (NULL). The character with the hex value 00 (all bits turned off).

null statement. A C statement that consists solely of a semicolon.

O

object. An instantiation of an object class. A coupling facility (CF) list structure or a connection to a CF list structure.

object aggregation. The practice of grouping unrelated objects (in terms of inheritance) together to represent other objects.

object class. A description that defines the exact format of the attributes (data) as well as the exact methods (functions) to be applied to the data. A category of objects.

object code. Machine-executable instructions, usually generated by a compiler from source code written in a higher level language (such as C language).

object file. In the TPF system, a compiler or assembler output file that is suitable as input to a linkage editor. Object files are included in a load module as designated by the build script for the load module.

object header. A header that contains an object ID, update sequence counter, and object length.

object ID. A field containing the hexadecimal class ID of the object. When you find an object in a record using the ZDFIL command, you can determine what class or type of object it is from this class ID. The class IDs of all the objects used by TPF collection support (TPFCS) are defined by CLASSID macro statements in the ITO2 copy segment.

object length. A field containing the length of an object when it is brought into memory by TPF collection support (TPFCS) to process its associated persistent collection.

object module. In the TPF system, an output file produced by a C compiler supported by the TPF system or by the high-level assembler (HLASM) that is ready to be processed by the TPF offline loader, TPFLDR. To create an object module using a C compiler, use the TARGET(TPF) option. To create an object module with HLASM, the source code must call the BEGIN macro with TPFISOC=NO and the FINIS macro.

OCR. Open Systems Adapter (OSA) configuration record.

octal. A base 8 numbering system.

octal constant. The digit 0 followed by any digits 0 to 7.

online multiple release. A multiple release where pool directory update (PDU) processing was run between two or more releases of a pool address. See also *multiple release* and *offline multiple release*.

offline ACF/SNA table generation (OSTG). A function that creates the tables used online to define and control the ACF/SNA network.

offline functions. See *offline system*.

offline loader. See *general file loader*, *auxiliary loader*, or *E-type loader*.

offline multiple release. A multiple release where pool directory update (PDU) processing was not run between two or more releases of a pool address. See also *multiple release* and *online multiple release*.

offline system. The batch-oriented MVS programs that support the online TPF system.

offload device. A device that performs well-defined interface services to free the host processor to perform other tasks.

OLD. A symbolic name, reserved to TPF, for a general tape denoting the load medium to be used by the E-type loader function.

OMT. Output message transmitter.

online loader. See *general file loader*, *auxiliary loader*, or *E-type loader*.

online system. The TPF production system.

on-time event. The signal generated by a Sysplex Timer (STR) that verifies TOD synchronization in the CPC.

open file. A file that is currently associated with a file descriptor. (POSIX.1)

open file description. An object that contains information such as a file offset, the status of a file, and the access mode of a file. An open file description can be referred to by one or more file descriptors.

Open Systems Adapter (OSA). Integrated hardware that combines the functions of an IBM System/390 input/output (I/O) channel with the functions of a network port to provide direct connectivity between IBM System/390 applications and their clients on the attached networks.

operand. An expression that is acted upon by an operator.

operating system. Software that controls functions such as resource allocation, scheduling, input/output control, and data management.

operation. A specific action such as add, multiply, shift.

operational program zero (OPZERO). The program that creates an entry control block (ECB), defines an entry, and therefore introduces new message information into the system for processing. It is activated when the CPU loop dispatches a work item from the input list.

operator. A symbol (such as +, -, *) that represents an operation (in this case, addition, subtraction, multiplication).

OPR dump. The dump generated when an ECB-controlled program detects an error condition that does not necessarily stop the ECB from continuing its processing.

optimistic concurrency. In TPF collection support (TPFCS), a way of controlling data access. Optimistic concurrency allows a user to read a collection, update it, and replace it without requiring exclusive access to the collection.

OPZERO. Operational program zero.

ordinal number. For a symbolic file address, the relative position of a record in a record type.

OSA. Open Systems Adapter.

OSA configuration record (OCR). A record consisting of two tables, the Open Systems Adapter (OSA) definition table and the OSA Internet Protocol (IP) address table, that contain the definitions and status of OSA-Express connections.

OSA control block. A control block that contains one entry for each active OSA-Express connection.

OSA definition table. A table in the Open Systems Adapter (OSA) configuration record that contains the definitions and status of the OSA-Express connections.

OSA-Express. Integrated hardware that uses queued direct I/O (QDIO) to communicate with high-bandwidth networks such as the Gigabit Ethernet (GbE or GENET) or Fast Ethernet (FENET) networks.

OSA IP address table. A table in the Open Systems Adapter (OSA) configuration record that contains the definitions and status of the Internet Protocol (IP) addresses associated with OSA-Express connections.

OSA shared IP address table (OSIT). A table that contains the status of all Open Systems Adapter (OSA) Internet Protocol (IP) addresses in a loosely coupled TPF complex.

OSIT. Open Systems Adapter (OSA) shared Internet Protocol (IP) address table.

OSTG. Offline ACF/SNA table generation.

out-of-band. The MSG_OOB flag can be set on stream sockets for calls such as `send`, `recv`, and `recvfrom`. The MSG_OOB flag is set for high priority data. Flagged data, which is 1 byte long, may be sent inline with other data or as a single byte by itself. If flagged data is sent inline, it is marked to be read in a specific sequence in relation to the other inline data.

output command handler. A main storage resident program that transmits queued SNA commands.

output message transmitter (OMT). The program that queues and initiates output message transmission to terminals in an ACF/SNA network.

overflow. A condition that occurs when a portion of the result of an operation exceeds the capacity of the intended unit of storage.

P

package. A group of TPF-unique programs necessary to process one particular function or a group of related functions.

package test. The testing procedure, unique to TPF, that checks the validity of interrelated functions in a program package. This is sometimes called Phase III test.

package unit. In the program test vehicle (PTV), a gradient of program testing that allows several application programs to be tested together to verify the performance of specified functions. Also see *transaction unit* and *full scale*.

packet. In TCP/IP, the unit of data passed across the interface between the internet layer and the link layer. A packet includes an IP header and data. A packet can be a complete IP datagram or a fragment of an IP datagram. See also *datagram*.

pad. To fill unused positions in a field with data, usually zeros, ones, or blanks.

page. A 4 KB area of memory; an entry in a page table.

page and segment table area. The segment and page table area (SPTA) is the control table for the ECB virtual memory. It is allocated by CCCTIN. The address of each ECB's SPTA is saved in the Key F section of the ECB.

page frame real address (PFRA). The real address of the hardware frame identified by a given virtual address.

page protection. A facility that controls access to virtual storage by using the page-protection bit in each page table entry.

page zero. Storage locations 0 to 4095.

PAL. Deprecated term for *IBMPAL*.

parallel session. In SNA, 2 or more concurrently active sessions between the same 2 logical units (LUs).

parallel session logical unit. A logical unit (LU) that can have 1 or more concurrently active sessions with a given partner LU.

parameter. The name of a value that a function receives.

parameter declaration. A description of a value that a function receives. A parameter declaration determines the storage class and the data type of the value.

parametric recoup. The attribute of the file recoup program that allows it to be activated and controlled by parameter lists.

parent directory. The directory that is one level above the current directory. When discussing a given directory, the directory that contains a directory entry for the given directory and is represented by the path name dot-dot (..) in the given directory. (POSIX.1) When discussing other types of files, a directory containing a directory entry for the file under discussion. (POSIX.1)

parent process. A process that creates a child process. See also *child process* and *process*.

PARS. Programmed airlines reservation system.

PARS list. A partitioned data set member that contains the names and versions of the E-type programs to be loaded to the loader general file.

parser. A program that allows the use and interpretation of data. The XML4C parser is used for data written in the XML language. In XML4C, there are two specifications used to interact with the parser: Document Object Model (DOM) and Simple API for XML (SAX). See also *Document Object Model* and *Simple API for XML*.

part objects. See *collection part objects*.

partial load. Synonym for *short load*.

partially duplicated files. A design for a TPF database where some records have duplicate copies while other records do not.

partitioned emulation program (PEP). An extension of the network control program that allows the emulator program (EP) and the Network Control Program (NCP) to cohabit the 37x5 processor.

PAT. Program allocation table.

path. The logical structure used to communicate between 2 processors. A communication unit path provides two-way communication between 2 processors. Each path consists of 2 units, each supporting one-way communication for reading or writing.

path information unit (PIU). The basic unit of information sent between the TPF system and System Network Architecture (SNA) devices. A path information unit (PIU) is SNA terminology for a message.

path length. The number of ESA machine instructions required to process an input message from the time it is received until the response is sent to the communication facilities.

path name. A file name specifying all directories leading to the file. See also *relative path name*. A file name specifying all directories leading to a file plus the file name itself. A string that is used to identify a file. A path name consists of, at most, PATH_MAX bytes, including the terminating null character. It has an optional beginning slash (/) followed by zero or more file names separated by slashes. If the path name refers to a directory, it may also have a trailing slash.

path switch. An action taken by one of the high-performance routing (HPR) endpoints to request a new path for a rapid transport protocol (RTP) connection when the HPR endpoint detects a failure in the network. This action is nondisruptive; that is, no LU-LU sessions or data are lost.

path switch timer. A timer used by the TPF system to detect path switch failures in a high-performance routing (HPR) network.

pattern. (1) A regular expression or series of regular expressions that define the search pattern. (2) A sequence of characters used either with regular expression notation or for path name expansion as a means of selecting various character strings or path names, respectively. The syntaxes of the two patterns are similar, but not identical; the standard always indicates the type of pattern being referred to in the immediate context of the use of the term. (POSIX.2) (3) A sequence of characters used by commands that search for strings. Some characters have special meanings in patterns; for example, `$` refers to the end of a line and `abc$` refers to the sequence `abc` appearing at the end of a line. Some patterns can be matched by many different strings.

PBI. Program base identification.

PDU. (1) In Simple Network Management Protocol (SNMP) agent support, a protocol data unit. (2) In TPF file pool support, pool directory update processing.

PEP. Partitioned emulation program.

PER. Program event recording.

permanent storage. Storage that is the final repository for the data that TPF systems share and might be on DASD. TPF systems can read the data from permanent storage to local storage buffers for their use and then maintain the data in the local cache buffers and use the directory-only caching method to track the validity of the data.

permission (file permission). The right to access a file. See also *access permissions*.

persistence. A process that guarantees collection access beyond the life of the creating entry control block (ECB) and beyond a system re-IPL. Access is guaranteed until a collection is specifically deleted.

persistent collection. An abstract representation of data having common attributes and functions that maintain their state after the entry control block (ECB) that creates them exits.

persistent identifier (PID). An identification number that is assigned to all collections in TPF collection support (TPFCS). The PID is architected as a 32-byte number consisting of a format indicator and other information used to locate the collection.

persistent long-term collection. A collection that lives beyond the life of the creating ECB, resides on DASD in long-term pool records, and can survive a re-IPL. The collection will be deleted only with an explicit delete call.

persistent message. A message that survives a restart of the queue manager. Contrast with *nonpersistent message.*

persistent short-term collection. A collection that lives beyond the life of the creating ECB, resides on DASD in short-term pool records, and can survive a re-IPL. The collection will be deleted when the short-term pools are recycled.

persistent structure. A coupling facility (CF) structure that remains allocated when there are no active connections.

pessimistic concurrency. In TPF collection support (TPFCS), a way of controlling data access. Pessimistic concurrency uses an exclusive lock to allow a user to read a collection, update it, and replace it.

PFRA. Page frame real address.

Phase III test. See *package test*.

physical address. The absolute address after configuration (the final address). See also *absolute address*, *logical address*, *real address*, and *virtual address*.

physical storage block. Types of working storage blocks used as I/O blocks, system work blocks, entry control blocks, frames, and common frames.

PID. Persistent identifier.

pilot tape. A general tape that can be processed by the online data loader to load new fixed file data into the online system.

pinned data. Data held until it is destaged to DASD or explicitly discarded by a host command because of a permanent error condition in a 3990 caching control unit.

PIO. Preemptive I/O. A TPF control program routine that manages I/O operations to a single device while suspending normal I/O (CIO) services for all other devices. This is used primarily by the system error routine.

pipe. (1) To direct data so that the output from one process becomes the input to another process. (2) A one-way communication path between a sending process and a receiving process. See also *pipeline*.

pipeline. (1) A chain of two or more processes connected by pipes. Each process in the chain acts as a filter, reading data from the standard input (`stdin`), performing some transformation, and writing the results to the standard output (`stdout`). (2) A direct, one-way connection between two or more processes. (3) To perform processes in a series.

PIU. Path information unit.

PKST. Processor keypoint status table.

PNA. Program nesting area.

pointer. A variable that holds the address of a data object or function.

polling. In a communication network, the act of checking for input from a device.

pool conversion. In pool file support, to convert the pool data structures on file in DASD from pool expansion (PXP) support format to 32-way loosely coupled pool support format. For pool conversion to take place, all processors in the complex must be migrated to 32-way loosely coupled pool support. When pool conversion is completed, the pool data structures in main processor storage (core) on each processor and on file in DASD are in 32-way loosely coupled pool support format. Contrast with *pool migration* and *pool conversion fallback*.

pool conversion fallback. In pool file support, to return the pool data structures on file in DASD from 32-way loosely coupled pool support format to pool expansion (PXP) format. When pool conversion fallback is completed, the pool data structure in main processor storage (core) on each processor is 32-way loosely coupled pool support format, while the pool data structure on file in DASD has been returned to PXP support format. Processors in unmigrated state can now join the complex. See also *pool conversion*, *pool migration*, and *unmigrated state*.

pool directory. An index of all pool records maintained by the control program file directory system.

pool directory generation. A storage management process that creates pool directories.

pool directory record. The array of status bits that indicates whether a pool record is available or unavailable.

pool fallback. The technique for selecting an alternate compatible pool section for address dispensing if a depleted pool section is selected.

pool file record. A DASD record used for temporary data storage; it is given to programs when requested and returned when no longer needed by the programs.

pool file storage. See *pool file record*.

pool migration. To IPL a processor on an image that contains 32-way loosely coupled pool support while the data structure on file in DASD remains pool expansion (PXP) support format. The 32-way loosely coupled pool support data structure format is used in main processor storage (core). Contrast with *pool conversion*.

pool record. See *pool file record*.

pool record type. See *pool type*.

pool section. Storage space allocated for a particular pool type. The pool type may be allocated across several device types in which case the pool type will consist of several pool sections.

pool segment. Two noncontiguous areas in a pool section.

pool type. One of 10 groups of pool records: small long-term (SLT), small short-term (SST), small long-term duplicate (SDP), large long-term (LLT), large short-term (LST), large long-term duplicate (LDP), 4K long-term (4LT), 4K short-term (4ST), 4K long-term duplicate (4DP), and 4K long-term duplicate FARF6 (4D6).

POP. Post Office Protocol.

portability. The ability to move a subsystem to a different local or remote CPU site without impacting the operation of the subsystem being moved or any subsystem remaining at the original site.

Portable Operating System Interface for Computer Environments. Synonym for *POSIX*.

POSIX. Portable Operating System Interface for Computer Environments. An interface standard governed by the IEEE and based on UNIX. POSIX is not a product. Rather, it is an evolving family of standards describing a wide spectrum of operating system components ranging from C language and shell interfaces to system administration.

post-interrupt branch address. The standard field in system control blocks used to point to the system routines invoked when a work item reaches the top of a queue.

post-interrupt processing. (1) The housekeeping routine to set up further processing for an application after the control program has completed a service request. (2) When an IOB reaches the top of the ready list, post-interrupt processing removes the IOB address from the ready list and links the application to the input data by moving the core block address to the ECB, moves the output data core block address to the ECB, and returns the core block to the system pool. If all I/O is completed, control returns to the linked application.

post-interrupt routine. The housekeeping routine that performs further processing for an application after the control program has completed a service request.

Post Office Protocol (POP). In the Internet suite of protocols, an application protocol that allows a client to retrieve Internet mail from a server. POP transfers mail to the client, and optionally, removes the original copy from the server. See also *Internet Message Access Protocol (IMAP)* and *Simple Mail Transfer Protocol (SMTP)*.

pragma. See `#pragma`.

PRC. Prime CRAS.

precedence. The priority system used to determine the grouping of different types of operators with their operands.

precision. A measure of the ability to distinguish between nearly equal values. See single precision and double precision.

preemptive I/O. Synonym for *PIO*, which is the commonly used term. A TPF control program routine that manages I/O operations to a single device while suspending normal I/O (CIO) services for all other devices. This is used primarily by the system error routines. See also *common I/O (CIO)*.

prefix register. Positions 1–19 of the prefix register contain the value used to transfer from a real address to an absolute address when prefixing is applied.

prelinker. A program that prepares code with writable static data, long names, and dynamic link libraries (DLLs) for the linkage editor.

preprocessor. A program that examines the source program for preprocessor statements that are then executed, resulting in the alteration of the source program.

preprocessor statement. A statement that begins with the symbol # and is interpreted by the preprocessor.

primary directory. See *quick enter directory*.

primary expression. An identifier, an expression enclosed within parentheses, a function call, an array element specification, or a structure or union member specification.

primary image. The image that is used during a hard IPL.

primary key path. A structure that exists from the moment a collection is created and dictates the location of elements within that collection. See also *alternate key path*.

primary record. When DASD records are duplicated, the 2 copies of a data record are called the primary record and the duplicate record. When used in the context of TPF collection support (TPFCS), this term has a different meaning. See *TPFCS primary record*.

prime CRAS (PRC). The main system console designated to direct system processing.

prime module. The online module used for IPLs and system restarts. In a fully duplicated database, the disk pack containing the primary records. Contrast with *duplicate module*. See also *primary record* and *duplicate record*.

prime restart area. The part of the restart area used for online system restarts.

private code. An unnamed executable control section.

process. A function being performed or waiting to be performed. An executing function or one waiting to execute. A sequence of actions required to produce a desired result. (OSF) An entity receiving a portion of the processor's time for executing a program. (OSF) A unique, finite course of events defined by its purpose or by its effect, achieved under given conditions. Any operation or combination of operations on data. A running program, including the memory occupied, the open files, the environment, and other attributes specific to a running program. An address space and the single thread of control that executes within that address space and its required system resources. (POSIX.2)

process identifier (ID). A unique, positive number that represents a process. In the TPF system, the process ID is a unique identifier for a process.

process selection vector (PSV). An optional exit program that allows the user to extend TPF communication support for additional terminal types without modifying the user's application programs.

processing unit. A functional unit that consists of 1 or more processors and their internal storage.

processor. In a computer, a functional unit that interprets and processes instructions.

processor complex. A configuration that consists of all the machines required for operation.

processor keypoint status table (PKST). The communication control unit keypoint status record used for non-SNA communication.

processor lock. Used to permit system control programs, processing in 2 or more I-stream engines in a CPC, to modify shared system data.

processor resource ownership table (PROT). A table maintaining the ownership status of tape drives and system utilities in a loosely coupled complex.

processor shared cache. In logical record cache support, a cache that contains cache entries that are kept synchronized between all processors in a loosely coupled complex that are using the cache.

processor shared keypoint (PSK). The keypoint records that identify resources shared among processors. All processors in a loosely coupled complex share the same copy of these keypoint records.

processor shared resource. A resource that is shared among processors in a loosely coupled environment.

processor unique cache. In logical record cache support, a cache that contains cache entries that are used by only one processor in a loosely coupled complex.

processor unique keypoint (PUK). The keypoint records that identify resources dedicated to each processor. Each processor in a loosely coupled complex has its own unique copy of these keypoint records.

processor unique resource. A resource that cannot be shared by or switched among loosely coupled processors.

program. One or more files containing a set of instructions conforming to a particular programming language syntax.

program allocation table (PAT). A table built by the allocator program that provides an enter-by-name capability and program allocation attributes. The program allocation table allows dynamic determination of the address of the program being entered.

program allocator list (PAL). Deprecated term for *IBM program allocator list (IBMPAL)*.

program base identification (PBI). The ECB field that identifies the program base of a particular subsystem.

program collector. The data collection program that records the macro types, the programs called, and the residency of the called programs. The data is written to the data collection tape and processed by the offline data reduction programs.

program event recording (PER). A facility that provides assistance in debugging programs in a native TPF system environment by monitoring the following events: storage alteration, instruction fetching, and successful branching.

program ID field. A 4-byte field in the header of every data record that contains the name of the last program updating that record.

program nesting area (PNA). The fields used to hold chains of ENTER/BACK requests controlled by an ECB. Base address, return address (next sequential instruction), and program base ID are saved for each program issuing an ENTRC.

program test vehicle (PTV). An online utility that permits the user to test applications in progressive levels of system involvement.

programmed airlines reservation system (PARS). The application programs developed specifically for airline reservations.

prolog. The code that is processed each time a C language function is activated. Its purpose is to allocate a block of main storage to contain local variables for use during function processing.

property. An attribute with values that a user can dynamically associate with a persistent collection.

property service. A service for created persistent collections that lets a user dynamically associate named attributes (properties) with an already existing persistent collection. Once the properties are defined, their values and access modes can be obtained and changed.

PROT. Processor resource ownership table.

protocol. In open systems interconnection architecture, a set of semantic and syntactic rules that determine the behavior of entities on the same layer in performing communication functions.

pseudo directory. An accurate account of long-term pool records at some discrete instant of time.

pseudo module. For pool file, a DASD module on which pool addresses are allocated, but the module does not currently exist. This allows for adding devices to the database without the need to regenerate pool directories.

PSV. Process selection vector.

PSW. Program status word.

PTV. Program test vehicle.

PU type 2.1. PU type 2.1 attachment to an SNA network involves TPF appearing to a local NCP as a type 2.1 node with independent LUs. TPF is the primary side of the link and performs an exchange identification format 3 (XID3) to establish connection. TPF application LUs appear to reside in the local NCP, which requires a unique name for each TPF application per channel-attached NCP.

PU type 5. PU type 5 attachment to an SNA network involves TPF appearing to a local NCP as a type 5 subarea node with an SSCP and a CDRM component. TPF is a data host (that is, does not send ACTPU to the NCP) and performs exchange identification format 2 (XID2) to establish connection. TPF application LUs appear as CDRMs to a VTAM CMC.

PUK. Processor unique keypoint.

Q

QCE. Queue control element.

QDIO. Queued direct input/output (I/O).

queue. (1) An MQSeries object. Message queuing applications can put messages on, and get messages from, a queue. A queue is owned and maintained by a queue manager. Local queues can contain a list of messages waiting to be processed. Queues of other types cannot contain messages—they point to other queues or can be used as models for dynamic queues. (2) A first-in-first-out (FIFO), or ordered, collection of mail items.

queue control element (QCE). A user-specified control block that is used by the queue manager in SNA communications to keep queue message management information.

queue manager. (1) Provides a basic set of tools for performing SNA message queuing functions. (2) A system program that provides queuing services to applications. It provides an application programming interface so that programs can access messages on the queues that the queue manager owns.

queued direct input/output (QDIO). A link layer in the TPF system that is used to communicate with the Open Systems Adapter (OSA)-Express card.

quick enter directory. A table of addresses used by the quick enter linkage routine to branch to C library functions. Synonymous with *primary directory*.

quick enter linkage. A TPF method providing fast linkage to C library functions by using a function number provided by the compiler to index into the quick enter directory and branch to the function.

quota. In TPF Internet mail server support, the maximum amount of storage allowed for one or more mailboxes. A quota is applied to a quota root. See also *quota root*.

quota root. In TPF Internet mail server support, the point in a mailbox naming hierarchy where a quota, or storage limit, is set. A quota root is created when you enter the ZMAIL SETQUOTA command. See also *quota*.

R

rapid transport protocol (RTP) connection. A connection between two high-performance routing (HPR) nodes that may traverse one or more intermediate HPR nodes and links. The connection endpoints provide error recovery and adaptive rate-based flow control for the connection traffic, and nondisruptive switching of the underlying physical path if there is a route outage. The intermediate HPR nodes minimize their routing overhead using automatic network routing (ANR) protocols, which rely on header information to permit effective source routing and prioritized transmission along the RTP connection.

rapid transport protocol control block (RTPCB) table. A core-resident table that contains an entry for each rapid transport protocol (RTP) connection in the TPF system. Each entry contains all the relevant information about that RTP connection, such as the transport connection identifiers (TCIDs) and the forward automatic network routing (FANR) field.

ratio dispensing. A technique to dispense addresses from the various pool sections (for a particular pool record type) based on a ratio factor.

ratio factor. Specifies the number of addresses to dispense from a pool section before selecting another pool section from which to dispense addresses.

RBA. Relative byte address.

RC. Record cache.

RCAT. Routing control application table.

RCB. Routing control block.

RCC. Record code check.

RCPL. Routing control parameter list.

RCS. Record cache subsystem.

RCS I/O queue thresholding. The process of monitoring the overall queue depth of a 3990 record cache controller while it is processing in a degraded state. The degraded state is defined as any functional capability being inhibited at either the subsystem or attached device level.

RCS I/O queue threshold value. A number that represents the maximum number of queued I/O requests tolerated by a DASD device attached to a 3990 caching control unit operating in a degraded state.

RCS subsystem ID. A number identifying the physical components of a logical DASD subsystem in a 3990 storage control configuration.

RDLR. Root dynamic load record.

RDW. Record descriptor word.

ReadWrite cursor. A cursor that puts an exclusive lock on a collection for read and write operations.

ready list. A high-priority CPU loop list used to return to an entry already in progress when system activity is completed. It is interrogated after the cross list processing is completed.

real address. An address before prefixing, such as found in the instruction address portion of the channel status word (CSW). If translation is off, the logical address is the real address. See also *absolute address*, *logical address*, *physical address*, and *virtual address*.

real group ID. The attribute of a process that, at the time of process creation, identifies the group of the user who created the process. This value is subject to change during the process lifetime. (POSIX.1)

real-time tapes. Write-only tapes that may be written to by any entry at any time. They are used to collect TPF system data that may be analyzed by offline maintenance and reporting procedures. By convention, the first 2 characters of the 3-character tape name are RT.

real-time trace (RTT). (1) A system utility that counts or traces the use of specific macros and related system activity; activated by commands issued from CRAS terminals. (2) The facility that monitors and records system activity when activated through a command. RTT can provide a historical record of input messages, I/O and macro activity, and output messages.

real user ID. The attribute of a process that, at the time of process creation, identifies the user who created the process. This value is subject to change during the process lifetime. (POSIX.1)

receive-only (RO) CRAS. The device that records all TPF system output to the system console.

receiver channel. In message queuing, a channel that responds to a sender channel, takes messages from a communication link, and puts them on a local queue.

reclaim function. The E-type loader function that rebuilds the E-type loader database to recover any E-type loader fixed file records that have been lost.

reconstruction. A process that provides a way to have a damaged persistent collection at least partially restored automatically. The process of reconstruction involves rebuilding a control record of the collection and the chains that the collection anchors.

record cache (RC). The name given to the TPF system support for the 3880 caching control unit with the record cache RPQ.

record cache subsystem (RCS). Name given to the TPF system support for the 3990 caching control unit with the record cache RPQ.

record code. A field in record headers that can be used to ensure the correct record was retrieved for processing.

record code check (RCC). A means of accomplishing an additional data integrity check on subelements of a record by using the 1-record code field in the record header.

record descriptor word (RDW). The first 4 bytes of a variable block length (format-VB) logical record.

record duplication. In the TPF system, data records (on DASD) can be duplicated, which means that there are 2 copies of a data record on the database. The copies are referred to as the primary record and the backup record (sometimes called the *duplicate record* or *dupe*).

record header. The standard header in data records that contains the record ID, record code, control data, program name, and chaining address fields.

record hold. The protocol and facility that secures data records with an exclusive hold. It must be used by all programs when updating file records to ensure the proper sequencing of updates and data integrity.

record ID. Two bytes that identify the function or type of data a given record contains. By convention, it appears in the first 2 bytes of the record header. Also called a RIAT ID.

record ID attribute table (RIAT). A table used to define the characteristics of fixed and pool file system records in terms of size, longevity, duplication status, device type, exception recording or logging status, user exits, and VFA status. RIAT also defines restore status, RCS caching status, and locking status.

record sharing table (RST). A system table that links the VFA hash tables to the VFA buffers.

record type. A group of logically related, predefined records residing in the fixed file area.

record type indicator. A hexadecimal value identifying a record type in the fixed file area. Each record type indicator is assigned a symbolic name, the first character of which is #, used by programs when accessing records of that type.

record type name. The symbolic name assigned to a record type.

record type uniqueness group. A group of records that have the same record type name and user uniqueness.

recoup. The utility that determines if pool records are valid or not valid (lost), recovers records that are not valid, and produces a report that indicates the E-type programs that may have lost the pool references.

recoup index. A system collection that describes the location of persistent identifiers (PIDs) and file addresses embedded in all collections associated with that recoup index.

recovery log. A log that holds the data that is necessary to recover resources following a system failure without compromising the integrity of the database. The recovery log is written to DASD.

redirect. Diverting data from a process to a file or device to which it would not normally go.

register. A storage area commonly associated with fast-access storage, capable of storing a specified amount of data such as a bit or an address.

regular expression. (1) A mechanism to select specific strings from a set of character strings. (POSIX.2) (2) A set of characters, metacharacters, and operators that define a string or group of strings in a search pattern. (OSF) (3) A string containing wildcard characters and operations that define a set of one or more possible strings. (OSF) (4) A more technical term for *pattern*. (5) See also *wildcard character*.

reinclude function. An E-type loader function that adds 1 or more programs to a specified loadset. Only programs that were previously excluded from the loadset can be reincluded in the loadset.

relative byte address (RBA). In TPF collection support (TPFCS), the 1-based (the first element in the collection has an index of 1) displacement of a byte from the beginning of a binary large object (BLOB) collection.

relative path name. The name of a directory or file expressed as a sequence of directories followed by a file name, beginning from the current directory. Relative path names do not begin with a slash (/) but are relative to the current directory. A path name that does not begin with a slash. The predecessor of the first file name in the path name is taken to be the current working directory of the process. (POSIX.1) See also *absolute path name*, *path name*.

relative record number (RRN). A number that specifies the location of a record in relation to the beginning of a database file member or subfile. In TPF collection support (TPFCS), it is the number returned by the `TO2_getNumberOfRecords` C function. A number that describes the order in which a record occurs in the abstract flat file representation of the extended-resident collection data and associated control information.

remote procedure call (RPC). A process that allows applications on one workstation to call functions that reside on and are run by another workstation.

remote unit of work. A method of accessing distributed relational data in which users or applications can, in a single unit of work, read and update 1 system using multiple structured query language (SQL) statements.

reply-to queue. The name of a queue to which the program that issued an MQPUT call wants a reply message or report message sent.

REQTAIL. A private protocol RU sent by a TPF control point LU (CLU) to the VTAM logon manager to request a different route for starting a session.

Request for Comments (RFC). In Internet communications, the document series that describes a part of the Internet suite of protocols and related experiments. All Internet standards are documented as RFCs.

residency. A characteristic of TPF collection support (TPFCS) that determines what the layout of the data is in the internal objects that comprise a collection.

resource identifier (RID). The ordinal number representing an addressable unit in the ACF/SNA network.

resource manager (RM). The SNA component that provides the services required to establish, manage, and deactivate conversations on an already established LU-LU session. In TPF transaction services, there are two resource managers that work with the transaction manager to identify and harden resources used by the application in a commit scope. TPF DASD and pool support are the resource managers supplied by IBM for TPF transaction services.

resource name hash control table (RNHCT). A record that contains pointers to the other resource name hash (RNH) tables, the resource vector table (RVT) available list, and the RVT termination list.

resource name hash entry table (RNHET). A table that contains pointers to the resource vector table (RVT). It also contains pointers that maintain the RNHET synonym chain, RVT available list, and RVT termination list.

resource name hash prime table (RNHPT). A table that contains entries referred to as RNHPT hash buckets. Each RNHPT hash bucket points to the first entry on its RNHET synonym chain and contains a count of the number of RNHET entries on that RNHET synonym chain.

resource name hash sort table (RNHST). A table that is used to sort the RNHET entries that are placed on the resource vector table (RVT) termination list.

resource name hash (RNH) tables. Tables used to access the resource vector table (RVT). These tables include the resource name hash control table (RNHCT), resource name hash prime table (RNHPT), resource name hash entry table (RNHET), and resource name hash sort table (RNHST).

resource vector table (RVT). A directory of all network addressable units in the ACF/SNA portion of the system network.

restart. The facility started to restore the system to operational state after an outage. Restart involves IPL, initialization, and the restart scheduler.

restart scheduler. A program containing a sequence of ENTERs to ECB-controlled system programs that build system tables for resource management and provide services required for system processing.

restore. A program used to regain, update, and restore disk files from the previously captured records on tape.

RES0. The common name for an application called airlines reservations; often used as an application name in the RCAT.

retentive (RET) attribute. A user-specified caching attribute that allows a data record to be written to cache and to the DASD surface. Access to data with this attribute has performance benefits for read operations.

RFC. Request for Comments.

RIAT. Record ID attribute table.

RID. Resource identifier.

RM. Resource manager.

RNHCT. Resource name hash control table.

RNHET. Resource name hash entry table.

RNHET synonym chain. A linked list of the RNHET entries that are assigned to a particular RNHPT hash bucket. One RNHET synonym chain exists for each RNHPT hash bucket.

RNHPT. Resource name hash prime table.

RNHPT hash bucket. An entry in the RNHPT table.

RNHST. Resource name hash sort table.

RNH tables. Resource name hash tables.

RO CRAS. Receive-only CRAS.

rollback. To return to a previous state. In TPF transaction services, the file changes that were made inside a commit scope when a transaction fails are not applied. The database remains consistent with its state before the commit scope was opened.

root directory. The first directory in the file system hierarchy. A slash (/) at the beginning of a path name represents the root directory.

root dynamic load record (RDLR). The record that is used to keep status of the dynamic load of resources in NORM state.

root scope. In TPF transaction services, the first, or highest-level, commit scope activated by an application.

router. In TCP/IP support, a device that connects networks at the network layer level and routes packets between them. Routers have the ability to select the best transmission paths and optimum packet sizes.

Route Selection control vector (RSCV). A control vector that describes a route in an Advanced Peer-to-Peer Networking (APPN) network. The RSCV consists of an ordered sequence of control vectors that identify the transmission groups (TGs) and nodes that make up the path from an origin node to a destination node.

routing control application table (RCAT). The system table that contains the identification information required by the control program to start a particular application for message processing.

routing control block (RCB). A fixed file terminal control block, associated with a particular terminal, used to pass system and application information.

routing control parameter list (RCPL). A data area, associated with each input or output message, that identifies the origin, destination, and characteristics of the message.

RPC. Remote procedure call.

RRN. Relative record number.

RSCV. Route Selection control vector.

RST. Record sharing table.

RTA. A symbolic tape name, reserved to TPF systems, denoting the primary real-time tape.

RTC. A symbolic tape name, reserved to TPF systems, denoting the tape produced by the data collection programs and analyzed by the data reduction programs.

RTL. A symbolic tape name, reserved to TPF systems, denoting the real-time tape used for logging system data.

RTP connection. Rapid transport protocol connection.

RTPCB table. Rapid transport protocol control block table.

RTT. Real-time trace.

RU. An SNA request or response unit.

run. To cause a program, utility, or other machine function to be performed.

RVT. Resource vector table.

RVT available list. A linked list that contains the RNHET entries for all of the available (or spare) resource vector table (RVT) entries in the LU section of the RVT.

RVT termination list. A linked list that contains the RNHET entries for all of the dynamic LU resources that no longer have sessions established.

S

SA. Session address.

SAA. Systems Application Architecture.

SABRETALK. A high-level program language used to code ECB-controlled programs. Additional main storage must be attached to the ECB when SABRETALK segments are processed.

SAL. System allocator table.

SALO. System allocator.

SAT. Subarea address table.

SAX. Simple API for XML.

SBCS. Single-byte character set.

SCB. Session control block.

SCK. System communication keypoint records.

scalar. An arithmetic object, or a pointer to an object of any type.

schema. (1) The set of statements, expressed in data definition language, that completely describe the structure of a database. (2) Statements that define the tags used in an XML document. A schema defines the structure with elements and attributes, and it establishes constraints for how each element and attribute may be used within the particular class of documents. A schema can be either a DTD or an XML Schema.

1. The DTD is one method of defining the acceptable tags for an XML document. It has a strict syntax and can be included internally in the XML document or externally through a reference in the XML document. A DTD is a type of schema, but is not written in XML language. DTDs are supported on TPF through the XML4C parser.
2. The XML Schema is actually written using the XML language and was developed by the World Wide Web Consortium (W3C). It is more inclusive and more detailed than a DTD for the following reasons:
   - It can be parsed as an XML document.
   - It can specify what type of data can be in a particular element (for example, integer versus character data).
   - It allows you to specify element that must be used the same throughout the XML document as well as elements that have special meanings in different contexts.

   For more information about the XML Schema, go to http://www.w3.org/.

scope. The level on which a function or variable is “visible” or accessible. File scope means that the function or variable is visible only within the source file in which it is defined. Block scope means that the function or variable is only visible within the block (defined by curly braces { }).

scratch pad area (SPA). The terminal control block associated with each SNA network addressable unit defined in the system. Applications use SPA records to pass information among the entries of a transaction.

SCT. SWB control table.

SDA. Symbolic device address.

SDAT. Symbolic device address table.

SDMF. Standard data/message file.

secondary directory. A table of addresses used to branch to secondary library routines.

secondary library routine. A C library function coded in assembler language that resides in its own control program CSECT and does not follow the conventions required for the TPF system E-type programs.

secondary linkage. A TPF method that provides linkage to C library functions written in assembler language and installed as control program CSECTs.

segment. Real-time code or offline code that is not part of the control program (CP).

segment and page table area (SPTA). The control table for the ECB virtual memory (EVM). It is allocated by CCCTIN. The address of each ECB's SPTA is saved in the Key F section of the ECB. Synonym for *page and segment table area*.

selected equate macro. An assembler macro, such as REGEQU, that provides equate support.

selective activation. The E-type loader process of restricting the use of the programs in a loadset to specific ECBs.

selective file dump (SFD). A debugging tool that writes the contents of specified file records to the real-time tape.

selective file dump and trace (SFDT). Two debugging tools (selective file dump [SFD]) and (selective file trace [SFT]) designed to help users locate file-related errors during online operations or while testing under the control of the program test vehicle (PTV). Both functions are activated by commands.

selective file trace (SFT). A debugging tool that monitors the updating of selected file addresses during a specified file trace period.

selectively duplicated file. See *partially duplicated file*.

selective memory dump table (SMDT). A table that maps keywords (representing different areas of main storage) to addresses. It is used by the dump override table (DOT) for system error processing.

self-discovery. In SNA, the process that restarts adjacent link stations (ALSs), NCPs, and CTCs that were previously active.

SENDB postprocessor. A program used for multisegment message transmission over a binary synchronous link.

sender channel. In message queuing, a channel that initiates transfers, removes messages from a transmission queue, and moves them over a communication link to a receiver or requester channel.

SENDL postprocessor. See *long message transmitter (LMT)*.

sequential number wrap value. In MQSeries, a method of ensuring that both ends of a communication link reset their current message sequence numbers at the same time. Transmitting messages with a sequence number ensures that the receiving channel can reestablish the message sequence when storing the messages.

sequence collection. A type of collection with ordered, nonunique elements that are not accessible by a key. Elements are ordered by arrival sequence, but elements can be inserted or deleted before existing elements.

serialize. To change from parallel-by-byte to serial-by-bit.

server. In TCP/IP, a program or process that provides services for a program at another site. See also *client*.

SESINIT. A private SNA protocol RU sent by the VTAM logon manager to request session initiation across a particular link.

session. A logical connection between two application programs that allows them to communicate.

session address (SA). In high-performance routing (HPR) support, a unique identifier that flows in the FID5 transmission header (TH) of a network layer packet (NLP). The SA is used to identify a particular LU-LU session over a rapid transport protocol (RTP) connection.

session control block (SCB). An area in main storage used to control sessions for TPF/APPC support.

session index table (SIT). A table that maps the LU-LU session identifier (SID) to the SLU resource identifier (RID) when the TPF system communicates as a PU 2.1.

session manager (SM). The SNA component responsible for insuring that the underlying LU-LU session needed for a conversation is available.

set collection. A type of collection with unordered, unique elements that are not accessible by a key.

SFD. Selective file dump.

SFDT. Selective file dump and trace.

SFT. Selective file trace.

shadow. A TPF collection support (TPFCS) option that allows you to specify that a collection will maintain an extra copy of that collection. When using the shadow option with normal TPF duplicate files of the collection, there will actually be four copies of the data.

shared library indicator directory (SLID). A table that consists of 1-byte flags for each of the library load modules.

shared library names table (SLNT). A table that contains the 4-character names of each of the library load modules.

shared memory. An area of memory that allows two or more processes to share a given region of memory.

shared record. A fixed file record that is shared by all subsystem users, processors, or I-streams. Contrast with *unique record*.

shared resources. In a loosely coupled complex, resources that can be used concurrently by I-streams, processors, subsystems, or subsystem users. Contrast with *unique resources*.

short load. A software load where only a subset of a full load is loaded. Synonymous with *partial load*.

short request timer. A timer used by the TPF system to detect failures in a high-performance routing (HPR) network.

short-term pool records. File pool records that are usually maintained only for the time required to complete a transaction.

shutdown level. A predefined value that is used to control access to a specified system resource. When the availability of the resource reaches the shutdown level, operation of the system can be inhibited until availability increases.

SIB. SNA I/O buffers.

SICF. System interprocessor communication facility. See *interprocessor communications*.

side information table. A table used by TPF/APPC mapped conversations that contains the currently defined set of symbolic destination names and the corresponding transaction program names, LU names, and node names.

signal. A simple method of communication between two processes. One process can inform the other process when an event occurs using signals.

signaling. A feature that allows the operating system to notify a program when an expected message arrives on a queue.

Simple API for XML (SAX). A specification that allows an application to interact with XML data as a series of events.

Simple Mail Transfer Protocol (SMTP). In the Internet suite of protocols, an application protocol for sending mail to users in the Internet environment. SMTP specifies the mail exchange sequences and message format. It assumes that the Transmission Control Protocol (TCP) is the underlying protocol. See also *Internet Message Access Protocol (IMAP)* and *Post Office Protocol (POP)*.

single-byte character set (SBCS). A set of characters in which each character is represented by one byte.

single inheritance. A design characteristic of an object-oriented database in which each class inherits directly from only one immediate superclass.

SIP. System initialization program.

SIP skeleton and internal macro. A macro or skeleton (such as SPPBLD or SPCOMP) that is used by the system initialization program (SIP).

SIP stage I. The first part of system initialization during which macros defined by the user are assembled, analyzed, and expanded to produce an MVS job stream used by SIP stage II.

SIP stage II. The second phase of system initialization during which the MVS job stream generated by SIP stage I is processed. Stage II generates the modules and libraries that comprise the user-specified system.

SIPC. System interprocessor communications. See *interprocessor communications*.

SIT. Session index table.

slash. The literal character /. This character is also known as a solidus in ISO 8859-1 (B34) (POSIX.1) The / character. UNIX and POSIX-conforming systems use the slash (/) to separate the components of a path name. A slash (/) at the beginning of a path name represents the root directory.

SLC. Synchronous link control.

SLID. Shared library indicator directory.

SLNT. Shared library names table.

SLST. Symbolic line status table.

slow queue. A queue in which the rate of service is slower than the rate that messages are added to the queue. See also *sweep*.

SM. Session manager.

SMDT. Selective memory dump table.

SMP. System message processor.

SMTP. Simple Mail Transfer Protocol.

SNA. Systems Network Architecture.

SNA channel-to-channel (CTC). A facility that provides a high-speed link to local and remote VTAM and TPF systems.

SNA command processing. The processing method where SNA commands are used to communicate among SNA network addressable units in order to control network resources.

SNA CTC. SNA channel-to-channel.

SNA CTC priming. A process that initiates exchange identification (XID) processing over SNA CTC links with an active partner.

SNA I/O buffers (SIB). Storage areas that are assigned for NCP read operations and CTC read and write operations.

SNA message recovery. An optional feature that uses a system recovery table to track input and output messages to insure successful delivery or recovery options.

SNA node. A junction point in a network that contains a physical unit. A node may contain other network addressable units, path control components, and data link control units.

SNCT. Station name conversion table.

SOBT. Static override bitmap table.

socket. An endpoint for communication between processes or applications.

socket address. An address used by socket applications that contains the address family and address associated with a socket.

socket API. Standard application programming interface functions that provide a standard interface to the transport and internet layers of TCP/IP.

socket block table. A table that contains information about sockets that use TCP/IP native stack support.

socket descriptor. The integer value returned to a socket application on a `socket`, `accept`, or `activate_on_accept` function call. The socket descriptor is used as a parameter for subsequent socket API function calls. See also *file descriptor*.

socket sweeper program. A program that cleans up sockets that have not been used for a specified period of time.

socket thread. In a TCP/IP system, a process that shares a socket descriptor with other ECB-controlled segments.

socks server. A circuit-level gateway that provides a secure one-way connection through a firewall to server applications in a nonsecure network.

Note: *Socks* is an abbreviation for *sockets*.

soft error. An intermittent error condition that disappears when the operation is retried. Contrast with *hard error*.

software IPL. The recovery process to restore the system to an operational state after the occurrence of a catastrophic software error. Contrast with *hard IPL*.

SOM. Start-of-message.

SON. System ordinal number.

SON device. A direct access storage device (DASD).

SON format. A system ordinal number format for the file address reference field supported in earlier TPF versions. FARF3, FARF4, FARF5, and FARF6 format addresses are currently supported.

sorted bag collection. A type of collection with ordered, nonunique elements that are not accessible by a key. Elements are ordered in ascending collating sequence by the nonunique sort field.

sorted set collection. A type of collection with elements sorted by a user-specified unique sort field.

source program. A set of instructions written in a programming language that must be translated to machine language before the program can be run.

SPA. Scratch pad area.

spare RVT entry. An entry in the resource vector table that is not assigned to a resource.

special file. A file that provides an interface to an input/output (I/O) device (such as a line printer), a logical subdevice (such as a large section of a disk drive), or a pseudo-device (such as the null file, `/dev/null`).

spin lock. A mechanism to cause a process (program), processing on behalf of an entry, to wait until another entry has modified shared system data.

SPM. Structured programming macro.

SPTA. Segment and page table area.

SQL. Structured query language.

SRT. System recovery table.

SS. Subsystem.

SSCP. System services control point.

SSID. Subsystem ID.

SSST. Subsystem status table.

SSU. Subsystem user.

SSUID. Subsystem user ID.

stack block. A storage block containing one or more stack frames.

stack exception routine. A routine that manages the stack blocks, including initializing the first stack frame in the first block that contains the storage used by the TPF system and C library functions. The routine is called by a prolog whenever there is no stack block chain, or when another block is required.

stack frame. The storage reserved by the compiler to hold the C automatic variables, parameter lists, and register save area for an individual function.

stage. The state of the file addresses in the TPF system indicating which file address formats are supported by the FACE table; currently, either FARF3/FARF4 or FARF4/FARF5.

staged NCB directory records. The node control block (NCB) directory records that are used by the NCB reorganization function to change the number of NCB directory records in the TPF system.

standard data/message file (SDMF). A storage facility for canned (prepared) messages and other data that may be called by any program.

standard error (`stderr`). The place where many programs place error messages; for the TPF file system, this is the `/dev/null` special file unless redirected. An output stream usually intended to be used for diagnostic messages. (POSIX.2) In the TPF file system, UNIX, and POSIX, `stderr` is associated with file descriptor 2.

standard input (`stdin`). The primary source of data going into a program. For the TPF file system, this is the `/dev/tpf.imsg` special file unless redirected. The conventional name for file descriptor 0.

standard output (`stdout`). The primary destination of data coming from a program. For the TPF file system, this is the `/dev/null` special file unless redirected. The conventional name for file descriptor 1.

standby tapes. Tapes that are available to the system for forced or voluntary tape switch. Standby tapes must have the same symbolic name as the tapes that they supplement.

start-of-message (SOM). The output message character that directs terminal hardware to a location on specific kinds of terminals where the message should be displayed.

state change interruption. A combination of bits in the status byte of a DASD I/O operation that occurs for a change in the 3990 record cache subsystem or device. The status bit combination includes attention, device end, and unit exception. This interruption is sent to all hosts to inform them of the state change.

statement. An instruction that ends with the ; (semicolon) character or several instructions that are surrounded by the characters { and }.

static block. A storage block containing one or more static frames.

static exception routine. A routine that manages static blocks. This routine is called by the C compiler-generated function prolog whenever static variables are declared for the function.

static frame. The storage reserved by the C compiler to hold all of the static variables declared in a given compile unit (TPF E-type program segment).

static function. A function called only by other functions residing in the same C source module. Synonymous with *internal function*.

static override bitmap table (SOBT). A table that associates system error numbers with keywords representing storage areas to include in dumps. Entries in the SOBT are generated by the IDOTB macro.

static virtual IP address. A virtual Internet Protocol address (VIPA) that cannot be moved between processors.

station name conversion table (SNCT). The system table that associates every bisynchronous station address with a 4-character symbolic name and provides pointers to the application name table.

STC. System test compiler.

stderr. Standard error.

stdin. Standard input.

stdout. Standard output.

stepping mode. When a stepping signal is synchronized to a Sysplex Timer (STR) oscillator signal, the configuration is in STR stepping mode. Otherwise, the configuration is in local stepping mode.

stepping port. The port of a CPC that receives the Sysplex Timer (STR) oscillator signal. Used to synchronize the stepping signal.

stepping signal. The stepping signal is used to increment all TOD clocks and to decrement all CPU timers in a configuration. The signal may be synchronized to a Sysplex Timer (STR) oscillator signal received from either of the 2 CPC ports, or synchronized to a local or remote oscillator.

storage protection. Three hardware protection facilities are provided to protect the contents of main storage from destruction or misuse by programs that contain errors or are unauthorized: key-controlled protection, page protection, and low-address protection. The protection facilities are applied independently. Access to main storage is only permitted when none of the facilities prohibit the access. See *key-controlled protection*, *low-address protection*, and *page protection*.

STR. Sysplex Timer.

stream. A continuous sequence of data elements being transmitted, or intended for transmission, in character or binary-digit form, using a defined format.

string constant. Zero or more characters enclosed in double quotation marks.

structure. (1) In coupling facility (CF) support, a construct used by the TPF system to map and manage storage on a CF. See *coupling facility (CF) list structure*. (2) A variable that contains an ordered group of data objects. Unlike an array, the data objects within a structure can have varied data types.

structured programming macro (SPM). A macro that is used to add structured programming verbs to existing assembler language.

structure object. An object that TPF collection support (TPFCS) uses to sort or retrieve the data of a given collection. A structure object falls into either of two categories: compact structure or extended structure. See also *compact structure* and *extended structure*.

structure record. The pool record that contains the structure object of a collection.

structure tag. The identifier that names a structure data type.

structured query language (SQL). A programming language used to define and access relational data and control access to relational database resources.

STSA. System temporary save area.

STTS. System test terminal simulation.

STV. System test vehicle.

suballocation. The carving of a 4K frame into 1 or more storage blocks.

subarea address table (SAT). The system table that contains the path information required to reach any subarea in an ACF/SNA network.

subclass. A specific class of a more generic class.

subdirectory. A directory contained within another directory.

submailbox. In mailbox naming hierarchy, a lower-level mailbox. For example, `user1.projects.work.mail` and `user1.projects.fun.swingset` are both submailboxes of the mailbox `user1.projects`.

subscript. One or more expressions, each enclosed in brackets, that follow an array name. A subscript references an element in an array.

subsystem (SS). An application or group of applications sharing a database. See also *multiple database function (MDBF)*.

subsystem ID (SSID). The field that identifies a subsystem in an MDBF or RCS environment. The SSID may be used to access information pertaining to that subsystem. An identifier used by RCS support to uniquely identify each caching subsystem.

subsystem status table (SSST). A record cache subsystem control table used to represent the active 3990 caching control unit complex and its attached devices.

subsystem user (SSU). A unique subset of a subsystem database. A collection of subsystem users that share a database constitutes a subsystem.

subsystem user ID (SSUID). The field that identifies a subsystem user in a subsystem. The SSUID may be used to access information pertaining to that subsystem user.

superclass. A generic class of a more specific class.

superuser. A system user who operates without restrictions. A superuser has the special rights and privileges needed to perform administrative tasks.

superuser authority. The unrestricted ability to access and modify any part of the operating system, usually associated with the user who manages the system.

suspend list. A secondary CPU loop list which contains entries that were suspended after exceeding a system resource threshold. The suspend list is used for the LODIC macro when the availability of a particular block type has fallen below a defined shutdown level, or the TMSLC macro when the entry has run for a defined time limit.

SVA. System virtual address.

SVAT. System virtual address table.

SVM. System virtual memory.

SWB. System work block.

SWB control table (SCT). A table that keeps track of which system work blocks (SWBs) are in use and the address of the routine that obtained and released the blocks.

sweep. The process of relocating messages on a slowly serviced queue from main storage memory to DASD. See also *slow queue*.

swing. The process of moving all current messages from one transmission queue to another specified transmission queue and forcing all future messages intended for the original queue to be placed on the new destination queue.

switch expression. The controlling expression of a `switch` statement.

switchable resources. In a loosely coupled complex, resources that can be used by only 1 processor at a time. Examples of switchable resources are unit record devices, tape devices, system utilities, and communication control units.

symbolic address. The address of a record in file storage that consists of a record type and ordinal number.

symbolic device address (SDA). A logical device address. For device types 37x5 and SNA CTC, the address must be in the X'0001' to X'7FFF' range. For DASD, the symbolic device address is made up of a logical channel/control unit/device address with more restrictions. The mapping of symbolic device addresses to real device addresses is done when the input/output configuration program (IOCP) is generated.

symbolic device address table (SDAT). A table created by SIP from the IODEV macros and copied into the SNA keypoint containing 37x5 NCP and channel-to-channel (CTC) symbolic device addresses.

symbolic line status table (SLST). The table used by the control program to control and maintain status of the communication network. It is the primary control table for the non-SNA communication network.

symbolic link. A type of file that contains the path name of, and acts as a pointer to, another file or directory.

symbolic module number. A field in the file status table that points to a particular DASD device.

synchronous link control (SLC). A line control procedure that uses full-duplex voice-grade lines, and transmits at 2400–9600 bits per second.

synchronous messaging. A method of communication between programs in which programs place messages on message queues. With synchronous messaging, the sending program waits for a reply to its message before resuming its own processing. Contrast with *asynchronous messaging.*

syncpoint. An intermediate or end point during the processing of a transaction at which the protected resources of a transaction are consistent. At a syncpoint, changes to the resources can safely be committed or they can be backed out to the previous syncpoint.

syntax. The rules for the construction of a command or a program.

SYSEQ tag. A system equate that provides a symbolic name for a system parameter or commonly used constant.

syslog daemon. A server process that provides a message logging facility for application and system processes.

Sysplex Timer (STR). An IBM 9037 unit that synchronizes the time-of-day (TOD) clocks in as many as 16 processors or processor sides. A common time source for clock synchronization across central processing complexes (CPCs).

system. The computer and its associated devices and programs.

system allocator (SALO). The program that generates the PAT and SAL tables from the program allocator list (IBMPAL).

system allocator table (SAL). One of the tables output by the system allocator (SALO). It is used by the TPF linkage editor (LEDT) to resolve external references.

system collector. The data collection program that records system activity data (core block availability, ECBs in use, entries on CPU queues, CPU clocks, input messages by source) at timed intervals.

system communication keypoint records (SCK). The main storage resident records used to define the non-SNA portion of the communication network.

system contraction. The online deletion of processors from a loosely coupled complex.

system expansion. The online addition of processors to a loosely coupled complex.

system heap. In a TPF system, a virtual address space located at the end of system virtual memory, which is only backed by system frames when requested. The storage is not attached to any ECB, but is accessible by all ECBs because it is not mapped as ECB virtual memory (EVM) unique storage.

system ID. A three-part name identifying a particular TPF CPU. The system ID consists of an enterprise name, a TPF complex name, and a CPU ID.

system initialization program (SIP). The two-phase process that generates a TPF system according to user requirements. Hardware, software, and communications configurations are defined according to the SIP macro parameters selected by the user. The macros are passed to the assembler and an MVS JCL job stream is produced (SIP stage I). is produced. When this job stream is processed (SIP stage II), it produces the initial TPF system.

system interprocessor communication facility (SICF) or (SIPC). See *interprocessor communications*.

system loader. See *auxiliary loader* or *E-type loader*.

system macros. Macros that are restricted to system use. There are three types of system macros: those that require authorization, those that do not require authorization, and those that are restricted to the control program (CP).

system message processor (SMP). The system ECB-controlled programs that process commands.

system ordinal number (SON). Deprecated term for *database ordinal number (DBON)*. In earlier TPF system releases, system ordinal number was used to identify the logical/relative record numbers across the entire database. The term is no longer used.

system performance measurement. Online data collection programs and offline data reduction programs that provide statistics with which the user can analyze system performance.

system program save area. The ECB area used to save the current contents of general registers when an application program issues a control program macro.

system recovery table (SRT). A table used to reintroduce lost or timed-out input messages and retransmit lost or timed-out output messages.

system restart. See *restart*.

Systems Application Architecture (SAA). A set of IBM software interfaces, conventions, and protocols that provide a foundation for designing and developing consistent applications across systems.

system services control point (SSCP). A focal point in the SNA network that manages the network, coordinates operator and problem determination requests, and provides general support for users of the network. Multiple SSCPs divide the network into domains of control. Each SSCP controls the logical units and physical units in its domain.

Systems Network Architecture (SNA). The description of the logical structure, formats, protocols, and operational sequences for transmitting information units through, and controlling the configuration and operation of, networks.

system state. The condition of the operating system in terms of the level of functions that can be performed. Beginning with the lowest or least active system state, the 5 states are: 1052, UTIL (utility), CRAS, MESW (message switching), and NORM.

system state change. The function called by a command or by an internal request that makes a transition among the 5 system states.

system temporary save area. The control block that provides an extended save area for the TPF system.

system test. The PTV testing procedure where all programs undergo multithread testing in an environment that simulates the actual system.

system test compiler (STC). The offline program that creates tapes to be used for test units for PTV or pilot tapes for the data loader.

system test terminal simulation (STTS). A package of simulator programs that format and print input and output messages as the messages would appear on specified terminals.

system test vehicle (STV). A facility under PTV used to introduce input messages during system testing.

system virtual address (SVA). A location inside of system virtual memory for an I-stream.

system virtual address table (SVAT). The table in the ECB that is used to keep track of the system virtual addresses of all pages mapped in the ECB virtual memory.

system virtual memory (SVM). Virtual memory, used only by control program code, that maps all of the memory in each of the ECB address spaces, plus some memory that is not available at all in the ECB address spaces. There is 1 system virtual memory per I-stream in a tightly coupled complex.

system work block (SWB). A storage block provided by the system for system use; cannot be used as a TPF block. Contrast with *input/output block (IOB)*.

T

tag name. A C identifier for a global field or record, that corresponds to the assembler label of the same name. It is defined as a unique 32-bit unsigned integer. The bit settings that make up the integer reflect attributes of the global field or record.

tape device assignment. The association of a tape device with a tape group name and subsystem user.

tape device assignment table (TDAT). A table used to associate tape devices with tape group names.

tape group. A set of associations between tape labels (tape names) and tape devices. Each tape group is identified by a tape group name.

tape group definition table (TGDT). A processor-unique table used during automatic tape mounting that contains a list of tape group names.

tape group name. A processor-unique tape group identifier. The names ALL and NONE are reserved group names that cannot be deleted.

tape label assignment. The association of a tape label (tape name) with a tape group.

tape module number. The ordinal number of the tape status table (TSTB) entry the specified device or tape is using.

tape reconfiguration. The process of adjusting available tape drives to fluctuating system, application, and hardware maintenance requirements.

tape status table (TSTB). A system table containing the data required to control tape operations. Each TSTB item provides durable (for example, device address) and transient (for example, sense data) information for a particular tape.

tape switch. The process of activating the next physical tape volume for a given symbolic tape name when processing of the current tape volume has completed. The next volume to be activated may be a standby tape or an alternate tape (ALT).

tape symbolic name. A 3-character name assigned to each tape and used with the tape status table to control tape resources and operations. Certain names are reserved by the TPF system; all other combinations are available to users.

task control area (TCA). The control block used to communicate between the TPF system and the C compiler generated code and run-time library.

TC. Tightly coupled.

TCA. Task control area.

TCID. Transport connection identifier.

TCP. Transmission Control Protocol.

TCP/IP. Transmission Control Protocol/Internet Protocol.

TDAT. Tape device assignment table.

Telnet. In the Internet suite of protocols, a protocol that provides remote terminal connection service. It allows users of one host to log on to a remote host and interact as directly attached terminal users of that host. Telnet uses the Transmission Control Protocol (TCP) as the underlying protocol.

temporary collections. Collections that reside in the private heap area of the ECB and overflow to short-term pools. These collections are deleted when the ECB exits because the private heap area of the ECB is reclaimed by the system at ECB exit.

terminal address table (WGTA). See *WGTA table*.

terminal control block. Collectively refers to the scratch pad area (SPA), routing control block (RCB), and agent assembly area (AAA).

terminal identification table. Collectively refers to the terminal address table (WGTA) and the resource vector table (RVT).

terminal interchange. A term associated with telecommunication components that predate SNA support. A terminal interchange is functionally the same as a cluster controller.

test unit tape (TUT). A tape generated with STC for input to PTV, containing one or more test units and their required environments. TUT is a reserved tape symbolic name.

TFTP. Trivial File Transfer Protocol.

TGDT. Tape group definition table.

THDR. Transport header.

THGL. Thread global data control block.

thread control block (TTCB). The control block used to define thread types.

thread global data control block (THGL). The control block used to contain thread information in a given process.

thread stack definition table (TSDT). The control block used by the thread address space manipulation routines to locate each thread stack.

thread stack usage table (TSUT). The control block used to maintain the current status for each thread stack in a given process.

throw exception. Any user, logic, or system error detected by a function that does not itself deal with the error but passes the error on to a handling routine.

TI. Terminal interchange.

tightly coupled. A multiprocessing environment in which multiple I-stream engines in a single processor complex run concurrently.

tightly coupled (TC) complex. The synchronization of shared main storage in an ESA configuration of multiple I-stream engines. An ESA configuration with only one I-stream engine is called a uniprocessor and one with multiple I-stream engines a multiprocessor. Uniprocessor and multiprocessor are terms in the TPF system that are to be associated with tightly coupled multiprocessing.

tightly coupled (TC) multiprocessing. Refers to the synchronization of access to shared main storage in a central processing complex (CPC) of 2 or more I-stream engines.

time available supervisor (TAS). A procedure for accepting low-priority work items.

time-of-day clock synchronization. The process used to synchronize TOD clocks.

TLD. A symbolic name, reserved to TPF, for a general tape denoting the load medium to be used by the auxiliary loader function.

TOD. Time-of-day.

TOD clock control override facility. The facility that permits the control program to set the TOD clock without requiring operator intervention.

TOD clock synchronization. Time-of-day clock synchronization.

TOD synch check. An interrupt generated when a TOD clock goes out of synchronization with the external synchronization source.

TOD synchronization compatibility (TSC) hardware. A hardware RPQ required when there are TOD RPQ CPCs and Sysplex Timer (STR) CPCs in the same loosely coupled complex.

token. A 32-bit value used for efficient interfacing of processors in MPIF complexes.

token-ring network. A network that supports unidirectional transmission of data by passing a token from data station to data station until the data returns to the original station.

TP. Transaction program.

TPF Advanced Program-to-Program Communications (TPF/APPC). An implementation of the SNA LU 6.2 protocol that allows interconnected systems to communicate and share the processing of programs.

TPF API functions. C library functions that provide TPF-specific services.

TPF/APPC. TPF Advanced Program-to-Program Communications.

TPF block. One of the storage blocks that can be attached to the CBRW of an ECB. TPF has 128-, 381-, 1055-, and 4095-byte blocks.

TPF C implementation data (CID). A control block that contains the address of the ISO-C static exception routine. It is initialized by the CINFC macro.

TPF CLAW device interface. Provides CLAW I/O functions, manages I/O queues, and handles I/O completions using the Common Link Access to Workstation (CLAW) protocol.

TPF CLAW services. Provides the control program service routines for the CLAW API functions and enters the TPF CLAW device interface to complete the processing of the CLAW functions.

TPF complex name. See *complex name*.

TPFAR. Transaction Processing Facility Application Requester.

TPFCS. Transaction Processing Facility collection support.

TPFCS database. A database that provides a set of services for any application that would like to store persistent collections. The TPFCS database handles collection sizes from 1 element to more than 2 000 000 000 elements.

TPFCS primary record. The first logical copy of each record used to represent a collection. If a collection is not shadowed, TPF collection support (TPFCS) then uses only primary records to represent the collection.

TPFCS shadow record. A duplicate copy of each of the records used to represent the TPF collection support (TPFCS) collection in the TPF database. TPFCS provides shadowing independent of TPF duplication of files.

TPFDF. Transaction Processing Facility Database Facility.

TPF_regs. A C data structure used as a register save area and parameter passing area when calling an assembler program. TPF_regs contains the values of general registers R0–R7.

TPNS. Teleprocessing network simulator.

TPNT. Transaction program name table.

TPSA. A field in the TCA that is used by the TPF ISO-C startup code to store the address of an area for saving registers. The stack overflow routine uses this field to access the area for saving registers.

transaction. A series of messages related to a processing requirement.

transaction manager (TM). In TPF transaction services, a manager that provides a set of application program interfaces (APIs) for an application to define the scope of a transaction and actions to be taken for the transaction. The TM coordinates resource managers and determines which resources are written to the recovery log at commit time and which resources are recovered at restart time.

Transaction Processing Facility Application Requester (TPFAR). A TPF feature that allows TPF application programs to read and write directly to DATABASE 2 Version 2 Release 3 or later.

Transaction Processing Facility Database Facility (TPFDF). An IBM licensed program that is a database manager for application programs that run in a Transaction Processing Facility (TPF) environment, or under Airline Control System MVS/XA (ALCS/MVS/XA), or Airline Control System Version 2 (ALCS V2).

transaction program (TP). An application program that uses APPC communication services to communicate with a partner transaction program. A TPF local transaction program uses the TPF/APPC services, and a remote transaction program may use some other implementation of the APPC architecture.

transaction program name table (TPNT). A table used to define the local TPF transaction program names as known by the remote transaction programs.

transaction unit. In the program test vehicle (PTV), a gradient of program testing that allows a complete transaction to be tested in a single thread environment. If all application programs are available, the driver is not required. It can be used to monitor the test. Also see *package unit* and *full scale*.

Transmission Control Protocol (TCP). A communications protocol used in the Internet and in any network that follows the U.S. Department of Defense standards for inter-network protocol. TCP provides a ***reliable*** host-to-host protocol between hosts in packet-switched communications networks and in interconnected systems of such networks. It assumes that the Internet protocol is the underlying protocol. See also *User Datagram Protocol (UDP)*.

Transmission Control Protocol/Internet Protocol (TCP/IP). A set of communications protocols that support peer-to-peer connectivity functions for both local and wide area networks.

transmission queue. A local queue on which prepared messages destined for a remote queue manager are temporarily stored.

transport connection identifier (TCID). An 8-byte hexadecimal value that is used to uniquely identify a rapid transport protocol (RTP) connection.

transport header (THDR). The part of the network layer packet (NLP) that contains control information about the rapid transport protocol (RTP) connection.

transport layer. The layer in the Internet architecture that provides the end-to-end data transfer. TCP/IP support provides support for both TCP and UDP protocols as application interfaces to Internet Protocol (IP).

triggering. In MQSeries, a facility that allows a queue manager to start an application automatically when predetermined conditions on a queue are satisfied.

trigger message. A message containing information about the program that a trigger monitor is to start.

trigger monitor. A continuously running application serving one or more initiation queues. When a trigger message arrives on an initiation queue, the trigger monitor retrieves the message and uses the information in the trigger message to start a process that serves the queue on which a trigger event occurred.

Trivial File Transfer Protocol (TFTP). A protocol for file transfer that requires minimal overhead and provides minimal capability. TFTP uses the connectionless datagram delivery services of the User Datagram Protocol (UDP).

truncate. To shorten a value to a specified length.

try block. A block in which a known C++ exception is passed to a handler.

TSC. TOD Synchronization Compatibility.

TSC Hardware. Time-of-day Synchronization Compatibility Hardware RPQ.

TSDT. Thread stack definition table.

TSTB. Tape status table.

TSUT. Thread stack usage table.

TTCB. Thread control block.

TUT. Test unit tape.

type balancing. A conversion that makes both operands have the same data type.

type class. A category of related data types. The C-language type classes are: aggregate, scalar, arithmetic, and integral.

type definition. A definition of a synonym for a data type.

type specifier. A name of a data type.

U

UDD. Universal data display.

UDDC. Universal data display client.

UDDS. Universal data display server.

UDP. User Datagram Protocol.

UFT. Universal format type.

UFT/FTI conversion table. A two-stage lookup table for decoding FARF4, FARF5, and FARF6 addresses.

UID. User ID.

unary expression. An expression that contains one operand.

unblocked tape. A tape recorded with undefined length (format-U) blocks. The logical records on the tape are usually referred to as *unblocked records*. An unblocked tape contains one record for each block. Contrast with *blocked tape*.

Unicode. A character coding system designed to support the interchange, processing, and display of the written texts of the different languages. The XML4C parser is fully compliant with the Unicode 3.0 specification. For details about the Unicode Standard, go to the Unicode Consortium's Web page at http://www.unicode.org.

uniform resource locator (URL). For Hypertext Markup Language (HTML) documents and for the World Wide Web, a sequence of characters that represent information resources. This sequence of characters includes (a) the abbreviated name of the protocol used to access the information and (b) the information used by the protocol to locate the information resource. For example, in the context of the Internet, these are abbreviated names of some protocols used to access various information resources: `http`, `ftp`, `gopher`, `telnet`, and `news`; and the Web address for the IBM home page, which is http://www.ibm.com

union. A variable that can hold any one of several data types, but only one data type at a time.

union tag. The identifier that names a union data type.

uniprocessor. A processor with only one I-stream.

unique collections. Collections in which no two elements have the same value (such as bags and logs) or the same key (such as dictionaries and key bags).

unique record. A fixed file record that is unique to any subsystem user, processor, or I-stream. Contrast with *shared record*.

unique resource. A resource that is not shared among processors, I-stream engines, subsystems, or subsystem users.

unit of work. A recoverable sequence of operations performed by an application between two points of consistency. A unit of work begins when a transaction starts or after a user-requested syncpoint. It ends at either a user-requested syncpoint or at the end of a transaction.

unit record status table (URST). A system table that contains information indicating the status of all unit record devices in the system.

universal data display (UDD). A component of the TPF C Debugger for VisualAge Client and TPF Assembler Debugger for VisualAge Client that displays synchronized data for both debuggers. It consists of a server (UDDS) and a client (UDDC). See also *universal data display server (UDDS)* and *universal data display client (UDDC)* .

universal data display client (UDDC). A component of the universal data display (UDD) that resides on a user's workstation. It displays data sent to it from the UDDS and also communicates user requests to the UDDS. See also *universal data display (UDD)* and *universal data display server (UDDS)* .

universal data display server (UDDS). A component of the universal data display (UDD) that communicates to the UDDC data residing in the address space of the ECB being debugged. See also *universal data display (UDD)* and *universal data display client (UDDC)* .

universal format type (UFT). A 6-bit field at the front of FARF4 and FARF5 addresses and a 16-bit field at the front of FARF6 addresses. The value in this field is used to determine the size of the format type indicator (FTI) field of the address. Once the FTI size is known, its value can be determined. A specific UFT/FTI combination is related to a specific record type in the TPF system.

universal unique identifier (UUID). An attribute that consists of a network address and a timestamp, used to specify the interface definition.

UNIX operating system. An operating system developed by Bell Laboratories that features multiprogramming in a multiuser environment. The UNIX operating system was originally developed for use on minicomputers but has been adapted for mainframes and microcomputers.

unmigrated state. In pool file support, a condition that refers to a processor that has not been IPLed on an image that contains the pool support provided by 32-way loosely coupled pool support. See also *pool migration* and *pool conversion*.

unsolicited message processor. A collection of programs that handle unsolicited messages to terminals or LUs logged to applications.

update sequence counter. A field used by TPF collection support (TPFCS) to control updates made to an object.

UPR. User profile record.

URL. Uniform resource locator.

URST. Unit record status table.

User Datagram Protocol (UDP). An application interface to Internet Protocol (IP). It adds no reliability, flow control, or error recovery to IP. It simply serves as a vehicle for sending and receiving IP datagrams and using ports to direct the datagrams. See also *Transmission Control Protocol (TCP)*.

user exit. A point in the TPF system where a user-written routine can perform installation-unique processing.

user exit vector. See *exit vector*.

user expansion area. An area reserved for application use that is at the end of the C library function work area contained in the first stack frame.

user global symbol table. In expression enhancements for the TPF debuggers, a table that contains global symbol definitions that do not exist in a real-time assembler program. The global symbol definitions map to system structures that are not referenced in the real-time assembler program. You can use the user global symbol table user exit (UGST) to define global symbols.

user ID (UID). A nonnegative integer that is used to identify a user.

user profile record (UPR). In TPF Internet mail server support, a record that contains account information and the list of mailboxes for the user.

user symbol override table. In expression enhancements for the TPF debuggers, a table that contains global symbols that are used to override symbol definitions in the local symbol table or the common symbol table. For example, you can define symbol D0 in the symbol override table as a pointer to the storage block on data level 0 to override the definition in data macro (DSECT) CPSEQ, which has a value of 0. You can use the user symbol override table user exit (USOT) to define these global symbols.

UTIL state (utility state). One of 5 system states. In utility state, clock management is provided, disk lost interrupt is active, and commands are the only permitted input.

UUID. Universal unique identifier.

V

valid. In XML, the term used to describe a document that conforms to the rules of the associated schema. See also *schema*.

validation. A process that checks persistent collection structures to ensure that they are built correctly.

variable cross-reference support (VCRS). The offline program that scans a partitioned data set and prints a cross-reference listing of the global variable symbols used in the data set, lists the PDS members in which the symbols are used, and lists any other global variables that depend on those members.

VCRS. Variable cross-reference support.

VCT. Virtual file access (VFA) count.

VEQR. Virtual-equals-real.

VEQV. Virtual-equals-virtual.

verb. A conversation statement that transaction programs issue to communicate through the LU 6.2 protocol boundary. The program's current conversation state determines what verbs a transaction program can issue.

vertical allocation. When allocating record space on DASD, logically adjacent records are allocated sequentially to the same physical device. Contrast with *horizontal allocation*.

VFA. Virtual file access.

VFA candidate. A record held in virtual file access (VFA) that may or may not be synchronized across processors. A record that is synchronized across processors is called a *VFA synchronization candidate*.

VIPA. Virtual Internet Protocol (IP) address.

virtual address. The address of a location in virtual storage. A virtual address must be translated into a real address to process the data in processor storage. See also *absolute address*, *logical address*, *physical address*, and *real address*.

virtual-equals-real (VEQR) mode. An operating mode in which system virtual memory (SVM) addresses are equal to ECB virtual memory (EVM) addresses. Virtual-equals-real (VEQR) mode is used to test and debug code that is being migrated to the TPF 4.1 system.

virtual file access (VFA). A storage management facility that dynamically allocates frequently referenced records to main storage.

virtual file access count (VCT) list. A secondary CPU loop list which contains entries that were forced to give up control after exceeding a system resource threshold, one of which is the number of virtual file access (VFA) record accesses.

virtual IP address (VIPA). An Internet Protocol (IP) address that is associated with a Transmission Control Protocol/Internet Protocol (TCP/IP) stack without associating with a specific physical network attachment, thereby allowing error recovery if failures occur.

virtual reader. The VM/ESA facility that supplies input to a virtual machine.

Virtual Telecommunications Access Method (VTAM). An IBM licensed program that controls communication and the flow of data in a computer network. It provides single-domain, multiple-domain, and multiple-network capabilities.

VTAM. IBM Virtual Telecommunications Access Method.

W

WAN. Wide area network.

Web browser. A client program that allows a user to navigate the Internet World Wide Web through hypertext links. These links, called uniform resource locators (URLs), specify the protocol, location, and file name of each document. The documents can be text, graphics, video, or audio. The links can also use other protocols such as File Transfer Protocol (FTP).

Web page. A Hypertext Markup Language (HTML) document that can be accessed by a uniform resource locator (URL) on the World Wide Web. Contrast with *home page*.

well-known port. In the Internet suite of protocols, one of a set of preassigned protocol port numbers in the range 1–1023 that address specific functions used by transport-level protocols such as the Transmission Control Protocol (TCP) and the User Datagram Protocol (UDP). For example, File Transfer Protocol (FTP) uses well-known port 21, Trivial File Transfer Protocol (TFTP) uses well-known port 69, and Hypertext Transfer Protocol (HTTP) uses well-known port 80.

well-formed. A term used to describe an XML document that follows the basic rules for writing XML markup language. These rules include, but are not limited to the following:

- Every XML document must have a root element.
- All tags must be opened and closed. XML also allows you to write empty elements by adding an ending slash before the closing bracket; for example, <address />.
- Tags must follow nesting rules.
- Either single quotations (' ') or double quotations (″ ″) must surround the value of an attribute.

Go to the XML specification on the W3C Web site at http://www.w3.org/ for more specific information about well-formed documents.

WGTA table. A TPF control table that serves as the focal point for the system records associated with unique terminals; namely, the agent assembly area (AAA) and the routing control block (RCB).

white space. Space characters, tab characters, form feed characters, and new-line characters.

wide area network (WAN). A network that provides communication services to a geographic area larger than that served by a local area network or a metropolitan area network and that may use or provide public communications facilities.

wide-oriented file. A file stream that contains only multibyte characters.

wildcard address. When a socket address is specified as INADDR_ANY, the system interprets the address as any address. If the caller of a `bind` function specifies the internet address as INADDR_ANY, the socket is bound to all network interfaces on the host.

wildcard character. A special character, such as an asterisk (*), that can be used to represent one or more characters.

working directory. The active directory used to resolve path names that do not begin with a slash (/). A working directory can also be referred to as the current directory or the current working directory. A directory, associated with a process, that is used in path name resolution for path names that do not begin with a slash. (POSIX.1) Synonym for *current directory*, *current working directory*.

working storage. Refers to those areas of main storage that are (1) available to application programs as system resources and (2) the system control blocks used for managing an entry. Contrast with *fixed storage*.

World Wide Web Consortium (W3C). A body that makes recommendations for standard Web specifications. The W3C developed the DOM specification and the technology behind namespaces and schemas (DTD and XML Schema). For more information, go to the W3C Web site at http://www.w3.org/. See also *namespace* and *schema*.

writable static control block (WSCB). A hashing table that contains the addresses of the DLM writable static blocks used by the ECB.

write lock. A means to inform a process that another process has write access to a file and does not want to share access.

WRT. E-type loader working record table.

WSCB. Writable static control block.

W3C. World Wide Web Consortium.

X

X.25 NCP Packet Switching Interface (NPSI). An IBM licensed program offering Systems Network Architecture (SNA) users the ability to use communications facilities that support the X.25 Interface as defined by the Telecommunication Standardization Sector (TSS), formerly known as the International Telegraph and Telephone Consultative Committee (CCITT).

XID. Exchange identification.

XLF. External lock facility.

XML. Extensible Markup Language (XML).

XML-DEV. A mailing list hosted by OASIS. The members of the mailing list collaboratively developed the SAX specification. To view or join the mailing list, go to http://www.xml.org.

XML Schema. A type of schema. See also *schema*.

Z

Z-messages. commands; sometimes called Z-messages because the first character of the message is always Z.

zero suppression. The substitution of blanks for leading zeros in a number. For example, 00057 becomes 57 when using zero suppression.

Numerics

1052 state. The lowest and least active of the 5 system states. Support is not available for clock management, file data management, or communication facilities. Keypoint update is active. Certain commands are the only allowable input.

3270 simulation. The facility that allows 3270 devices to be used in place of 2915/4505 display devices or 1977/1980 printers without requiring application code changes.

3480 format. An 18-track recording format used when tape data compaction and auto blocking are not enabled.

3480 XF format. An 18-track recording format used when tape data compaction and auto blocking are enabled.

3480-2 XF format. A 36-track recording format using tape auto blocking. This format is used whether data compaction is enabled or disabled.

4505 simulation. The facility that simulates 4505-type terminals on 3270-type terminals.

4-byte file address. A basic element of data organization in the TPF system that is defined as a FARF3, FARF4, or FARF5 file address.

4-byte file address standard header. A 16-byte record header containing either 4-byte forward and backward chain address fields or zeros starting at X'008'.

4x4 format. An 8-byte file address with a high-order 4-byte indicator that contains zeros and a low-order 4-byte FARF3, FARF4, or FARF5 address. 4x4 format is the method by which a 4-byte symbolic file address in FARF3, FARF4, or FARF5 format is maintained as an 8-byte file address.

8-byte file address. A basic element of data organization in the TPF system that is defined as a 4x4 or FARF6 format. See also *4x4 format*.

8-byte file address standard header. A 32-byte record header containing either 4-byte forward and backward chain address fields or zeros starting at X'010'.

Special Characters

#define statement. A preprocessor statement that directs the preprocessor to replace an identifier or macro invocation with specified code.

#FLOCK record. A processor-shared fixed file record that is used to indicate a file lock.

#include statement. A preprocessor directive that causes the preprocessor to replace the statement with the contents of the specified file.

#pragma linkage. A preprocessor directive that notifies the compiler of the type of function call expansion and return linkage to be generated for a given function.

#pragma map. A TPF-defined instruction to the C compiler that notifies the compiler of the external name to be used for calls to external and library functions.

#PROGn. A 4 KB block that contains ordinals that represent the C load module or library that is to be loaded into core storage. Its header has a forward chain that can point to ordinal #XPRG (ordinal_#XPRG) records that contain more ordinals for the remaining C load module, if necessary, depending on the size of the program or library.

#XPRGn. A record type that contains two kinds of information: (1) If chained off #PROG, it contains more ordinals for the remaining C load module. It is also referred to as *ordinal_#XPRG*. (2) If pointed to by the ordinals in #PROG (and ordinal_#XPRGs, if necessary), it contains the text (machine executable code) or ADCON relocation information.

Master Index to the TPF Library

This master index is built from the individual indexes in each TPF publication. Publications are identified in this index by the document reference codes used throughout the library. To locate an item, go to the publication pointed to by the reference code in this master index; its index will have an identical entry with the applicable page numbers.

Following is a list of publications in the TPF library with their document reference codes and softcopy file names.

Table 12. TPF Library Reference Codes and Softcopy Names

Publications	Reference Codes	Softcopy Names
General Documents		
TPF ACF/SNA Network Generation	ACF-GDE	GTPACFxx
TPF Application Programming	APP-GDE	GTPAPPxx
TPF C/C++ Language Support User's Guide	CLS-UGR	GTPCLUxx
TPF Concepts and Structures	CON-STR	GTPCONxx
TPF Library Guide	DOC-AID	GTPDOCxx
TPF General Information	GIM	GTPGIMxx
TPF General Macros	GEN-MAC	GTPGENxx
TPF System Macros	SYS-MAC	GTPSYSxx
TPF Migration Guide: Program Update Tapes	MIG-GD2	GTPMG2xx
TPF Migration Guide: TPF 3.1 System to TPF 4.1 System	MIG-GD1	GTPMG1xx
TPF Operations	OPR-GDE	GTPOPRxx
TPF Programming Standards	PSM-GDE	GTPPSMxx
TPF System Generation	SYS-GEN	GTPSYGxx
TPF Transmission Control Protocol/Internet Protocol	CLAWGR	GTPCLWxx
TPFDF and TPF Structured Programming Macros	SPM	BDFSPMxx
Program References		
TPF ACF/SNA Data Communications Reference	SNA-PRM	GTPSNRxx
TPF Application Requester User's Guide	AR-USG	GTPARUxx
TPF Data Communications Services Reference	DCS-PRM	GTPDCRxx
TPF Database Reference	DBS-REF	GTPDBRxx
TPF Main Supervisor Reference	MSP-PRM	GTPMSRxx
TPF Multi-Processor Interconnect Facility Reference	MPI-PRM	GTPMPRxx
TPF Non-SNA Data Communications Reference	NSC-PRM	GTPNSRxx
TPF Program Development Support Reference	PDV-PRM	GTPPDRxx
TPF System Installation Support Reference	INS-PRM	GTPINRxx
TPF System Performance and Measurement Reference	SPM-PRM	GTPSPRxx

Index

Special Characters

Numerics

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X

Y

Z

File Number: S370/30XX-20
Program Number: 5748-T14

Printed in the United States of America
on recycled paper containing 10%
recovered post-consumer fiber.

GH31-0146-16