Note:

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

| **Second Edition (August 1997)**

This edition applies to Version 2, Release 3, Modification 0 of the IBM Parallel Environment for AIX, program number 5765-543, and to all subsequent releases and modifications until otherwise indicated in new editions or technical newsletters.

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About This Book

This book is designed to help any user of IBM Parallel Environment for AIX (PE) who needs to know what a message means and how they should respond to that message. This book lists all of the error messages generated by the PE software and components and describes a likely solution.

This book assumes that AIX and the X-Windows system are already installed, if required. For information on installing AIX and X-Windows, consult *IBM AIX for RISC System/6000 Installation Guide* SC23-2341.

Who Should Use This Book

This book is designed for system programmers and administrators, but should be used by anyone responsible for diagnosing problems related to PE. To use this book, you should be familiar with the AIX operating system. Where necessary some background information relating to AIX is provided. More commonly, you are referred to the appropriate documentation.

How to Use This Book

Overview of Contents

This book contains the following information:

Chapter 1, "Understanding the Diagnostic Message Format" on page 1

This chapter explains how to use the message number to identify the component associated with each message.

Chapter 2, "pdbx Messages" on page 3

Chapter 3, "pedb Messages" on page 25

Chapter 4, "POE Messages" on page 49

Chapter 5, "MPI Messages" on page 93

Chapter 6, "VT Messages" on page 113

Chapter 7, "Xprofiler Messages" on page 149

Typographic Conventions

This book uses the following typographic conventions:

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Type Style	Used For
bold	**Bold** words or characters represent system elements that you must use literally, such as command names, program names, file names, and flag names. **Bold** words also indicate the first use of a term included in the glossary.
italic	*Italic* words or characters represent variable values that you must supply. *Italics* are also used for book titles and for general emphasis in text.
`Constant width`	Examples and information that the system displays appear in `constant width` typeface.

In addition to the highlighting conventions, this manual uses the following conventions when describing how to perform tasks. User actions appear in uppercase boldface type. For example, if the action is to enter the **smit** command, this manual presents the instruction as:

ENTER smit

The symbol "●" indicates the system response to an action. So the system's response to entering the **smit** command would read:

- The System Management Interface Tool's main window opens.

Abbreviated Names

The abbreviated names used in this book are defined below.

Short Name	Full Name
AIX	Advanced Interactive Executive
CSS	Communication Subsystem
dsh	distributed shell
GUI	graphical user interface
HDF	Hierarchical Data Format
IP	Internet Protocol
MPI	Message Passing Interface
MPL	Message Passing Library
PE	Parallel Environment
PM Array	Program Marker Array
POE	Parallel Operating Environment
PSSP	Parallel System Support Programs
RISC System/6000 (IBM RS/6000)	Reduced Instruction Set Computer System/6000
rsh	remote shell
SDR	System Data Repository
SP	IBM RS/6000 Scalable POWERparallel Systems

Short Name	Full Name
STDIN	standard input
STDOUT	standard output
US	User Space
VT	Visualization Tool

Related Publications

Related PE Publications

- *IBM Parallel Environment for AIX: General Information*, GC23-3906
- *IBM Parallel Environment for AIX: Hitchhiker's Guide*, GC23-3895
- *IBM Parallel Environment for AIX: Installation*, GC28-1981
- *IBM Parallel Environment for AIX: Operation and Use, Volume 1*, SC28-1979
- *IBM Parallel Environment for AIX: Operation and Use, Volume 2*, SC28-1980
- *IBM Parallel Environment for AIX: MPI Programming and Subroutine Reference*, GC23-3894
- *IBM Parallel Environment for AIX: MPL Programming and Subroutine Reference*, GC23-3893
- *IBM Parallel Environment for AIX: Licensed Program Specification*, GC23-3896

As an alternative to ordering the individual books, you can use SBOF-8588 to order the entire PE library.

Related AIX Publications

IBM AIX Version 4.1 Commands Reference, SBOF-1851

IBM AIX Version 4.2 Installation Guide, SC23-2550

IBM AIX Version 4 General Programming Concepts: Writing and Debugging Programs, SC23-2533

IBM AIX Version 4 Communications Programming Concepts SC23-2610

Other Related Publications

Note: The following are related to this book only if you run parallel programs on the IBM IBM RS/6000 SP. They are not related if you use an IBM RS/6000 network cluster.

- *IBM Parallel System Support Programs for AIX: System Planning*, GC23-3902
- *IBM Parallel System Support Programs for AIX: Administration Guide*, GC23-3897
- *IBM Parallel System Support Programs for AIX: Installation Guide*, GC23-3898
- *IBM Parallel System Support Programs for AIX: Diagnosis and Messages Guide*, GC23-3899

- *IBM Parallel System Support Programs for AIX: Command and Technical Reference*, GC23-3900
- *IBM Parallel System Support Programs for AIX: Licensed Program Specification*, GC23-3901

As an alternative to ordering the individual books, you can use GBOF-8587 to order the entire SP software library.

National Language Support

For National Language Support (NLS), all PE components and tools display messages located in externalized message catalogs. English versions of the message catalogs are shipped with the PE program product, but your site may be using its own translated message catalogs. The AIX environment variable **NLSPATH** is used by the various PE components to find the appropriate message catalog. **NLSPATH** specifies a list of directories to search for message catalogs. The directories are searched, in the order listed, to locate the message catalog. In resolving the path to the message catalog, **NLSPATH** is affected by the values of the environment variables **LC_MESSAGES** and **LANG**. If you get an error saying that a message catalog is not found, and want the default message catalog:

ENTER **export NLSPATH=/usr/lib/nls/msg/%L/%N**

export LANG=C

The PE message catalogs are in English, and are located in the following directories:

/usr/lib/nls/msg/C
/usr/lib/nls/msg/En_US
/usr/lib/nls/msg/en_US

If your site is using its own translations of the message catalogs, consult your system administrator for the appropriate value of **NLSPATH** or **LANG**. For additional information on NLS and message catalogs, see *IBM Parallel Environment for AIX: Messages* and *IBM AIX Version 4 General Programming Concepts: Writing and Debugging Programs*.

Accessing Online Information

The PE program product provides manual pages as well as online versions of the publications that can be viewed using an HTML browser (such as Netscape, WebExplorer, or Mosaic).

To access a list of manual pages for PE:

ENTER **man pe**

Note: In order to use the PE MPI subroutine manual pages or access the PE online (HTML) publications, the **ppe.pedocs** fileset must first be installed. To view the PE online publications, you need the following:

- Access to a common HTML document browser (such as Netscape, WebExplorer, or Mosaic)

- The location of the HTML index file provided with the **ppe.pedocs** fileset. Contact your system administrator or installer for this location.

Obtaining Documentation

This book is available in PostScript format. You can obtain the PostScript files for the product documentation by:

- Downloading them from the **lscftp.pok.ibm.com** anonymous FTP server. The files for *PE_prod_name* can be found in the directory called /**pub**/**pps**/**PE**.
- Printing the PostScript documentation files that are shipped on the product media.

You can also view or download this book from the IBM RS/6000 web site, whose current URL is listed in the PE filesets' README files.

Chapter 1. Understanding the Diagnostic Message Format

The message identifiers for the PE messages in this manual are structured as follows:

0029-*nnnn*	pdbx (the line-oriented debugger)
0030-*nnnn*	pedb Motif/Xwindow Style Parallel Debugger
0031-*nnn*	Parallel Operating Environment
0031-A4*nn*	Program Marker Array
0032-*nnn*	Message Passing Interface
0033-1*nnn*	Visualization Tool - Performance Monitor
0033-2*nnn*	Visualization Tool - Trace Visualization
0033-3*nnn*	Visualization Tool - Trace Collection
0033-4*nnn*	Visualization Tool - Widget Messages
2537–*nnn*	Xprofiler X-Windows Performance Profiler

where:

- The first four digits (0029, 0030, 0031, 0032, 0033, 2537) identify the component that issued the message.
- The remaining three to four digits identify the sequence of the message in the group.

Note: If you need help from IBM in resolving a PE problem, contact your local IBM representative.

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Chapter 2. pdbx Messages

0029-0101 Your program has been loaded.

Explanation: This message is issued when your program has been loaded into the tasks in the partition. This message indicates all the functions available in **pdbx** are available for you to use.

User Response: When this message is displayed, you can start debugging the tasks in the partition.

0029-0104 The remote debugger on task: *number* **has exited with the following error:** *number*

Explanation: The debugger on the remote node has exited prematurely and **pedb** will exit.

User Response: The error message from the remote debugger is presented. Use the information provided by the remote debugger message to proceed.

0029-0105 Error creating temporary file *string***.**

Explanation: When starting **pdbx** in attach mode, a temporary file is created, consisting of a list of tasks that are executing under the **poe** job that you specified. The contents of this file are displayed in the menu from which you select the tasks that you wish to attach. This temporary file is created in /tmp by default, unless you specify a different directory with the TMPDIR environment variable. The naming convention for this file is: < */tmpdir*>/.pdbx.< *poe-pid*>.menu where <*/tmpdir*> is either /tmp or the directory specified by the TMPDIR environment variable, if it has been defined, and where < *poe-pid*> is the process ID of the poe job to be attached to. The message that you received appears when the temporary attach task menu file cannot be opened, or when errors are detected while writing to the file.

User Response: Verify that there is enough space available in the /tmp filesystem, or if you have specified a directory with the TMPDIR environment variable, check the filesystem that contains this directory for sufficient space. You may also want to check to be sure that a file of the same name does not already exist.

0029-1001 Missing command file name following the -c flag. For information on the correct syntax to use when invoking pdbx, type: pdbx -h

Explanation: The **-c** flag requires the name of a file as an argument. This argument was missing. It is also required that the file have read permissions set for the **pdbx** user.

User Response: Specify the name of a **pdbx** command file following the **-c** flag. A **pdbx** command file is a file containing valid **pdbx** commands.

0029-1002 Missing or invalid argument following the -I flag. For information on the correct syntax to use when invoking pdbx, type: pdbx -h

Explanation: The **-I** flag requires the name of a directory that pdbx will search for source code files on the remote tasks. This argument was missing or invalid.

User Response: Specify the name of a directory following the **-I** flag. This directory should be available to each task in your partition because the **-I** flag will be passed to each remote **dbx** debugger.

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0029-1003 Missing or invalid argument following the -d flag. For information on the correct syntax to use when invoking pdbx, type: pdbx -h

Explanation: The **-d** flag requires an integer argument that specifies the nesting depth limit of program blocks.

User Response: Specify an integer. Note that this overrides the default nesting depth limit of 25 program blocks.

0029-1005 Unable to read command file specified by the -c flag.

Explanation: You must specify a command file that you have read access to after the **-c** flag. The file that you specified after the **-c** flag did not have read permission so that **pdbx** could open it for reading.

User Response: Check the name of the file and the permissions to ensure that it is readable.

0029-1006 You must use the attach, quit, or help command.

Explanation: When starting the debugger in attach mode, at the initial prompt the only allowable commands are **attach**, **quit**, or **help**.

User Response: Enter a valid command to continue.

0029-1009 Could not create remote pdbx_startup file: *string***.**

Explanation: For each task to be initialized, the remote **dbx** requires the creation of a temporary startup file. **pdbx** requested that the partition manager daemon create the file and the partition manager daemon was unable to do so.

User Response: The temporary pdbx_startup file is to be created in the directory specified by the MP_TMPDIR environment variable, the **-tmpdir** flag, or /**tmp**. Make sure that this directory is available for writing by you on each node allocated to your partition.

0029-1010 Could not read message from poe.

Explanation: **pdbx** was unable to read data from the POE debug socket.

User Response: Debugging can continue except that the information about synchronized exit may not be passed back to the debugger from the POE job. Please note that the debugger will most likely not be able to re-attach to this POE job after detaching.

0029-1012 Cannot switch to context *string***, which has RUNNING task(s), until all tasks in the partition have been loaded with a program.**

Explanation: Some of the tasks have been loaded with a program and some have not. The tasks that have been loaded are RUNNING and waiting to synchronize with all of the other tasks in the partition. This wait is normal processing that happens at the start of a parallel program to pass ip addresses around in preparation for future message passing calls.

User Response: Continue to load programs on the remaining tasks in the partition. At this time you can only switch context to groups and tasks that have all task(s) in DEBUG_READY state.

0029-2001 Could not delete the groups events (breakpoints or tracepoints) from task: *number***, because this task is RUNNING.**

Explanation: Since the task was not in DEBUG_READY state, **pdbx** could not delete its events (breakpoints or tracepoints). It is possible to continue but there are some events (breakpoints or tracepoints) that pdbx no longer has a record of.

User Response: Issue the **group list** or **tasks** command to view the state of the tasks. The tasks in the group that are in RUNNING state are the ones on which pdbx could not delete the events.

0029-2002 Could not add the groups events (breakpoints or tracepoints) to task: *number***, because this task is RUNNING.**

Explanation: Since the task was RUNNING and not available for debug commands, **pdbx** could not add the group events (breakpoints or tracepoints) for this task. It is possible to continue but the group breakpoints will not have been set for this task.

User Response: Issue the **group list** or **tasks** command to check the state of the tasks. Create a new group after all of the tasks of interest have stopped RUNNING and are under debugger control.

0029-2003 Breakpoint or tracepoint: *string* **could not be set by pdbx on task:** *number***.**

Explanation: The remote **dbx** was unable to set a breakpoint or tracepoint.

User Response: Make sure the requested breakpoint or tracepoint was valid. Use the **status** command to see what **pdbx** events have been set. Issue the **pdbx where** command to find out where the program is on each node.

0029-2004 *string* **is ambiguous on one or more of the tasks in the current context. Also, the response from whatis** *string* **varies from task to task. The following grouping of tasks would give each group the ability to resolve the symbol consistently:**

Explanation: If a symbol, typically a function, is found to be ambiguous, **pdbx** issues a menu to the user that allows him to select the instance(s) to which the command (such as stop in, list, or func) is applied. To simplify the user interface, the parallel debugger requires that all tasks in the partition have a consistent view of the ambiguous symbol, since **pdbx** can display only one selection menu for a context.

User Response: Issue the **whatis** command to make sure the symbol in question is resolved in the current context. This message is also followed by a table that suggests a set of groups, each of which would resolve the symbol in the same way. Using these or similar groups, you could issue the same command by changing the context as desired.

0029-2005 The network connection from pdbx or pedb to task: *number* **failed.**

Explanation: An error was encountered when **pdbx** or **pedb** attempted to read or write using a socket connection to the task. **pdbx** or **pedb** will no longer have any control over this task.

User Response: The debugger can continue after a task loses contact with the home node. Under certain circumstances, you might choose to continue debugging using the remaining tasks for some period of time.

0029-2013 Debugger attached and ready.

Explanation: All of the specified tasks have been attached, and you are able to start debugging.

User Response: None. This is an informational message.

0029-2014 Internal Error: non-zero status: *number* **returned from pm_respond().**

Explanation: Internal Error: The main communication control section of the home node portion of **pdbx** has indicated a failure.

User Response: Restart **pdbx**, verify that your job runs correctly under **poe** and that **poe** is correctly installed and configured for your id. If the problem persists, gather information about it and follow local site procedures for reporting hardware and software problems.

0029-2015 Could not open socket for debugger to communicate with poe.

Explanation: The socket() call failed when the debugger tried to set up communications with POE.

User Response: Debugging can continue except that the information about synchronized exit will not be passed back to the debugger from the POE job. Please note that the debugger will most likely not be able to re-attach to this POE job after detaching.

0029-2016 Could not make socket connection to poe.

Explanation: The connect() call failed when the debugger tried to set up communications with POE. The information about a synchronized exit is not passed back to the debugger from the POE job. The debugger probably cannot re-attach to this POE job after detaching.

User Response: You can continue debugging with limited function. Please note that the debugger probably cannot re-attach to this POE job after detaching.

0029-2017 Missing or invalid argument to -a flag. For information on the correct syntax to use when invoking pdbx, type: pdbx -h

Explanation: The **-a** flag requires an integer argument specifying the process identifier of the POE process.

User Response: Specify the POE process id when using the **-a** flag. For example, specify **pdbx -a 34192**.

0029-2018 Program not loaded. Issue 'load' or other context-insensitive command.

Explanation: Your program must be loaded on the partition before the **pdbx** command is executed.

User Response: Load your program into the partition. For more information, see the **pdbx load** command in the IBM Parallel Environment for AIX: Operation and Use manual.

0029-2019 Cannot specify a context for a context-insensitive command.

Explanation: The command that was entered defines a context-insensitive action for a context-sensitive command. Context insensitive commands cannot be issued in conjunction with context-sensitive commands.

User Response: Re-specify your command string without the context-sensitive prefix.

0029-2020 Either the alias name which has a 15 character maximum or the alias string which has a 79 character maximum is too long.

Explanation: You have defined an alias that is longer than 15 characters or an alias string that is longer than 79 characters.

User Response: Re-specify your alias definition within the allowable maximum limits.

0029-2021 Internal error in *string*: *number* - pdbx was unable to resolve the current context into task numbers.

Explanation: The context-sensitive command that you entered has no current context defined.

User Response: Change to a different context or create a new group, and then re-enter the command. If the problem persists, gather information about it and follow local site procedures for reporting hardware and software problems.

0029-2022 Task: *number* **has already been loaded with a program.**

Explanation: The task number that you specified has already been loaded.

User Response: Specify another task that has not been loaded. Issue the **group list** or **tasks** command to check the state of the tasks. The tasks in NOT LOADED state are the ones that still need to be loaded with a program.

0029-2024 You specified a breakpoint or tracepoint event number on the pdbx delete command that does not exist within the current context.

Explanation: The event that you specified does not exist within the current context.

User Response: Check the event number within your current context. Find event numbers using the **status** or **status all** command.

0029-2025 No events were deleted, because of incorrect syntax. The correct syntax is 'delete' followed by an event list where the event list can contain space or comma-separated event numbers, or range(s) of event numbers separated by colons or dashes. 'delete *' will delete every event within the context, while 'delete all' will delete every event in every context.

Explanation: Invalid syntax for the **pdbx delete** command.

User Response: Specify the **delete** command followed by a space or comma- separated list of event numbers. Specify ranges of events using a dash or a colon. The command **delete *** will delete all events within the context, while **delete all** will delete all events in all contexts. Find event numbers using the **status** or **status all** command. Consult the man pages for further information regarding the **pdbx delete** command. Re-issue the command using the correct syntax.

0029-2026 EOF detected (and ignored) on STDIN. To exit, use 'quit'.

Explanation: Unexpected EOF (user pressed D) from STDIN.

User Response: **pdbx** does not recognize an EOF generated from the keyboard as a request to exit the debugger because it can be inadvertently typed as <Ctrl>-d. To exit the debugger, use the **quit** command.

0029-2027 The task or group cannot execute remote debugger commands.

Explanation: The task or group that is the current context has no tasks in DEBUG READY state.

User Response: Issue the **group list** or **tasks** command to determine the states of the tasks. Use the **halt** command to bring RUNNING tasks under debugger control.

0029-2028 Task *number* **may not have detached properly.**

Explanation: The write to the task socket did not succeed.

User Response: None.

0029-2029 No remote dbx is available to issue the 'dhelp' command.

Explanation: All the tasks are RUNNING and cannot handle the **dbx** command. The **dhelp** command needs at least one task to be under debugger control.

User Response: Issue the **halt** command to bring the RUNNING task(s) under debugger control or issue **hook** to an unhooked task and re-issue **dhelp**.

0029-2030 The correct syntax is: 'group add group_name member_list'. A member list can contain space or comma-separated task numbers, or ranges of task numbers separated by colons or dashes. Specify the group name as a string of alphanumeric characters that starts with an alphabetic character.

Explanation: Invalid syntax for the **pdbx group add** command.

User Response: Consult the man pages for the **pdbx group** command and re-specify the command. Provide a group name that is no longer than 32 characters, which starts with an alphabetic character, and is followed by any alphanumeric combination.

0029-2031 No tasks were added to any group because you specified an incorrectly formed member list. A member list can contain space or comma-separated task numbers, or ranges of task numbers separated by colons or dashes.

Explanation: The group member list is incorrectly specified.

User Response: Consult the man pages for the **pdbx group** command and re-issue the command again.

0029-2032 No action was taken because the group name is longer than the maximum group name length of *number***.**

Explanation: The group name specified is too long to be processed.

User Response: Provide a group name that is no longer than 32 characters, which starts with an alphabetic character, and is followed by any alphanumeric combination.

0029-2033 No action was taken because the first character in the group name specified was not an alphabetic character.

Explanation: The group name specified started with some character that was not alphabetic.

User Response: Provide a group name that is no longer than 32 characters, which starts with an alphabetic character, and is followed by any alphanumeric combination.

0029-2034 Cannot create any more groups because the maximum number already exists.

Explanation: You issued the **group add** command but there are already as many groups defined as can exist.

User Response: You need to reduce the current number of groups in order to open up a slot for another group to be created.

0029-2035 No action was taken on group *string***, because it is the group reserved to contain all of the tasks.**

Explanation: You issued the **group add** command in an attempt to add tasks to the group reserved to contain all of the tasks. No action could be taken because this group already contains all of the tasks.

User Response: Specify a different group name on the **group add** command.

0029-2036 Task: *number* **has experienced an error in communicating with pdbx. It cannot be added to a group.**

Explanation: The specified task is not communicating properly with the home node, so it is marked as unavailable for any command that attempts communications.

User Response: The debugger can continue after a task loses contact with the home node. Under certain circumstances, you might choose to continue debugging using the remaining tasks for some period of time.

0029-2037 Cannot add task: *number***, because it is already in group** *string***.**

Explanation: The task specified on the **group add** command is already included in the group specified.

User Response: Retry the command specifying only task(s) that are not already included within the specified group.

0029-2038 No action has been taken because a task number is out of range.

Explanation: The task specified on the **group** or **on** command is not an acceptable value.

User Response: Retry the range specification using only task numbers between 0 and one less than the value of **-procs** or **MP_PROCS** (since the first task is number 0).

0029-2039 *one* **task was added to group** *string***.**

Explanation: A task was added to the specified group.

User Response: None. This is an informational message.

0029-2040 *number* **tasks were added to group** *string***.**

Explanation: The list of tasks was added to the specified group.

User Response: None. This is an informational message.

0029-2041 The correct syntax is: 'group change old_name new_name'.

Explanation: The **group change** command was improperly formed.

User Response: Re-issue the command specifying the existing group name and the new group name.

0029-2042 No action was taken because the group name *string* **was not found.**

Explanation: The group name you specified to be renamed on the **group change** command could not be found by **pdbx**.

User Response: Use the **group list** command to see the list of groups currently defined. Make sure that the group you wish to rename already exists.

0029-2043 No action was taken because the group name *string* **is already used.**

Explanation: The new name, for the group to be renamed, on the **group change** command already exists. The existing group will not be renamed to avoid confusion or ambiguity.

User Response: Use the **group list** command to see the list of groups currently defined. Make sure that the group name you wish to change the existing group to does not already exist.

0029-2044 No action was taken because the new group name is longer than the maximum group name length of *number***.**

Explanation: The new group name specified on the **group change** command is too long to be handled.

User Response: Choose a string under 32 characters for the new group name and retry the command.

0029-2045 Group *string* **has been renamed to** *string***.**

Explanation: You have given a new group name to a previously existing group.

User Response: Note that the old group name no longer exists.

0029-2046 The correct syntax is: 'group delete group_name [member_list]'. A member list can contain space or comma-separated task numbers, or ranges of task numbers separated by colons or dashes. Specify the group name as a string of characters.

Explanation: The **group delete** command requires an existing group name as an argument.

User Response: Re-issue the command with an existing group name as an argument. If you wish to delete one or more tasks from a group, specify the list of tasks to be deleted after the group name.

0029-2047 Nothing was deleted because the group name *string* **was not found.**

Explanation: The **group delete** command requires an existing group name as an argument. The specified group could not be matched with any of the existing groups.

User Response: Use the **group list** command to see the list of groups currently defined. Make sure that the group you wish to delete or modify already exists.

0029-2048 No action was taken on group *string***, because it is the group reserved to contain all of the tasks.**

Explanation: The debugger requires at least one group which represents all the tasks in your partition. This group cannot be deleted or modified.

User Response: You can create a group with all tasks except one or two in two steps:

1. Create a group with all tasks using **group add**" *new_group* 0-num_procs where num_procs is the number of tasks in your partition.
2. Use **group delete** *new_group* member_list to remove one or more tasks from the new group.

0029-2049 Incorrectly formed member list. No tasks were deleted from any group. A member list can contain space or comma-separated task numbers, or ranges of task numbers separated by colons or dashes.

Explanation: You specified a member list with the **group delete** command, but the member list was not recognized, so no action was taken.

User Response: Re-issue the **group delete** command with a valid member list.

0029-2050 Task: *number* **was successfully deleted from group** *string***.**

Explanation: A task has successfully been deleted from a group.

User Response: None. This is an informational message.

0029-2051 The group *string* **was not found.**

Explanation: The group you specified on the **group list** command is not known to **pdbx**.

User Response: Re-issue the **group list** command with a valid group name or issue **group list** to list all groups.

0029-2052 Internal error in *string* : *number* - No action was taken because the group has no members.

Explanation: You issued the **group list** on an empty group.

User Response: This is an internal error, retry the command. If the problem persists, gather information about it and follow local site procedures for reporting hardware and software problems.

0029-2053 Valid group actions are: add, change, delete and list.

Explanation: You issued a **group** command with invalid syntax.

User Response: Check syntax and re-issue the **group** command.

0029-2054 The correct syntax is: 'hook' (with no arguments).

Explanation: You issued the **hook** command with one or more arguments. **hook** takes effect on the current command context or the temporary command context when used in combination with the **on** command.

User Response: Re-issue the **hook** command with no arguments.

0029-2055 No action has been taken because the task or group is not unhooked, or has completed and is in exited state.

Explanation: There are no unhooked tasks in the command context that you specified. When a task that has been unhooked completes, it changes from unhooked state to exited state. Once an unhooked task completes, it can no longer be hooked.

User Response: Use the **group list** or **tasks** command to view the state of the tasks.

0029-2056 Task: *number* has already exited.

Explanation: You attempted to hook this task but the task had already completed processing and exited.

User Response: None. This is an informational message.

0029-2057 No action was taken on group *string*, because it is a group name reserved for use by the debugger.

Explanation: The **group add** or **group change** command was issued with a group name that the debugger uses.

User Response: Specify a different group name on the **group add** or **group change** command.

0029-2058 The correct syntax is 'on context' or 'on context command', where command is the command you wish to execute on the specified context.

Explanation: An **on** command has been issued with incorrect syntax.

User Response: Check syntax and re-issue the **on** command.

0029-2059 Group *string* not found. No action performed.

Explanation: You issued the **on** command with a group specified, but the group is not known to **pdbx**.

User Response: Issue **group list** to display group names, then re-issue **on** command.

0029-2060 The correct syntax is: 'source filename'.

Explanation: The **source** command cannot be issued with zero or greater than one arguments.

User Response: Re-issue the **source** command with only one argument.

0029-2061 Cannot open the command file that was specified on the source command.

Explanation: The **source** command has been issued with a filename that either does not exist or has no read permission.

User Response: Make sure the file exists and has read permission.

0029-2062 The correct syntax is either 'status' or 'status all'.

Explanation: An argument other than **all** was specified on the **status** command.

User Response: Re-issue **status** with no arguments or with **all** as the single argument.

0029-2063 All events (breakpoints or tracepoints) are in use for this task or group.

Explanation: The maximum number of events for this task or group has been exceeded. Each breakpoint or tracepoint that is set causes an event to be recorded.

User Response: Use the **delete** command on any event(s) in this task or group to reduce the number of events, then re-issue the original command.

0029-2064 The task has experienced an error in communicating with pdbx.

Explanation: Events cannot be added to this task because there is a communication problem with this task.

User Response: The debugger can continue after a task loses contact with the home node. Under certain circumstances, you might choose to continue debugging using the remaining tasks for some period of time.

0029-2065 You specified an invalid breakpoint or tracepoint. The command failed on task *number* **-** *string*

Explanation: The breakpoint or tracepoint that you tried to create using the **pdbx stop** or **trace** command was not accepted by the remote **dbx** debugger.

User Response: Check the **pdbx stop** or **trace** command syntax.

0029-2066 The correct syntax is: 'unhook' (without any arguments).

Explanation: You issued the **unhook** command with one or more arguments. The **unhook** does not take any arguments. **unhook** takes effect on the current command context or the temporary command context when used in combination with the **on** command.

User Response: Re-issue the **unhook** command with no arguments.

0029-2067 The correct syntax is: 'unalias alias_name'.

Explanation: You specified zero or greater than one arguments with the **unalias** command.

User Response: Check the **pdbx** syntax for **unalias** and re-issue the command.

0029-2068 *string* **is not aliased.**

Explanation: You attempted to **unalias** an unknown alias.

User Response: To display the existing aliases, issue the **alias** command with no arguments. Issue the **unalias** command with one of the existing aliases to remove it.

0029-2069 Reading command file *string***.**

Explanation: The debugger has started reading the command file specified by the **-c** command line flag, the **source** command or as a result of having a .pdbxinit file in the current working directory or your home directory.

User Response: None. This is an informational message.

0029-2070 command file line *number***:** *string*

Explanation: The debugger displays each line of the command file as it is read showing the line number and the text.

User Response: In the event one or more lines in the command file cause errors in the debugger, this message will show the line number and the text that needs to be corrected. Unless a severe error is encountered causing the debugger to terminate, a command file will generally be read in its entirety even if it contains multiple errors.

0029-2071 No tasks were attached due to a badly formed task list.

Explanation: Invalid syntax for the **attach** command.

User Response: Specify the **attach** command followed by a space or comma-separated list of task numbers. Specify ranges of tasks using a dash or a colon. The command **attach all** may be used to attach to all the tasks of the poe application.

0029-2072 Cannot send commands to task: *number* **because it is executing.**

Explanation: It is not possible to send a dbx command to a task that is RUNNING.

User Response: Issue the **group list** or **tasks** command to to make sure the tasks are not RUNNING.

0029-2073 Error creating temporary file *string***.**

Explanation: When starting **pdbx** in attach mode, a temporary host.list file is created, consisting of only the tasks that you selected to attach to. This temporary host.list file is created in /tmp by default, unless you specify a different directory with the TMPDIR environment variable. The naming convention for this file is: </*tmpdir*>/.pdbx.<*poe-pid*>.host.list where </*tmpdir*> is either /tmp, or the directory specified by the TMPDIR environment variable, if it has been defined, and where < *poe-pid*> is the process ID of the poe job to be attached to. The message that you received appears when the temporary host.list file cannot be opened, or when errors are detected while writing to the file.

User Response: Verify that there is enough space available in the /tmp filesystem, or if you have specified a directory with the TMPDIR environment variable, check the filesystem that contains this directory for sufficient space. You may also want to check to be sure that a file of the same name does not already exist.

0029-2075 *string* **:** *number* **- Unable to allocate** *number* **of bytes in** *string***.**

Explanation: Internal error: A memory allocation routine failed because there is not enough memory available. **pdbx** continues processing, but it is likely you will have subsequent problems.

User Response: Start **pdbx** again and try the following:

- Debug your program with a subset of the tasks, or with smaller data segments.
- Contact your System Administrator to increase system resources, if possible.

If you continue to get this error message, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0029-2076 There are no tasks in DEBUG READY state (active).

Explanation: The response to the **active** command is that there are no tasks that are ready to be debugged. This is to say that there are no tasks that are active with respect to the debugger.

User Response: None. This is an informational message.

0029-2077 Command *string* is not valid when using pdbx.

Explanation: **pdbx** does not allow the use of this command.

User Response: Check the IBM Parallel Environment for AIX: Operation and Use manual for a description of commands that are not allowed.

0029-2080 Could not set breakpoint or tracepoint event.

Explanation: A stop or trace event could not be added in the current context.

User Response: Check the IBM Parallel Environment for AIX: Operation and Use manual for information on setting **pdbx** breakpoints and tracepoints.

0029-2081 Cannot set breakpoint or tracepoint event in different source files.

Explanation: **pdbx** will not attempt to set a breakpoint at a line number when in a group context if the group members (tasks) have different current source files.

User Response: Either choose to set events for individual tasks or set the same source file for the whole group.

0029-2082 Could not find a task available for debugger commands in the current context.

Explanation: No tasks in DEBUG READY state were found in the current context. This action requires that a **dbx** command be issued to the remote node, and that the node is not RUNNING. If the task is RUNNING, it is not ready for debugger commands.

User Response: Issue the **group list** or **tasks** to make sure that one or more tasks are ready to be debugged.

0029-2083 The correct syntax is: stop if <condition>
stop at <line-number> [if <condition>]
stop in <procedure> [if <condition>]
stop <variable> [if <condition>]
stop <variable> at <line-number>[if <condition>]
stop <variable> in <procedure>[if <condition>]

Explanation: You issued the **stop** command with the incorrect syntax.

User Response: Re-issue the command using the correct syntax.

0029-2084 Missing argument to the -dbxpromptmod flag.

Explanation: The **-dbxpromptmod** flag requires a text string as an argument. This text string was missing.

User Response: Specify a text string to be used to modify the **dbx** prompt so that it will not collide with your data or program.

0029-2085 The dbx prompt modifier is too long; the maximum length is *number*.

Explanation: The **dbx** prompt modifier string that you specified using the command line **-dbxpromptmod** flag or the **MP_DBXPROMPTMOD** environment variable was too long.

User Response: Reset the **MP_DBXPROMPTMOD** environment variable or retry the **pdbx** command with a shorter string following the **-dbxpromptmod** flag.

0029-2086 Event: *number* cannot be deleted because it does not exist in the specified or current context.

Explanation: You issued the **delete** command with an event number that does not exist in the command context.

User Response: Use the **status** or **status all** command to display the events that are associated with the command context. Re-issue the **delete** command with a valid event.

0029-2087 Task *number* was not deleted, because it is not a member of group *string*.

Explanation: You issued a **group delete group_name member_list** command, but one of the tasks in the **member_list** was not in the group specified.

User Response: To display members of a group issue **group list group_name**.

0029-2088 Attempting to integrate VT trace files before quitting, press <Ctrl-c> to interrupt.

Explanation: You issued a **quit** command and a trace file has been requested for later **vt** processing. You will be given control as soon as the trace file has been written to disk.

User Response: You can cancel the **vt** trace file integration by pressing <Ctrl-c>. This will make the trace information unusable by **vt**.

0029-2090 Cannot reestablish events that were generated from a pdbx select menu.

Explanation: You issued a **group add** command to an existing group or a **hook** command and one or more events in the group or task resulted from a **pdbx** select menu. These events cannot be recreated automatically by **pdbx**.

User Response: You can manually recreate the events using the list in the message that follows this one.

0029-2091 The correct syntax is either 'halt' or 'halt all'.

Explanation: You issued the **halt** command with an incorrect argument. **halt** takes effect on the current command context or the temporary command context when used in combination with the **on** command. The **halt** command attempts to get RUNNING or hung programs under debugger control. This is done by sending interrupts to all tasks that are RUNNING in the current context. When **halt all** is specified, interrupts are sent to all RUNNING tasks, regardless of context.

User Response: Re-issue the **halt** command with no arguments or with **all**.

0029-2100 Specify a decimal number from 1 through *number*, or <Ctrl-c> to exit menu.

Explanation: Syntax that was supplied in response to the select menu is not recognized.

User Response: A command has been issued where the symbol cannot be resolved. Reply to this menu with the correct syntax to further qualify which symbol is to be selected.

0029-2101 Specify a list of space or comma-separated numbers and ranges or an asterisk. A number is a decimal number from 1 through *number*. A range is a dash ('-') separated pair of numbers.An asterisk will select all choices in the menu. A <Ctrl-c> will exit the menu.

Explanation: The syntax that was supplied in response to the select menu was not recognized.

User Response: A command has been issued where the symbol cannot be resolved. Reply to this menu with the correct syntax to further qualify which symbol is to be selected.

0029-2102 The sh command with no arguments is not allowed.

Explanation: You issued the **sh** command with no arguments, which is not allowed.

User Response: Issue the **sh** command with a specific executable name supplied. For example: **sh ls**.

0029-2103 The requested command could not be executed on the specified context because at least one task in that context is currently RUNNING.

Explanation: You can only issue the **on context command** form of the **on** command when there are no tasks RUNNING in the specified context.

User Response: Use the command **group list context** or **tasks** to check the tasks' states. To get all of the tasks in another context under debugger control, issue **on context**, then <Ctrl-c>, then **halt**.

0029-2104 The following command: *string* is unrecognized at the pdbx-subset prompt.

Explanation: You issued a command from the pdbx-subset prompt that is not understood.

User Response: Issue the **help** command at the pdbx-subset prompt for short descriptions or use **man pdbx** to find out which commands are available at the pdbx-subset prompt.

0029-2105 The current context contains at least one RUNNING task. When these RUNNING task(s) reach a breakpoint or complete execution, a pdbx prompt is displayed.

Explanation: You issued the **back** or **halt** command from the pdbx-subset prompt. Some of the tasks in the current context are RUNNING. A **pdbx** prompt will appear when the RUNNING task(s) reach a breakpoint or complete execution.

User Response: Either wait for the **pdbx** prompt or issue a <Ctrl-c> to get a pdbx-subset prompt. You can then issue the **tasks** or **group list** command to view the state of the tasks. The **on** command is available at the pdbx-subset prompt if the user wants to then switch to a different context.

0029-2106 Switching to context: *string*, where there is at least one RUNNING task. When these RUNNING task(s) reach a breakpoint or complete execution, a pdbx prompt is displayed.

Explanation: You issued the command **on context**. The target context has some task(s) that are RUNNING. This is an informational message to let you know that a **pdbx** prompt will not be displayed immediately.

User Response: If you want to switch to a context where all tasks are ready to be debugged, press <Ctrl-c> to obtain a pdbx-subset prompt. You can list the state of tasks using the **tasks** or **group list** command. The **on** command is available at the pdbx-subset prompt if you want to then switch to a different context.

0029-2107 Could not attach to task *number***.**

Explanation: An error occurred while attempting to attach to the task.

User Response: Check the poe application and restart the debugger.

0029-2108 The following RUNNING task(s): *string* **have been interrupted.**

Explanation: The task(s) listed were in RUNNING state. The **halt** command attempted to interrupt them so that a **pdbx** prompt will be issued for the current context.

User Response: After the **pdbx** prompt is issued, further debugger commands can be issued.

0029-2109 No action taken on task(s): *string***, because they have either been stopped by the debugger, finished executing, or have been unhooked.**

Explanation: The tasks listed were not RUNNING. These tasks may already be under the control of the debugger because of a breakpoint or step command. They could also have finished execution or be unhooked.

User Response: None, this is an informational message.

0029-2110 No action has been taken because you specified a task number that was not attached to.

Explanation: A task specified on the **group** or **on** command is not an acceptable value.

User Response: Retry the commnad using only task numbers that you attached to. Use the **tasks** command to display a list of valid task numbers.

0029-2111 Task *number* **has requested exit.**

Explanation: The indicated task has attempted to exit. The program terminates when all tasks have requested exit.

User Response: None. This is an informational message.

0029-2112 The syntax: "on context" is valid at the pdbx-subset prompt, but "on context command" is not.

Explanation: While at the pdbx-subset prompt, the **on context command** form of the **on** command was issued. The only valid form of the **on** command at the pdbx-subset prompt is **on context**.

User Response: Retry the **on** command using syntax: **on context**.

0029-2114 The correct syntax is: '*string***'.**

Explanation: You issued incorrect syntax, and the correct syntax is displayed as part of this message.

User Response: Retype the command using the syntax displayed.

0029-2115 Switching to context: *string***, where there is at least one RUNNING task. When these RUNNING task(s) reach a breakpoint or complete execution, a pdbx prompt is displayed.**

Explanation: You issued the **on context** command at the pdbx-subset prompt. The target context has some tasks that are RUNNING. This is an informational message to let you know that a **pdbx** prompt will not be displayed immediately.

User Response: Either wait for the **pdbx** prompt or issue a <Ctrl-c> to enter get a pdbx-subset prompt. You can then use the **tasks** or **group list** command to view the state of

the tasks. The **on** command is available at the pdbx-subset prompt if you want to then switch to a different context.

0029-2116 Group *string* **has been deleted, because it has no members.**

Explanation: The **group delete** command has been issued. All of the members in the group were specified to be deleted, so the group itself was also deleted.

User Response: None. This is an informational message.

0029-2117 Group *string* **has been deleted.**

Explanation: You issued the **group delete** command and the group has been successfully deleted.

User Response: None. This is an informational message.

0029-2118 No action was taken because task(s): *string* **are currently RUNNING, and because the specified group has breakpoints or tracepoints set for it. Only tasks in the DEBUG READY state can be added to a group which has group breakpoints or tracepoints set.**

Explanation: You issued the **group add** command. This group had some group events (breakpoints or tracepoints) set. When adding a task to this group, the group events will be added for the new task. To add an event, the task must be able to send debugger commands to the remote debugger. In this case, the tasks listed were not in the DEBUG READY state so that remote debugger commands could be issued.

User Response: Use the **tasks** and **group list** commands to view the state of the tasks. To change the state of tasks, use the **halt** command and <Ctrl-c> to bring up a pdbx-subset prompt.

0029-2119 No action was taken because task(s): *string* **are currently RUNNING, and because the specified group has breakpoints or tracepoints set for it. Only tasks in the DEBUG READY state can be deleted from a group which has group breakpoints or tracepoints set.**

Explanation: You issued the **group delete** command. This group had some group events (breakpoints or tracepoints) set. When deleting a task from this group, the group events will be deleted from the deleted task. To delete an event, the task must be able to send debugger commands to the remote debugger. In this case, the tasks listed were not in DEBUG READY state so that remote debugger commands could be issued.

User Response: Use the **tasks** and **group list** commands to view the state of the tasks. To change the state of tasks, use the **halt** command and <Ctrl-c> to bring up a pdbx-subset prompt.

0029-2120 All attached tasks have exited. Type either detach or quit to exit the debugger, and then restart pdbx if you wish to continue debugging. Reminder: quit also causes the poe job to be terminated, while detach does not.

Explanation: All the tasks of the partition have exited.

User Response: Issue the **quit** or **detach pdbx** command.

0029-2121 No action has been taken because the partition is already loaded.

Explanation: You issued the **load** command after the partition was already loaded.

User Response: The **load** command is not valid after the partition has been loaded.

0029-2122 This event cannot be set because task: *number* **is unhooked.**

Explanation: You issued a **trace** or **stop** command against a task that is unhooked. This **pdbx** command requires that the task be in DEBUG READY state.

User Response: You can use the **hook** command to regain debugger control of previously unhooked tasks. Issue the **group list** or **tasks** command to see which tasks are unhooked.

0029-2123 This event cannot be set because some task(s) in the group are unhooked.

Explanation: You issued a **trace** or **stop** command against a group which contains some task(s) that are unhooked.

User Response: The **hook** command can be used to regain debugger control of of previously unhooked tasks. You can create another group which does not contain any tasks that are in the unhooked state.

0029-2124 Could not add event to task: *number***, because it is in state:** *string***.**

Explanation: You issued a **trace** or **stop** command against the task specified in the message. No action was taken on behalf of this task because the task was not in DEBUG READY state.

User Response: If the task is unhooked, the **hook** command will bring the task to DEBUG READY state. If the task is RUNNING, the **halt** command will interrupt the task and bring it to DEBUG READY state. If the task has exited, events cannot be set.

0029-2125 Could not delete event: *number* **from task:** *number***, because it is in state:** *string***.**

Explanation: You issued the **delete** command with the task identified in the message as the current context, but the task was not in DEBUG READY state. The task must be in DEBUG READY state so that the remote debugger can record the fact that the event has been deleted. No action has been taken.

User Response: If the task is unhooked, use the **hook** command to bring it to DEBUG READY state.

0029-2126 Could not delete event: *number* **from task:** *number* **of this group on the remote node, because it is in state:** *string***.**

Explanation: You issued the **delete** command against the current context which is a group. The task listed in the message is a member of this group. No events can be deleted from the task because the task is not in debug ready state. The group event has been deleted on the home node. If the task is unhooked, this event will not be reset when the task is again hooked.

User Response: When the task is again in DEBUG READY state, issue the **on taskid dbx status** command to manually check the event's status on the remote debugger.

0029-2128 The correct syntax is: 'group list [group_name]'.

Explanation: You issued the **group list** with incorrect syntax.

User Response: Reissue the command specifying either **group list** to see the tasks and states which belong to all groups or **group list** followed by a group name to see the tasks and states that belong to a specific group.

0029-2129 No action was taken because the group name contained non-alphanumeric characters.

Explanation: The group name specified was made up of some character(s) that were neither alphabetic nor numeric.

User Response: Choose a group name of at most 32 characters that starts with an alphabetic character and is followed by alphanumeric characters.

0029-2130 No action was taken because the group name specified was null.

Explanation: You issued one of the **group** commands, but no group name was provided.

User Response: Choose a group name of at most 32 characters that starts with an alphabetic character and is followed by alphanumeric characters.

0029-2131 All tasks have exited. Issue quit then restart the debugger if you wish to continue debugging.

Explanation: All the tasks of the partition have exited.

User Response: Issue the **quit** command to exit **pdbx**.

0029-2132 The help command failed because two or more arguments were specified. Issue help for a list of commands and topics that have help. Issue 'help command' or 'help topic' to view the help text.

Explanation: You issued the **help** command with more than one argument.

User Response: Re-issue the **help** command with one argument. Issue **help** alone for a list of valid arguments.

0029-2133 The help command did not recognize the command or topic specified. Issue help for a list of commands and topics that have help. Issue 'help command' or 'help topic' to view the help text.

Explanation: You issued the **help** command with an unrecognized argument.

User Response: Re-issue the **help** command with a valid argument. Issue **help** alone for a list of valid arguments.

0029-9000 pdbx is terminating.

Explanation: **pdbx** is terminating normally.

User Response: Have a nice day.

0029-9036

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Syntax:

pdbx [program [program arguments]] [-c command_file] [-d nesting_depth] [-I directory [-I directory]...] [-F] [-x] [poe options]

pdbx -a poe_process_id [-c command_file] [-d nesting_depth] [-I directory [-I directory]...] [-F] [-x] [poe options]

pdbx -h

Flags:

-a Attaches to a running POE job by specifying its process id. The debugger must be executed from the node from which the POE job was initiated. Note that when using the debugger in attach mode there are some debugger command line arguments that should not be used.

In general, any arguments that control how the partition is set up, or specify program names and arguments, should not be used.

-c Reads startup commands from the specified commands_file.

-d Sets the limit for the nesting of program blocks. The default nesting depth limit is 25.

-F This flag can be used to turn off lazy reading mode. Turning lazy reading mode off forces the remote dbx sessions to read all symbol table information at startup time. By default, lazy reading mode is on. Lazy reading mode is useful when debugging large executable files, or when paging space is low. With lazy reading mode on, only the required symbol table information is read upon initialization of the remote dbx sessions. Because all symbol table information is not read at dbx startup time when in lazy reading mode, local variable and related type information will not be initially available for functions defined in other files. The effect of this can be seen with the "whereis" command, where instances of the specified local variable may not be found until the other files containing these instances are somehow referenced.

-h Writes the pdbx usage to STDERR then exits. This includes pdbx command line syntax and a description of pdbx options.

-I Specifies a directory to be searched for an executable's source files. This flag must be specified multiple times to set multiple paths. (Once pdbx is running, this list can be overridden on a group or single node basis with the 'use' command.)

-x Prevents the dbx command from stripping _ (trailing underscore) characters from symbols originating in FORTRAN source code. This flag enables dbx to distinguish between symbols which are identical except for an underscore character, such as xxx and xxx_.

-tmpdir This POE_option flag is normally associated with Visualization Tool trace collection. It specifies the directory to which output trace files are written. For pdbx, it specifies the directory to which the individual startup files (.pdbxinit.process_id.task_id) are written for each dbx task. This is frequently local, and may be a shared directory. If not set, and if its associated environment variable MP_TMPDIR is not set, the default location is /tmp.

Environment Variables: Because the pdbx command runs in the Parallel Operating Environment, it interacts with the same environment variables associated with the poe command. See the POE manual page for a description of these environment variables. As indicated by the syntax statements, you are also able to specify poe command line options when invoking pdbx. Using these options will override the setting of the corresponding environment variable, as is the case when invoking a parallel program with the poe command.

0029-9039 Cannot read attach configuration file.

Explanation: **pdbx** could not read the attach configuration file, which is created when the original POE job was started, and is removed when the job ends.

User Response:

1. Make sure the correct POE process id was used when invoking the debugger.
2. Check the **/tmp** directory for the existence of a configuration file containing the POE process id. (For example, check **/tmp/.ppe.**<*poe pid*>**.attach.cfg**).

0029-9040 Cannot open attach configuration file.

Explanation: **pdbx** was unable to open the attach configuration file.

User Response:

1. Make sure that the correct POE process id was used when invoking the debugger.
2. Check the /**tmp** directory for the existence of a configuration file containing the POE process id. (For example, check for /**tmp**/**.ppe.34192.attach.cfg**).

0029-9041 Cannot locate attach configuration file "*string***".**

Explanation: **pdbx** was unable to locate the attach configuration file.

User Response:

1. Make sure that the correct POE process id was used when invoking the debugger.
2. Check the /**tmp** directory for the existence of a configuration file containing the POE process id. (For example, check for /**tmp**/**.ppe.34192.attach.cfg**).

0029-9042 No tasks listed in attach configuration file.

Explanation: The attach configuration file created when the original POE job was started contained a zero in the first field indicating that POE is between job steps.

User Response: Wait for the next job step to start which will take a few seconds. Then you can re-enter **pedb** in attach mode, if you wish.

0029-9043 The command "*string***" is not valid when debugging in attach mode.**

Explanation: The command is not valid when debugging in attach mode.

User Response: Use a different command.

0029-9044 Could not write to poe debug socket.

Explanation: **pdbx** was unable to write to the POE debug socket.

User Response: The debugger was unable to communicate to POE that the debugger is detaching. Please note that the debugger will most likely not be able to re-attach to this POE job.

0029-9045 The "detach" command can only be used when running in attach mode.

Explanation: The detach command is only valid if the debugger has been attached to a set of tasks.

User Response: Use quit to exit the debugger if running in normal mode.

0029-9046 The correct syntax is: '*string***'.**

Explanation: You issued incorrect syntax, and the correct syntax is displayed as part of this message.

User Response: Retype the command using the syntax displayed.

0029-9047 An instance of pdbx has already been attached to this POE job.

Explanation: Only one instance of the debugger may be attached to a given POE job at a time. The existence of the **/tmp/.pdbx.**<*"poe-pid"*>**.host.list** file indicates that a debugger has already attached to this POE job.

User Response: If **pdbx** isn't currently attached to the POE job in question, remove the corresponding **/tmp/.pdbx.**<*"poe-pid"*>**.host.list** file in **/tmp**, and try again.

0029-9048 The following flag(s) are not valid when starting the debugger in attach mode - Please check for valid flags and retry.

Explanation: The user attempted to start **pedb** in attach mode with a command line flag(s) that is not valid. The error message is given and the debugger exits.

User Response: The user should check for valid command line flags and try again.

0029-9049 The following environment variables have been ignored since they are not valid when starting the debugger in attach mode - *string*

Explanation: Some of the environment variables the user has set are not valid when starting **pdbx** in attach mode. A message is given indicating what variables have been ignored. The debugger continues.

User Response: Note any environment variable of interest that have been ignored. This message exists to highlight the fact that some of the environment variables that normally have an effect when the POE job is Initially started will not have an affect by having them set when the debugger is invoked for attach.

0029-9999 pdbx is exiting.

Explanation: **pdbx** is terminating due to an error as opposed to a deliberate action. Generally, this message is preceded by a specific message which gives the reason why **pdbx** is quitting prematurely.

User Response: Refer to the message on the screen that precedes this error message.

Chapter 3. pedb Messages

0030-0002 *string* <*number*>**: Data Display data is not attached to data window [***number***][***number***].**

Explanation: Cannot access information to update the data window.

User Response: Further data viewing will be limited.

0030-0013 Range index value *number* **is out of bounds. The index value must be within the range between** *number* **and** *number***.**

Explanation: You have entered an index that is not within the range of acceptable values for the array selected.

User Response: Enter an array range index that is within the range of acceptable values specified at the top of the window.

0030-0014 Minimum array element number is greater than maximum element number.

Explanation: You have entered an array range value for minimum index that is greater than maximum index.

User Response: Re-enter a value for minimum that is within the correct range.

0030-0019 An unrecognized section of the manual has been entered.

Explanation: A string was chosen or typed in to select a section of a manual. The string did not match any of the manual sections listed in the window.

User Response: Correct the string in the choice field so it matches one of sections listed under manual selections, and then press <Enter> or click on the Ok or Apply button. You could also select a section by clicking with the left mouse button on a section listed under manual selections, and then press the Ok or Apply button to bring up the section under InfoExplorer.

0030-0021 An unrecognized online help index has been chosen.

Explanation: A string was chosen or typed in to select a section of the online help. The string did not match any of the online help sections listed in the window.

User Response: Correct the string in the choice field so it matches the entry in the online help sections that you wish to choose, and press <Enter> or click on the Ok or Apply button.

0030-0030 Only array ranges with up to 1000 elements can be specified.

Explanation: You have specified an array range that would select more than the maximum allowable array elements. You may only look at a maximum of 1000 elements at a time even if the array is larger than that.

User Response: Either enter values for minimum and maximum that define a smaller range of elements, or use a larger value for stride to select fewer array elements within the sub-range.

0030-0033 No source file is available for task: *number***.**

Explanation: **pedb** could not locate a source file to correspond with where the program on this task is stopped. Consequently no source file for this task will appear in the source file window.

User Response: **pedb** processing will continue. You can select a source file using the Get Source File option from the File pulldown or by double clicking on a stack entry which contains a source file name.

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0030-0034 No source file is available to edit.

Explanation: **pedb** could not locate a source file to edit. Pressing the edit button causes an edit window to be displayed containing the file that is currently displayed in the **pedb** source window. Since there is no source file to edit, the edit window will not be displayed.

User Response: Normal **pedb** processing will continue.

0030-0035 No task(s) selected.

Explanation: The context has not been set to a task or a task group.

User Response: Press a task or group button to set the current context.

0030-0036 The STOP function is not available, since pedb is not in PLAY mode.

Explanation: The STOP function is only available when PLAY mode is active. Its purpose is to cancel PLAY mode. The case may be that the stop button was pressed while play mode was in the process of stopping.

User Response: None. This is an informational message.

0030-0041 Cannot send a request to the remote debugger when a task is RUNNING or PLAYING. No action has been taken on any task.

Explanation: **pedb** cannot process your request when the task of the current context is RUNNING or PLAYING. You may have tried to create or delete breakpoints, or tried to press the single step or continue buttons. **pedb** can only process requests when the task is in DEBUG READY state.

User Response: You should resend the request when the task is in DEBUG READY state.

0030-0043 Cannot send a request to the following task(s): *string***. No action has been taken on these tasks.**

Explanation: A request has been issued for all tasks in the current context. **pedb** cannot process your request until all tasks in the current context are in DEBUG READY state. Setting or deleting breakpoints, clicking on STEP OVER, STEP INTO or CONTINUE are examples of actions that cause requests to be sent to all tasks in the current context. You may have tried to to create or delete breakpoints, or tried to press the single step or continue buttons. **pedb** can only process requests when all tasks in the current context are in DEBUG READY state, otherwise, the request is ignored.

User Response: Resend the request when all tasks in the current context are in DEBUG READY state, or change to a context that meets this criteria.

0030-0044 Shell script *string* **could not be located, or can not be executed.**

Explanation: The named shell script could not be located in the default directory, /usr/lpp/ppe.pedb/bin or the user directory if specified by environment variable MP_DEBUG_BIN_DIR.

User Response: Verify that the script is available and has the appropriate permissions to be executed by your login. If MP_DEBUG_BIN_DIR is set, make sure that the named script exists and has the proper permissions or that it does not exist so that the default script supplied with the debugger can be executed.

0030-0050 An invalid value: *string* was specified for the Play Delay. Please enter non-negative integer value. If you click on Cancel, the new delay field will be reset to the previous value of *number*.

Explanation: An invalid value for the play delay has been entered. Only non-negative integers are valid.

User Response: Specify a non-negative integer value for the play delay in tenths of seconds.

0030-0051 *string number*: Could not resolve mouse selection to a stack entry.

Explanation: Internal error: You have double-clicked on an entry in a stack window and **pedb** cannot resolve your selection to a call stack index. No action has been taken. **pedb** continues processing.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0030-0052 Cannot read attach configuration file.

Explanation: **pedb** could not read the attach configuration file, which is created when the original POE job was started, and is removed when the job ends.

User Response:

1. Make sure the correct POE process id was used when invoking the debugger.
2. Check the /tmp directory for the existence of a configuration file containing the POE process id. (For example, /tmp/.ppe.<poe pid>.attach.cfg).

0030-0053 No tasks listed in attach configuration file.

Explanation: The attach configuration file created when the original POE job was started contained a zero in the first field indicating that POE is between job steps.

User Response: Wait for the next job step to start, which takes a few seconds. Then you can re-enter **pedb** in attach mode, if you wish.

0030-0054 Cannot open attach configuration file.

Explanation: **pedb** was unable to open the attach configuration file.

User Response:

1. Make sure the correct POE process id was used when invoking the debugger.
2. Check the /tmp directory for the existence of a configuration file containing the POE process id. (For example, /tmp/.ppe.34192.attach.cfg).

0030-0055 You are not allowed to delete group Attached.

Explanation: The default group when running in attach mode, (Attached), is not allowed to be deleted.

User Response: None. This is an informational message.

0030-0056 Missing or invalid argument to -a flag. For information on the correct syntax to use when invoking pedb, type: pedb –h

Explanation: The **-a** flag requires an integer argument specifying the process identifier of the POE process.

User Response: Specify the POE process id when using the **-a** flag. For example, specify **pedb -a 34192**.

0030-0057 Task *number* **has been detached.**

Explanation: A reply was received from the debug engine (dbe) that indicated the specified task has been detached.

User Response: None. This is an informational message.

0030-0058 Attached to task *number***.**

Explanation: The specified task has been attached by the debugger.

User Response: None. This is an informational message.

0030-0059 Debugger attached and ready.

Explanation: All the specified tasks have been attached, and you are able to start debugging.

User Response: None. This is an informational message.

0030-0062 The following flag(s) are not valid when starting the debugger in attach mode - '*string* **'. Please check for valid flags and retry.**

Explanation: The user attempted to start **pedb** with a command line flag(s) that is not valid. The error message is given and the debugger exits.

User Response: The user should check for valid command line flags and try again.

0030-0063 The following environment variables have been ignored since they are not valid when starting the debugger in attach mode - '*string* **'.**

Explanation: Some of the environment variables the user has set are not valid when starting **pedb** in attach mode. A message is given indicating what variables have been ignored. The debugger continues.

User Response: Note any environment variable of interest that have been ignored. This message exists to highlight the fact that some of the environment variables that normally have an effect when the POE job is initially started will not have an affect by having them set when the debugger is invoked for attach.

0030-0064 Error creating temporary file *string***.**

Explanation: When starting **pedb** in attach mode, a temporary host.list file is created, consisting of only the tasks that you selected to attach to. This temporary host.list file is created in /tmp by default, unless you specify a different directory with the TMPDIR environment variable. The naming convention for this file is: </*tmpdir*>/.pedb.< *poe-pid*>.host.list where </*tmpdir*> is either /tmp, or the directory specified by the TMPDIR environment variable, if it has been defined, and where < *poe-pid*> is the process ID of the poe job to be attached to. The message that you received appears when the temporary host.list file cannot be opened, or when errors are detected while writing to the file.

User Response: Verify that there is enough space available in the /tmp filesystem, or if you have specified a directory with the TMPDIR environment variable, check the filesystem that contains this directory for sufficient space. You may also want to check to be sure that a file of the same name does not already exist.

0030-0065 Could not open socket for debugger to communicate with poe.

Explanation: The socket() call failed when the debugger tried to set up communications with POE.

User Response: Debugging can continue except that the information about synchronized exit will not be passed back to the debugger from the POE job. Please note that the debugger will most likely not be able to re-attach to this POE job after detaching.

0030-0066 Could not make socket connection to poe.

Explanation: The connect() call failed when the debugger tried to set up communications with POE. The information about a synchronized exit is not passed back to the debugger from the POE job.

User Response: You can continue debugging with limited function. Please note that the debugger probably cannot re-attach to this POE job after detaching.

0030-0067 Could not read message from poe.

Explanation: **pedb** was unable to read data from the POE debug socket.

User Response: Debugging can continue except that the information about synchronized exit may not be passed back to the debugger from the POE job. Please note that the debugger will most likely not be able to re-attach to this POE job after detaching.

0030-0068 Could not write to poe debug socket.

Explanation: **pedb** was unable to write to the POE debug socket.

User Response: The debugger was unable to communicate to POE that the debugger is detaching. Please note that the debugger will most likely not be able to re-attach to this POE job.

0030-0069 An instance of pedb has already been attached to this poe job.

Explanation: Only one instance of the debugger may be attached to a given POE job at a time. The existence of the /tmp/.pedb.<*poe-pid*>.host.list file indicates that **pedb** has already attached to this POE job.

User Response: If **pedb** isn't currently attached to the POE job in question, remove the corresponding .pedb.<*poe-pid*>.host.list file in /tmp, and try again.

0030-0070 Could not locate poe configuration file - '*string***'.**

Explanation: **pedb** was unable to locate the POE configuration file.

User Response: Check to see if the desired POE job is running and if the configuration file was created in /tmp. (For example, check for a /tmp/.ppe.34192.attach.cfg file, where 34192 would be the process id of the POE job.

0030-0071 The information in the poe configuration file has been modified and therefore the old information is no longer valid. This is most likely due to a poe job step ending.

Explanation: The POE configuration file, /tmp/.ppe.<*poe-pid*>.attach.cfg, was modified.

User Response: Restart the debugger in attach mode to debug the next POE job step.

0030-0072 All tasks have exited. Select Ok to detach.

Explanation: All the tasks in the partition have completed program execution. Selecting Ok causes **pedb** to detach from the program and exit. An alternative would be to click on Cancel and then select the Quit option from the File pulldown menu. Please note that this method would kill the POE job as well as causing **pedb** to exit.

User Response: As mentioned above, clicking on this window, and then select the File->Quit option to kill the program and exit the debugger.

0030-0073 Missing or invalid argument following the –l flag. For information on the correct syntax to use when invoking pedb, type: pedb –h

Explanation: The **–l** flag requires the name of a directory that **pedb** will search for source code files. This argument was missing or invalid.

User Response: Specify the name of a directory following the **–l** flag. This directory should be available to each task in your partition because the **–l** flag will be passed to each remote **dbx** debugger.

0030-0074 Missing or invalid argument following the –d flag. For information on the correct syntax to use when invoking pedb, type: pedb –h

Explanation: The **–d** flag requires an integer argument that specifies the nesting depth limit of program blocks.

User Response: Specify an integer. Note that this overrides the default nesting depth limit of 25 program blocks.

0030-0100 The Load command is ignored because the task *number* **is already loaded.**

Explanation: This task has already been loaded with a program.

User Response: If the wrong executable has been loaded for a particular task then **pedb** will have to be restarted.

0030-0101 Your program has been loaded.

Explanation: This message is issued when your program has been loaded into the tasks in the partition. This message indicates all the functions available in **pedb** are available for you to use.

User Response: When this message is displayed, you can start debugging on all tasks in the partition.

0030-0104 Cannot find executable '*string***'.**

Explanation: **pedb** could not find the specified executable file.

User Response: Check that the name and path of the program to be debugged are entered correctly, and verify that the file has the proper permissions.

0030-0105 Cannot execute '*string***'.**

Explanation: The file to be debugged is not executable by this userid.

User Response: Check the file permissions, and the results of the **id** command to ensure that you can execute the file. You may have to change your group or the file permissions.

0030-0107 Press a task or group button, because there is no current context.

Explanation: There is no defined context to execute on.

User Response: Select a context and re-execute the function.

0030-0109 *string* **searched to the top/end of the file and did not find** *string*

Explanation: This message is formatted dynamically from the string you are searching for, and the direction of the search. Message format is:

Searched to the <limit> of the file and did not find <string>.

For example: User specifies a string of my_variable in this find window. If using the First or Next option, the message text will be: Searched to the end of the file and did not find my_variable. If using Previous or Last, the message text will be: Searched to the top of file and did not find my_variable

User Response: Try specifying a different string or use the case sensitive button to ignore case when searching. To search from a different starting point in the text, scroll to that general area, and then left click on the desired starting line.

0030-0110 No source file is available for task: *string***, thread:** *string***.**

Explanation: **pedb** could not locate a source file to correspond with where the program on this task and thread is stopped. Consequently no source file for this task and thread will appear in the source file window.

User Response: **pedb** processing will continue. You can select a source file using the Get Source File option from the File pull-down or by double clicking on a stack entry which contains a source file name.

0030-0111 Could not locate source file: *string* **for task:** *string***, thread:** *string***.**

Explanation: **pedb** could not locate a source file to correspond with the current program state in this task and thread. Consequently no source file for this task and thread will appear in the source file window.

User Response: Check the source file search path and file permissions. **pedb** processing will continue.

0030-0112 Unable to open file *string* **for task** *string***, thread** *string***.**

Explanation: **pedb** was not able to open the file for reading or determined that the selected file was not a regular file (such as a directory or device).

User Response: This typically occurs when manually selecting a new source file for the source window. In this case, the user should check that the filename is valid and the proper permissions are in effect to allow it to be read. If this message occurs because the debugger stopped in a new source file, one may also want to check the source search path using the Source Path window under File on the menu bar. **pedb** will display no source if it stops in a file it cannot read.

0030-0113 Source file: *string* **on task:** *string***, thread** *string* **is larger than the maximum allowable size, which is 65534 lines.**

Explanation: **pedb** could not load the entire source file into the buffer used to process the Source File window. If you started **pedb** in normal mode, both **pedb** and the program will terminate. If you are using **pedb** in attach mode, **pedb** will detach from the program and exit, but the program will not be terminated.

User Response: If you want the ability to debug all the source code for this program, split the code into multiple files, with each file being less than 65535 lines. After completing this, recompile the program.

0030-0114 Array *string* **on task** *string***, thread** *string* **has a different number of dimensions. It is excluded from the export.**

Explanation: The array with a matching array name on the specified task and thread does not meet the match criteria and is excluded from the export.

User Response: The user must be aware of the match criteria when trying to allow multiple matching arrays to exported at the same time. For more information, see the *IBM Parallel Environment for AIX: Operation and Use, Volume 1* and *IBM Parallel Environment for AIX: Operation and Use, Volume 2*.

0030-0115 Array *string* **on task** *string***, thread** *string* **has a different minimum range. It is excluded from the export.**

Explanation: The array with a matching array name on the specified task and thread does not meet the match criteria and is excluded from the export.

User Response: The user must be aware of the match criteria when trying to allow multiple matching arrays to exported at the same time. For more information, see the *IBM Parallel Environment for AIX: Operation and Use, Volume 1* and *IBM Parallel Environment for AIX: Operation and Use, Volume 2*.

0030-0116 Array *string* **on task** *string***, thread** *string* **has matched. It is included in the export.**

Explanation: This informational message indicates that this particular array has met the match criteria and will be included in the export.

User Response: Continue normal pedb operations because this message indicates successful processing.

0030-0117 No matching array found on task *string***, thread** *string***.**

Explanation: No arrays that meet any of the matching criteria have been found on this task and thread.

User Response: The user must be aware of the match criteria when trying to allow multiple matching arrays to exported at the same time. For more information, see the *IBM Parallel Environment for AIX: Operation and Use, Volume 1* and *IBM Parallel Environment for AIX: Operation and Use, Volume 2*.

0030-2075 *string number***: Unable to allocate** *number* **of bytes in** *string*

Explanation: Internal error: A memory allocation routine failed because there is not enough memory available. **pedb** continues processing, but it is likely you will have subsequent problems.

User Response: Start **pedb** again and try the following:

- Debug your program with a subset of the tasks, or with smaller data segments.
- Start your program, and use **pedb** to attach to a smaller set of tasks that are most interesting to you.
- Contact your System Administrator to increase system resources, if possible.

If you continue to get this error message, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0030-2204 Could not find event number for *string* **when parsing break/trace information.**

Explanation: An internal error occurred when parsing breakpoint or tracepoint information. **pedb** was unable to find the event number associated with the breakpoint or tracepoint.

User Response: Retry the previous breakpoint or tracepoint action. If you continue to get this error message, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0030-2205 Only *number* **breakpoints allowed per view.**

Explanation: The maximum number of breakpoint per view has been reached.

User Response: Select another view to define additional breakpoints, or remove some breakpoints that are no longer needed, and then retry setting the breakpoint.

0030-2208 Task *number* **has exited.**

Explanation: The task has exited and can no longer be contacted. No further debugging of the program on this task is allowed in this session.

User Response: None. This is an informational message.

0030-2209 Task *number* **has requested exit.**

Explanation: The indicated task has attempted to exit. The program terminates when all tasks have requested exit.

User Response: None. This is an informational message.

0030-2212 The group was not added because the first character in the group name specified was not an alphabetic character.

Explanation: The new group name specified in the Add Group Window started with a character that was not alphabetic.

User Response: Provide a group name that is no longer than 32 characters, which starts with an alphabetic character, and is followed by any alphanumeric combination.

0030-2213 The group was not added because the group name contained non-alphanumeric characters.

Explanation: The new group name specified in the Add Group Window was made up of some character(s) that were neither alphabetic nor numeric.

User Response: Provide a group name that is no longer than 32 characters, which starts with an alphabetic character, and is followed by any alphanumeric combination.

0030-2214 The group was not added because the new group name is longer than the maximum group name length of *number***.**

Explanation: The new group name specified in the Add Group Window is longer than the maximum allowed name length.

User Response: Provide a group name that is no longer than 32 characters, which starts with an alphabetic character, and is followed by any alphanumeric combination.

0030-2215 The group was not added because the group name specified was empty.

Explanation: When attempting to add a new group, the group name was not specified.

User Response: Provide a group name that is no longer than 32 characters, which starts with an alphabetic character, and is followed by any alphanumeric combination.

0030-2216 Group *string* **already exists.**

Explanation: When attempting to add a new group, the name of an existing group was specified.

User Response: Provide a unique group name.

0030-2217 The maximum number of groups has been reached.

Explanation: When attempting to add a new group, the total number of groups exceeded the maximum allowed.

User Response: Delete unwanted groups to make room for new ones.

0030-2218 There were no free group structures.

Explanation: When attempting to add a new group, there were no free group structures.

User Response: Delete unwanted groups to make room for new ones.

0030-2219 No members were chosen.

Explanation: When attempting to add a new group, you didn't choose any tasks as it's members.

User Response: Select members for the new group.

0030-2220 Too many members were specified.

Explanation: When attempting to add a new group, there were too many members chosen.

User Response: Select fewer members for the new group.

0030-2221 Cannot delete group ALL.

Explanation: Removing the group ALL is not allowed.

User Response: None. This is an informational message.

0030-2222 A group cannot be deleted if it is the current context in any view.

Explanation: Removing a group if it is the current context is not allowed.

User Response: Change the context in all views to something other than the group that is to be deleted.

0030-2223 The attempt to delete group: *string* **failed because the group was not found.**

Explanation: When attempting to remove a group, you specified a group name that doesn't exist.

User Response: Check for the proper group name and try again.

0030-2224 The partition is not yet loaded.

Explanation: Informational message indicating that your program has not yet been loaded onto the tasks in the partition.

User Response: If you specified the program name on the **pedb** command line, wait until all of the tasks have been loaded with your program before starting to debug. If you did not specified the program name on the **pedb** command line, use the Load Executables option from the File pulldown menu to load one or more programs.

0030-2226 The task *number* **has been unhooked, and now the program running on that task is no longer under control of the debugger.**

Explanation: The task has been unhooked, and now the program running on that task is no longer under control of the debugger.

User Response: None. This is an informational message.

0030-2227 Source file *string* **is newer than the object file being debugged.**

Explanation: **pedb** detected a source file that appears to be newer than the executable file being debugged. If the file was changed since the executable file was built, the code displayed in the source window will not match the object.

User Response: If one of the source files has been changed, quit the debugger and recompile. This will insure that movement through the program will be correctly depicted in the source area of **pedb**. If the modification time of the source file is due to copying or tar'ing

the file there should not be any mismatch between the actual position in the program and the displayed in the source area. In this case, updating the modification time of the executable with the touch command will prevent this message from appearing.

0030-2228 Loading global variable list...

Explanation: A global variable list is being loaded.

User Response: None. This is an informational message.

0030-2229 Complete ...

Explanation: The status of the previously posted message is complete.

User Response: None. This is an informational message.

0030-2230 No Items were selected.

Explanation: The user selected Apply or Ok on the Variable Selection window without choosing any variables to be displayed.

User Response: None. This is an informational message.

0030-2232 Could not locate source file: *string* **for task:** *number***.**

Explanation: **pedb** could not locate a source file to correspond with the current program state in this task. Consequently no source file for this task will appear in the source file window.

User Response: Check the source file search path and file permissions. **pedb** processing will continue.

0030-2234 Unable to open file *string* **for task** *number***.**

Explanation: **pedb** was not able to open the file for reading or determined that the selected file was not a regular file (for example, a directory or device).

User Response: This typically occurs when manually selecting a new source file for the source window. In this case, the user should check that the filename is valid and the proper permissions are in effect to allow it to be read. If this message occurs because the debugger stopped in a new source file, one may also want to check the source search path using the Source Path window under File on the menu bar. **pedb** will display no source if it stops in a file it can not read.

0030-2235 Source file: *string* **on task:** *string* **is larger than the maximum allowable size, which is 65534 lines.**

Explanation: **pedb** could not load the entire source file into the buffer used to process the Source File window. If you started **pedb** in normal mode, both **pedb** and the program will terminate. If you are using **pedb** in attach mode, **pedb** will detach from the program and exit, but the program will not be terminated.

User Response: If you want the ability to debug all the source code for this program, split the code into multiple files, with each file being less than 65535 lines. After completing this, recompile the program.

0030-2236 Unknown source file suffix: *character***, assuming c.**

Explanation: The source file had a suffix that was not recognized as a character that represented a language. **pedb** assumes the source file was written in C. This is the default. Note that some language constructs that are unique to the C language are used on this file.

User Response: The source file could be renamed if appropriate.

0030-2238 Incorrectly formed member list. No tasks have been added to the group. A member list can contain space or comma separated task numbers, or ranges of task numbers separated by colons or dashes.

Explanation: The range of task numbers is incorrectly specified.

User Response: Consult the manual pages for how to create groups in **pedb** and re-specify the selection. For more information, see the IBM Parallel Environment for AIX: Operation and Use manual.

0030-2240 No executable name was entered.

Explanation: The Ok was pressed in the Load Executables window without entering or selecting a program name.

User Response: Re-open the Load Executables window and enter a program name.

0030-2241 Task *number* **loaded with** *string string***.**

Explanation: Describes what executable and arguments were loaded for a particular task.

User Response: None. This is an informational message.

0030-2242 Unable to send command to task '*number* **'.**

Explanation: An error occurred in sending an **pedb** command to the indicated task. Probably the remote node is no longer accessible.

User Response: Verify that the remote node in the partition can be contacted by other means. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0030-2243 No more new views are available.

Explanation: During an **pedb** session there is a limit to how many views can be created. Also, once a view has been closed it cannot be reopened.

User Response: You can use the views that are left to continue debugging.

0030-2244 ALL tasks have exited. Quit and restart pedb if you wish to continue.

Explanation: All the tasks of the partition have exited.

User Response: Quit **pedb**.

0030-2245 Internal pedb error at line *number* **in file '***string* **'.** *string*

Explanation: This is a generic message to mark a situation that should not have occurred.

User Response: Retry the operation or restart **pedb**. If you continue to get this error message, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0030-2246 Cannot perform this function in a context unless all the tasks are in DEBUGGED state.

Explanation: This is a generic message to mark a situation in which a function could not be performed because not all tasks in the context were in DEBUGGED state.

User Response: Switch to a context where all tasks are in DEBUGGED state.

0030-2250 Task *number* **has been sent halt execution.**

Explanation: Halt execution for this task has been selected. This task was running and a request to the remote debugger has been made to stop the task.

User Response: If the remote debugger is able to regain control over the task, the user should be able to continue debugging this task with **pedb**.

0030-2257 Tasks: *string* **in group:** *string* **have been sent halt execution.**

Explanation: Halt execution for this group has been selected. For each task in the group that was running, a request to the remote debugger has been made to stop the task.

User Response: You will be able to continue debugging on the tasks that the remote debugger is able to regain control over.

0030-2259 Unable to write to the directory *string***.**

Explanation: **pedb** was not able to write to the directory specified. This is the directory that is used to write the temporary files used in visualization.

User Response: Check the permissions of the directory. **pedb** uses this directory for temporary files. The default is /tmp. This can be overridden using the MP_TMPDIR environment variable.

0030-2260 Unable to parse the stack trace, placing task: *number* **in exited state.**

Explanation: A message was issued indicating that a trace table was unavailable for the function that contains the current program counter.

User Response: Further debugging of this task will be limited.

0030-2261 Task number is out of range.

Explanation: A task specified on a Select by Range window is not not within the acceptable range of values between 0 and the highest task number in your partition.

User Response: Retry the range specification using only task numbers between 0 and one less than the value of **-procs** or MP_PROCS (since the first task is number 0).

0030-2262 One or more tasks have not been attached and therefore could not be selected.

Explanation: One or more tasks specified on a Select by Range window have not been attached and therefore could not be selected.

User Response: Make sure the desired tasks have been attached. Adjust selection criteria as necessary.

0030-2263 HDF Failure: Unable to write array data type.

Explanation: An error has occurred while trying to write the data type to the HDF file. You may encounter this error when the HDF file is corrupted or when your file system is full.

User Response: Select a different file to export to and check file system space.

0030-2264 HDF Failure: Unable to write array dimensions.

Explanation: An error has occurred while trying to write the array dimensions to the HDF file. You may encounter this error when the HDF file is corrupted or when your file system is full.

User Response: Select a different file to export to and check file system space.

0030-2265 HDF Failure: Unable to write optional notes for dimension *number***.**

Explanation: An error has occurred while trying to write the optional notes to the HDF file. You may encounter this error when the HDF file is corrupted or when your file system is full.

User Response: Select a different file to export to and check file system space.

0030-2266 HDF Failure: Unable to write file label.

Explanation: An error has occurred while trying to write the file label to the HDF file. You may encounter this error when the HDF file is corrupted or when your file system is full.

User Response: Select a different file to export to and check file system space.

0030-2267 HDF Failure: Unable to write array slice.

Explanation: An error has occurred while trying to write the array slice to the HDF file. You may encounter this error when the HDF file is corrupted or when your file system is full.

User Response: Select a different file to export to and check file system space.

0030-2268 HDF Failure: Unable to close writing to file *string***.**

Explanation: An error has occurred while trying to close writing of array slices to the HDF file. You may encounter this error when the HDF file is corrupted or when your file system is full.

User Response: Select a different file to export to and check file system space.

0030-2269 HDF Failure: Unable to start writing to file *string***.**

Explanation: An error has occurred while trying to open writing of array slices to the HDF file. You may encounter this error when the HDF file is corrupted or when your file system is full.

User Response: Select a different file to export to and check file system space.

0030-2270 Overwriting HDF file *string***.**

Explanation: The file selected for export will be overwritten.

User Response: None. This is an informational message.

0030-2271 Appending to HDF file *string***.**

Explanation: The file selected for export will be appended to.

User Response: None. This is an informational message.

0030-2272 A non-integer value has been entered for the array range.

Explanation: A non-integer value was entered in text field the specifies the minimum/maximum array range.

User Response: Enter an integer value.

0030-2273 The value entered is less than the minimum range. Enter a minimum value greater than or equal to *number***.**

Explanation: The minimum value range is less than the allowable minimum.

User Response: Enter a minimum value greater than or equal to the minimum index of the array.

0030-2274 Unable to open the file *string* for exporting.

Explanation: **pedb** was not able to open the file for writing or determined that the selected file was not a regular file (such as a directory or device).

User Response: Check the permissions or type of the file that was selected. Make the appropriate modifications to the selected file to allow Exporting.

0030-2275 Unsupported Export Data type.

Explanation: The type of the array variable is not supported by this release.

User Response: See the list of supported data types.

0030-2276 A non-integer value has been entered for the stride.

Explanation: A non-integer value was entered in text field the specifies the stride value.

User Response: Enter an integer value.

0030-2277 Zero has been entered for the stride. Enter a non-zero integer value.

Explanation: The stride value must be an non-zero integer.

User Response: Enter an integer value that is non zero.

0030-2278 HDF Failure: Unable to close writing to Scientific Data Set

Explanation: An error has occurred while trying to close writing of array slices to the HDF file. You may encounter this error when the HDF file is corrupted or when your file system is full.

User Response: Select a different file to export to and check file system space.

0030-2279 Export request list had no tasks

Explanation: This is an internal error. The list for exporting array information should contain at least one task.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0030-2280 A non-integer value has been entered for the minimum range text field.

Explanation: A non-integer value was entered in text field the specifies the minimum array range.

User Response: Enter an integer value.

0030-2281 A non-integer value has been entered for the maximum range text field.

Explanation: A non-integer value was entered in text field the specifies the maximum array range.

User Response: Enter an integer value.

0030-2282 The integer value entered for the minimum text field is outside the allowable range of integers.

Explanation: The integer value entered is larger or smaller than the allowable range, which is defined by the largest and smallest integer value.

User Response: Enter an integer within the range of the largest and smallest integer value.

0030-2283 The integer value entered for the maximum text field is outside the allowable range of integers.

Explanation: The integer value entered is larger or smaller than the allowable range, which is defined by the largest and smallest integer value.

User Response: Enter an integer within the range of the largest and smallest integer value.

0030-2284 The integer value entered for the stride text field is outside the allowable range of integers.

Explanation: The integer value entered is larger or smaller than the allowable range, which is defined by the largest and smallest integer value.

User Response: Enter an integer within the range of the largest and smallest integer value.

0030-2285 Task *number* **is not in DEBUG state. It is excluded from the export.**

Explanation: A task must be in DEBUG state to be able to participate in an export.

User Response: If the user does not care that the task was excluded from the multi array export, the message can be ignored. If the user wants the array from the task to be included in the export, the user must put the task in DEBUG state prior to exporting.

0030-2286 Array *string* **on task** *number* **has a different number of dimensions. It is excluded from the export.**

Explanation: The array with a matching array name on the specified task does not meet the match criteria and is excluded from the export.

User Response: The user must be aware of the match criteria when trying to allow multiple matching arrays to exported at the same time. For more information, see the IBM Parallel Environment for AIX: Operation and Use manual.

0030-2287 Array *string* **on task** *number* **has a different minimum range. It is excluded from the export.**

Explanation: The array with a matching array name on the specified task does not meet the match criteria and is excluded from the export.

User Response: The user must be aware of the match criteria when trying to allow multiple matching arrays to exported at the same time. For more information, see the IBM Parallel Environment for AIX: Operation and Use manual.

0030-2288 Array *string* **on task** *number* **has matched. It is included in the export.**

Explanation: This informational message indicates that this particular array has met the match criteria and will be included in the export.

User Response: Continue normal pedb operations because this message indicates successful processing.

0030-2289 No matching array found on task *number***.**

Explanation: No arrays that meet any of the matching criteria have been found on this task.

User Response: The user must be aware of the match criteria when trying to allow multiple matching arrays to exported at the same time.

0030-2290 Could not run the executable for task *number***.**

Explanation: The application for the given task encountered a signal when an attempt was made to run it.

User Response: This depends on the signal that was encountered, which was given by a previous message. If it was signal 9 there is a good chance that the executable was compiled under an old release and needs to be recompiled.

0030-2291 You cannot Export at this time because task: *number* **is running.**

Explanation: A task must be in debug state to be able to participate in an export. You have issued a command that put the task in a running state after the export window for the array was opened.

User Response: To export using this window you must allow the task to continue until a debug state has been reached. This can be done by waiting for a running task to return, or if it is blocked, by stepping other tasks or pressing the halt button.

0030-2292 You cannot Export at this time because the program stack has changed since you created this window. The chosen array is out of scope.

Explanation: The array that was chosen in the Export window is no longer within scope. The program stack has changed due to an execution command, such as **step** or **continue**. The array chosen may longer exist due to scoping rules.

User Response: If the array chosen by the Export window can no longer be reached by stepping program execution back into the function or subroutine, the window is no longer useful and should be cancelled. If the function or subroutine can be reentered by controlling program execution, this window can be used when the scope of the variable is consistent with the program stack.

0030-2293 You cannot Visualize at this time because task: *number* **is running.**

Explanation: A task must be in debug state to be able to participate in an visualization. You have issued a command that put the task in a running state after the visualization window for the array was opened.

User Response: To visualize using this window you must allow the task to continue until a debug state has been reached. This can be done by waiting for a running task to return, or if it is blocked, by stepping other tasks or pressing the halt button.

0030-2294 You cannot Visualize at this time because the program stack has changed since you created this window. The chosen array is out of scope.

Explanation: The array that was chosen in the Visualization window is no longer within scope. The program stack has changed due an execution command, such as step or continue. The array chosen may longer exist due to scoping rules.

User Response: If the array chosen by the Visualization window can no longer be reached by stepping program execution back into the function or subroutine, the window is no longer useful and should be cancelled. If the function or subroutine can be reentered by controlling program execution, this window can be used when the scope of the variable is consistent with the program stack.

0030-2295 You cannot view the Array Subrange at this time because task: *number* is running.

Explanation: A task must be in debug state to be able to view an array subrange. You have issued a command that put the task in a running state after the Array Subrange window for the array was opened.

User Response: To view array subranges using this window you must allow the task to continue until a debug state has been reached. This can be done by waiting for a running task to return, or if it is blocked, by stepping other tasks or pressing the halt button.

0030-2296 You cannot view the array subrange at this time because the program stack has changed since you created this window. The chosen array is out of scope.

Explanation: The array that was chosen in the Array Subrange window is no longer within scope. The program stack has changed due an execution command, such as step or continue. The array chosen may longer exist due to scoping rules.

User Response: If the array chosen by the Array Subrange window can no longer be reached by stepping program execution back into the function or subroutine, the window is no longer useful and should be cancelled. If the function or subroutine can be reentered by controlling program execution, this window can be used when the scope of the variable is consistent with the program stack.

0030-3001 Task *number*: Unable to find variable

Explanation: The remote debug engine was unable to locate information about the variable.

User Response: None.

0030-3003 Task *number*: Invalid expression ID

Explanation: Internal error. The remote debug engine was unable to map the given expression id.

User Response: None.

0030-3005 Task *number*: Unsupported request code

Explanation: Internal error. The remote debug engine was unable to recognize the request code.

User Response: Debugging can most likely continue, but will possibly be limited. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0030-3006 Task *number*: Expression name is not valid

Explanation: The remote debug engine was unable to find the scope in which the expression name resided.

User Response: None.

0030-3008 Task *number*: Unable to find program to be debugged - check path and name on server

Explanation: The remote debug engine was unable to find the application to be debugged.

User Response: Verify that the executable is available on all nodes in the partition in the pathname specified or in the executable search path on the node.

0030-3014 Task *number***: ReplyExpression(): Internal error returned from unknown callee.**

Explanation: Received an error code from a routine that ReplyExpression() called but there was no additional information to pass on.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0030-3015 Task: *number* **encountered signal:** *number* **-** *string*

Explanation: The application encountered a signal of the type specified.

User Response: None. This is an informational message.

0030-3016 Task: *number* **has stopped due to a halt execution request.**

Explanation: This task has been interrupted via a halt execution request. The current program counter is likely at a location where the code has not been compiled with **-g**, thus portions of the display may be empty. The halt execution function is implemented with signal SIGINT. If the program has a SIGINT signal handler control will return to the SIGINT signal handler when execution is resumed.

User Response: Selecting entries on the stack may be useful to view local variables in the scopes of the call chain. Execution of this task can be continued via the vcr buttons.

0030-3017 Task *number***: No current file name was found, so no local variables are available. The executable may not have been compiled with -g.**

Explanation: While attempting to display local variables for the current or selected function, the owning source file could not be found. Not enough information is available to build a local variable list. **pedb** continues processing.

User Response: If this area of the code is of interest, you should recompile the containing object with the **-g** compiler option, then re-invoke **pedb**.

0030-3018 Task *number***: No current function name was found, so no local variables are available. The executable may have been stripped.**

Explanation: While attempting to display local variables for the current function no function name could be found at the current program counter. Not enough information is available to build a local variable list. **pedb** continues processing.

User Response: If this area of the code is of interest, you should recompile the containing object with the **-g** compiler option.

0030-3019 Unable to issue the execution request to task: *number***, because it is not in DEGUGGED state.**

Explanation: A request to execute the application has been issued. This task is not in DEBUGGED state so the request will not be honored. **pedb** continues processing. If the task referenced was part of a group and other tasks in the group did not cause this message, those other tasks will have been processed normally.

User Response: None. This is an informational message.

0030-3020 process_dbe_task_response(): Internal error: Don't recognize reply code: *string***, for task:** *string***.**

Explanation: An unrecognized message was received from the remote debugger.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0030-3021 Play mode has been stopped.

Explanation: Play mode has been terminated by the halt or stop button.

User Response: None. This is an informational message.

0030-3022 Play mode has been started.

Explanation: Play mode has been initiated by the play button.

User Response: None. This is an informational message.

0030-3023 The halt button had no effect on task: *number***, because it was not running.**

Explanation: The halt button was selected. No action was taken to stop the execution of this task because it was not running.

User Response: None. This is an informational message.

0030-3024 The halt button had no effect on tasks: *string* **in group:** *string***, because they were not running.**

Explanation: The halt button was selected. No action was taken to stop the execution of the tasks listed because they were not running.

User Response: None. This is an informational message.

0030-3025 Task *number***: Unable to initialize remote debug engine. Check location and permissions of executable.**

Explanation: Initialization of the remote debug engine has failed.

User Response: Verify that the executable program name has been specified correctly and has read and execute permissions.

0030-3026 Task *number***: Initial break point line number contains non-numeric data.**

Explanation: A line number and filename have been specified for the initial breakpoint via the MP_DEBUG_INITIAL_STOP environmental variable. The format is filename:line_number. In this case the line number had non numeric characters.

User Response: Respecify the line number in MP_DEBUG_INITIAL_STOP with only numerics.

0030-3027 Task *number***: While attempting to set the initial breakpoint, pedb could not find the file which contains the main routine. Check that the file containing the main routine or the program statement has been compiled with the -g option. The initial breakpoint can be set manually using the MP_DEBUG_INITIAL_STOP environment variable.**

Explanation: The remote debug engine is attempting to set an initial breakpoint in the main routine. A line number within a source file that correlated with the main routine was not found.

User Response: Check that the file containing the main routine or the program statement has been compiled with the **-g** option. The initial breakpoint can be set manually via the MP_DEBUG_INITIAL_STOP environment variable.

0030-3028 Task *number*: **Remote debug engine was unable to set the initial breakpoint.**

Explanation: The remote debug engine was unable to set the initial breakpoint.

User Response: Check that the file containing the main routine or the program statement has been compiled with the **-g** option. Check that the MP_DEBUG_INITIAL_STOP environment variable, if used, is set to an executable line of source code.

0030-3029 Task *number*: **Function atoi() could not translate line number string to a number.**

Explanation: The translation of the string following the colon in the MP_DEBUG_INITIAL_STOP environment variable failed.

User Response: Check that the environment variable MP_DEBUG_INITIAL_STOP has format: filename:line_number and it is set to an executable line of source code.

0030-3030 Task *number*: **Internal error: ProcessValueModify(): Call to GetExpressionList() failed.**

Explanation: Internal error.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0030-3031 Task *number*: **Internal error: ProcessValueModify(): Call to FindTreeNode() failed.**

Explanation: Internal error.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0030-3032 Task *number*: **Unable to process the change value request, check types and ranges.**

Explanation: The Change Value window was used but the remote debug engine was unable to change the value of the programs variable.

User Response: Check that the new value entered is of a type that can normally be assigned to the variable selected. If a range has been used to define the value to be assigned, check that the range is within bounds.

0030-3033 Task *number*: **The tracepoint request failed because the selected source line generates no executable code.**

Explanation: A source line in the source code window has been selected, and a tracepoint request has been made for that line. The line selected generated no executable code when compiled. No action has been taken.

User Response: Select another source line, then request the tracepoint again.

0030-3034 Task *number*: **The breakpoint request failed because the selected source line generates no executable code.**

Explanation: A source line in the source code window has been selected, and a breakpoint request has been made for that line. The line selected generated no executable code when compiled. No action has been taken.

User Response: Select another source line then, request the breakpoint again.

0030-3035 Task *number*: The breakpoint request failed. An invalid source line or invalid condition was specified.

Explanation: A source line in the source code window has been selected, and a breakpoint request has been made for that line. The line selected may not have generated any executable code when compiled. If a condition was specified, it may have been invalid. No action has been taken.

User Response: Select a another source line or specify a different condition.

0030-3036 Task *number*: The tracepoint request failed. An invalid source line or invalid condition was specified.

Explanation: A source line in the source code window has been selected, and a tracepoint request has been made for that line. The line selected may not have generated any executable code when compiled. If a condition was specified, it may have been invalid. No action has been taken.

User Response: Select a another source line or specify a different condition.

0030-3037 Task *number*: Internal error: An unsupported breakpoint action has been requested in ReplyBreakpointLocation().

Explanation: Internal error.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0030-3038 Task *number*: Maximum array range specified is out of bounds.

Explanation: The user specified a maximum array range that was out of bounds.

User Response: Check the permissible ranges and reset the range values.

0030-3040 Task *number*: The executable name chosen for debugging resolved to a full pathname where the length of the path prefix exceeds the PATH_MAX flag value or a pathname is longer than the NAME_MAX flag value while the POSIX_NO_TRUNC flag is in effect.

Explanation: The remote debugger could not find the program to execute on a task.

User Response: Check the path for the program on the remote node.

0030-3041 Task *number*: The executable name chosen for debugging was not found.

Explanation: The remote debugger attempted to find the program to execute on a task.

User Response: Check that the executable file for the program is available on the remote node.

0030-3042 Task *number*: The executable name chosen for debugging was not a regular file.

Explanation: The remote debugger attempted to find the program to execute on a task. The program name specified was not a regular file. It may have been a directory, socket, device or some other special file.

User Response: Check that the executable file for the program is available on the remote node.

0030-3043 Task *number*: The executable chosen for debugging did not have execute permission.

Explanation: The remote debugger attempted to find the program to execute on a task.

User Response: Update the permissions on the program file on the remote node.

0030-3044 Task *number*: The executable chosen for debugging is not a RISC System/6000 executable.

Explanation: The remote debugger could not find the program to execute on a task.

User Response: Check that the program file on the remote node is a RISC System/6000 executable.

0030-3045 Task *number*: The executable chosen for debugging did not have read permission.

Explanation: The remote debugger could not find the program to execute on a task.

User Response: Update the permissions on the program file on the remote node.

0030-3046 Task *number*: The executable chosen for debugging did not have execute or read permission.

Explanation: The remote debugger could not find the program to execute on a task.

User Response: Update the permissions on the program file on the remote node.

0030-3049 All tasks have exited. Select Ok to exit,then restart pedb if you wish to continue debugging.

Explanation: All the tasks in the partition have exited. There is currently no program restart facility in **pedb**.

User Response: Selecting Ok will exit **pedb**. Issue the **pedb** command again to do further debugging.

0030-3050 The remote debug engine for task: *number* has failed with: *string*.

Explanation: There is a remote debug engine started for each of the instances of the POE program. One of the remote debug engines has failed. The entire debug session has been terminated.

User Response: Re-start **pedb**. If the problem persists set the MP_DEBUG_LOG environment flag to 3 and have the log (/tmp/debug_log.**pid.task_number**) available when reporting the problem.

0030-9022

:

Syntax:

pedb [[program] program options] [poe options] [X options] [[-I source directory]...] [-d nesting depth] [-x]

pedb -a poe process id [limited poe options] [X options] [[-I source directory]...] [-d nesting depth] [-x] pedb -h

Flags:

-a Attaches to a running POE job by specifying its process id. The debugger must be executed from the node from which the POE job was initiated. Note that when using the debugger in attach mode there are some debugger command line arguments that should not be used.

In general, any arguments that control how the partition is set up, or specify program names and arguments, should not be used.

-d Sets the limit for the nesting of program blocks. The default nesting depth limit is 25.

-h Writes the pedb usage to STDERR then exits. This includes pedb command line syntax and a description of pedb flags.

-l Specifies a directory to be searched for an executable's source files. This flag must be specified multiple times to set multiple paths. (Once pedb is running, this list can also be updated using the Update Source Path window.)

-x Prevents stripping _ (trailing underscore) characters from symbols originating in FORTRAN source code. This flag enables distinguishing between symbols which are identical except for an underscore character, such as xxx and xxx_.

Environment Variables: Because the pedb command runs in the Parallel Operating Environment, it interacts with the same environment variables associated with the poe command. See the POE manual page for a description of these environment variables. As indicated by the syntax statements, you are also able to specify poe command line options when invoking pedb. Using these options will override the setting of the corresponding environment variable, as is the case when invoking a parallel program with the poe command.

0030-9051 Source emphasis failed - feature disabled.

Explanation: An error occurred while parsing the source file for source emphasis. Source emphasis is disabled for this session.

User Response: If the source being displayed is Fortran, you may try using the Free Form profile by setting FortranProfile: FF in the X resource file.

0030-9999 pedb exiting.

Explanation: **pedb** is terminating due to error as opposed to a deliberate action. Generally this message is preceded by a specific message which gives the reason why **pedb** quit prematurely.

User Response: Refer to the message that precedes this error message.

Chapter 4. POE Messages

0031-001 No man page available for poe

Explanation: User has requested that the poe man page be displayed (via -h option), but the /usr/man/cat1/poe.1 file does not exist, or some directory in the path leading to the file is not searchable.

User Response: Check that the file exists and that all directories in the path leading to the file are searchable. The pedocs fileset may need to be installed if the file doesn't exist.

0031-002 Error initializing communication subsystem.

Explanation: The remote node terminates.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-007 Error initializing communication subsystem: return code *number*

Explanation: The remote node was unable to initialize its communication subsystem. This message gives the return code from the function called. The remote node terminates.

User Response: Verify that the communication subsystem is running properly. If the SP high-speed switch is being used, make sure that the system software is operational.

0031-009 Couldn't integrate VT traces

Explanation: The system continues, but trace files for the Visualization Tool (VT) were not integrated.

User Response: Check that sufficient space is available for the VT trace files on each remote node.

0031-011 tcp service *string* **unknown**

Explanation: The Partition Manager terminates.

User Response: The PM daemon, **pmd,** is not known to the system. Review the results of installation to assure that the daemon specified by inetd is startable on each remote node.

0031-012 pm_contact: socket

Explanation: The Partition Manager terminates, as it could not create a socket.

User Response: The message is followed by an explanatory sentence. Check that the number of sockets required does not exceed the number available.

0031-013 pm_contact: setsockopt

Explanation: The Partition Manager continues, but some socket options may not be set correctly.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-018 Couldn't get info for hostname *string*

Explanation: The Partition Manager terminates.

User Response: The name mentioned cannot be identified. Check that the host name is spelled correctly and is known by name to the node on which the Partition Manager is running. If hostname is blank, allocation has failed.

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0031-019 pm_contact: connect failed

Explanation: The Partition Manager terminates.

User Response: The Partition Manager is unable to connect to a remote node. Message 0031-020 follows. Probable PE system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-020 Couldn't connect to task *number* **(***string***)**

Explanation: The Partition Manager terminates.

User Response: For the indicated remote task number and indicated host name, socket connection could not be established. Check for valid names.

0031-022 setsockopt(SO_LINGER)

Explanation: The Partition Manager continues.

User Response: An error occurred in setting the LINGER socket option. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-024 *string***: no response; rc =** *number*

Explanation: The Partition Manager terminates.

User Response: No acknowledgement of startup was received from the **pmd** daemon running on the indicated node. Check for error message from that node. The return codes are: -1, EOF on connection; 1 I/O error; 2 allocation error

0031-025 unexpected acknowledgment of type *string* **from remote node**

Explanation: The Partition Manager received an unexpected acknowledgement during initialization. Initialization with a remote node has failed.

User Response: Check the remote node log file to determine the reason for failure. Probable PE error.

0031-026 Couldn't create socket for PM Array

Explanation: The Partition Manager terminates. An explanatory sentence follows.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-027 Write to PM Array

Explanation: The Partition Manager continues. An explanatory sentence follows.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-028 pm_mgr_handle; can't send a signal message to remote nodes

Explanation: The Partition Manager terminates. An explanatory sentence follows.

User Response: Probable PE error. This error has occurred in the Partition Manager signal handler. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-029 Caught signal *number* **(***string***), sending to tasks...**

Explanation: The indicated signal is not used specifically by Partition Manager, and is being passed on to each remote task.

User Response: Verify that the signal was intended.

0031-031 task *number* **is alive**

Explanation: The message is sent from the indicated task in response to signal SIGUSR2.

User Response: Verify that the signal was intended.

0031-032 exiting...

Explanation: The message is sent from the indicated task in response to signal SIGINT, and the remote node is exiting.

User Response: Verify that the signal was intended.

0031-033 Your application has forced paging space to be exceeded...bailing out.

Explanation: The remote node exits with signal SIGDANGER. The message is sent from the indicated task in response to signal SIGDANGER. AIX is running out of paging space.

0031-034 task signal *number***:** *string*

Explanation: The message is sent from the indicated task in response to the indicated signal, which is not handled explicitly by the Partition Manager.

User Response: Verify that the signal was intended.

0031-036 sigaction(SIGHUP)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-037 sigaction(SIGINT)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-038 sigaction(SIGQUIT)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-039 sigaction(SIGILL)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-040 sigaction(SIGTRAP)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-041 sigaction(SIGIOT)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-042 sigaction(SIGEMT)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-043 sigaction(SIGFPE)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-044 sigaction(SIGBUS)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-045 sigaction(SIGSEGV)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-046 sigaction(SIGSYS)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-047 sigaction(SIGPIPE)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-048 sigaction(SIGALRM)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-049 sigaction(SIGTERM)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-050 sigaction(SIGURG)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-051 sigaction(SIGTSTP)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-052 sigaction(SIGCONT)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-053 sigaction(SIGCHLD)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-054 sigaction(SIGTTOU)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-055 sigaction(SIGIO)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-056 sigaction(SIGXCPU)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-057 sigaction(SIGMSG)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-058 sigaction(SIGWINCH)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-059 sigaction(SIGPWR)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-060 sigaction(SIGUSR1)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-061 sigaction(SIGUSR2)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-062 sigaction(SIGPROF)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-063 sigaction(SIGDANGER)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-064 sigaction(SIGVTALRM)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-065 sigaction(SIGMIGRATE)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-066 sigaction(SIGPRE)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-067 sigaction(SIGGRANT)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-068 sigaction(SIGRETRACT)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-069 sigaction(SIGSOUND)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-070 sigaction(SIGSAK)

Explanation: An explanatory sentence follows. The Partition Manager terminates.

Cause: The return from **sigaction** for the indicated signal is negative.

0031-071 invalid number of procs entered

Explanation: The Partition Manager terminates. Incorrect number of tasks specified.

User Response: Enter a number from 1 to the max numbers of nodes you have.

0031-076 invalid infolevel

Explanation: The **-infolevel** option was neither a 0 nor a positive number.

User Response: Correct the flag.

0031-077 invalid tracelevel

Explanation: The **-tracelevel** option was neither a 0 nor a positive number.

User Response: Correct the flag.

0031-078 invalid retrytime

Explanation: The **-retrytime** option was neither a 0 nor a positive number.

User Response: Correct the flag.

0031-079 invalid pmlights

Explanation: The **-pmlights** option was neither a 0 nor a positive number.

User Response: Correct the flag.

0031-080 invalid usrport

Explanation: The **-usrport** option was neither a 0 nor a positive number less than 32768.

User Response: Correct the flag.

0031-081 invalid samplefreq

Explanation: The **-samplefreq** option was neither a 0 nor a positive number.

User Response: Correct the flag.

0031-082 reserved message

Explanation: This message number is obsolete, and should not be issued.

0031-083 invalid wrap trace buffer

Explanation: The **-tbuffwrap** option was neither YES or NO.

User Response: Correct the flag.

0031-084 invalid tbuffsize value

Explanation: The **-tbuffsize** option specifies too large a trace buffer (or an invalid number).

User Response: Correct the flag.

0031-085 invalid tbuffsize unit

Explanation: The **-tbuffsize** option is not of the form *number*K or *number*M.

User Response: Correct the flag.

0031-086 invalid ttempsize value

Explanation: The **-ttempsize** option specifies too large a file (or an invalid number).

User Response: Correct the flag.

0031-087 invalid ttempsize unit

Explanation: The **-ttempsize** option is not of the form *number*M or *number*G.

User Response: Correct the flag.

0031-088 invalid tpermsize value

Explanation: The **-tpermsize** option specifies too large a file (or an invalid number).

User Response: Correct the flag.

0031-089 invalid tpermsize unit

Explanation: The **-tpermsize** option is not of the form *number*M or *number*G.

User Response: Correct the flag.

0031-092 MP_PROCS not set correctly

Explanation: The MP_PROCS environment variable is not a positive number.

User Response: Correct the variable.

0031-093 MP_INFOLEVEL not set correctly

Explanation: The MP_INFOLEVEL environment variable is neither 0 or a positive number less than 32768.

User Response: Correct the variable.

0031-094 MP_TRACELEVEL not set correctly

Explanation: The MP_TRACELEVEL environment variable is neither 0 or a positive number less than 32768.

User Response: Correct the variable.

0031-095 MP_RETRY not set correctly

Explanation: The MP_RETRY environment variable is neither 0 or a positive number less than 32768.

User Response: Correct the variable.

0031-096 MP_PMLIGHTS not set correctly

Explanation: The MP_PMLIGHTS environment variable is neither 0 nor a positive number.

User Response: Correct the variable.

0031-097 MP_USRPORT not set correctly

Explanation: The MP_USRPORT environment variable is neither 0 nor a positive number less than 32768.

User Response: Correct the variable.

0031-098 MP_SAMPLEFREQ not set correctly

Explanation: The MP_SAMPLEFREQ environment variable is neither 0 nor a positive number less than 32768.

User Response: Correct the variable.

0031-099 reserved message

Explanation: This message number is obsolete, and should not be issued.

0031-100 MP_TBUFFWRAP not set correctly

Explanation: The MP_TBUFFWRAP environment variable is neither YES nor NO.

User Response: Correct the variable.

0031-101 Invalid MP_TBUFFSIZE

Explanation: The MP_TBUFFSIZE environment variable specifies too large a trace buffer (or an invalid number).

User Response: Reduce or correct the size.

0031-102 Incorrect MP_TBUFFSIZE unit

Explanation: The MP_TBUFFSIZE environment variable is not of the form *number*K or *number*M.

User Response: Correct the flag.

0031-103 Invalid MP_TTEMPSIZE

Explanation: The MP_TTEMPSIZE environment variable specifies too large a trace file (or an invalid number).

User Response: Reduce or correct the size.

0031-104 Incorrect MP_TTEMPSIZE unit

Explanation: The MP_TTEMPSIZE environment variable is not of the form *number*M or *number*G.

User Response: Correct the flag.

0031-105 Invalid MP_TPERMSIZE

Explanation: The MP_TPERMSIZE environment variable specifies too large a trace file (or an invalid number).

User Response: Reduce or correct the size.

0031-106 Incorrect MP_TPERMSIZE unit

Explanation: The MP_TPERMSIZE environment variable is not of the form *number*M or *number*G.

User Response: Correct the flag.

0031-110 pm: atexit

Explanation: The user exit handler could not be installed.

Cause: Probable PE error.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-113 Stopping the job. Wait 5 seconds for remotes.

Explanation: The Partition Manager has received a SIGTSTP signal (from the LoadLeveler program product or the <Ctrl>Z keyboard interrupt) and is preparing to stop the job on all the remote nodes. The system will then issue a stop message giving the task number for the job as it would for any <Ctrl>Z keyboard interrupt.

User Response: Wait for the stop confirmation message (0031-127). To continue the job in the foreground, type in **fg** *tasknumber* after you receive the stop message. To continue the job in the background, type in **bg** *tasknumber* after you receive the stop message.

0031-115 invalid resd option

Explanation: The specification of the **-resd** option was neither YES or NO.

User Response: Correct the specification.

0031-116 MP_RESD not set correctly

Explanation: The specification of MP_RESD was neither YES or NO.

User Response: Correct the specification of MP_RESD.

0031-117 Unable to contact Resource Manager

Explanation: The Partition Manager was unable to contact the Resource Manager to allocate nodes of the SP.

User Response: Check that the Resource Manager is running. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-118 *string string* **requested for task** *number*

Explanation: The named host or pool was requested from the Resource Manager for the indicated task number. This informational message is issued when a host list file is read for node allocation.

0031-119 Host *string* **allocated for task** *number*

Explanation: The named host was allocated by the Resource Manager for the indicated task number. This informational message is issued when the Resource Manager does implicit node allocation.

0031-120 Resource Manager unable to allocate nodes due to internal error

Explanation: A system or socket error occurred when the Resource Manager client attempted to contact the server to request nodes. This is most often caused by loss of the connection between client and server under heavy network loads. An 0023 jm message is often printed before this message which may provide more specific information about the problem.

User Response: Retry the job; this should correct the problem if the network was temporarily overloaded. If this fails, contact your system administrator to determine if network is in a stable state before retrying. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-121 Invalid combination of settings for MP_EUILIB, MP_HOSTFILE, and MP_RESD

Explanation: The execution environment could not be established based on the above settings.

User Response: Refer to the *IBM Parallel Environment for AIX: Operation and Use* guide for valid combinations of above settings.

0031-123 Retrying allocation .... press control-C to terminate

Explanation: The requested nodes were not available from the Resource Manager. However, since the retry option was specified (by either the MP_RETRY environment variable or the **-retry** command-line flag), the Partition Manager will continue requesting nodes at the specified delay interval.

User Response: To terminate the allocation request, press <Ctrl>C.

0031-124 Less than *number* **nodes available from** *string*

Explanation: The requested nodes were not available from the Resource Manager.

User Response: Check that you haven't specified a number of nodes greater than the number of physical compute nodes in your SP or RISC System/6000 network cluster. Otherwise, wait until later when the needed number of nodes is available. You might want to specify the retry option by either setting the MP_RETRY environment variable or using the **-retry** command-line flag.

0031-125 Fewer nodes (*number***) specified in** *string* **than tasks (***number***).**

Explanation: There was an incorrect number of nodes specified than what is defined in the **host.list** file.

User Response: Check that you haven't specified a number of nodes greater than the number of physical compute nodes in your SP or RISC System/6000 network cluster. Otherwise, wait until later when the needed number of nodes is available. You might want to specify the retry option by either setting the MP_RETRY environment variable or using the -retry command-line flag.

0031-126 Unable to read string for current directory

Explanation: The Partition Manager is unable to interpret the data from the **pwd** command.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-128 Invalid euilib selected

Explanation: An **euilib** other than **ip** or **us** was entered.

User Response: Re-specify the **euilib** as either **ip** or **us.**

0031-129 Invalid euidevelop option, should be YES or NO

Explanation: An **euidevelop** other than YES or NO was entered.

User Response: Re-specify **euidevelop** with either YES or NO.

0031-130 Invalid newjob option, should be YES or NO

Explanation: A **newjob** other than YES or NO was entered.

User Response: Re-specify **newjob** with either YES or NO.

0031-131 Invalid pmdlog option, should be YES or NO

Explanation: A **pmdlog** other than YES or NO was entered.

User Response: Re-specify **pmdlog** with either YES or NO.

0031-133 Invalid stdoutmode

Explanation: A **stdoutmode** other than ORDERED, UNORDERED or an integer from 0 to (the number of tasks -1) was entered.

User Response: Re-specify**stdoutmode** with either ORDERED, UNORDERED or a number.

0031-134 Invalid mode for stdinmode

Explanation: A **stdinmode** other than ALL or an integer from 0 to (the number of tasks -1) was entered.

User Response: Re-specify **stdinmode** with either ALL or a number.

0031-135 Invalid labelio option, should be YES or NO

Explanation: A **labelio** other than YES or NO was entered.

User Response: Re-specify **labelio** with either YES or NO.

0031-136 Invalid MP_NOARGLIST option, should be YES or NO

Explanation: The Partition Manager terminates.

User Response: Enter YES or NO for MP_NOARGLIST.

0031-137 poe: Internal Error: Could not broadcast ACK for connect data

Explanation: An error occurred when poe was trying to acknowledge receipt of connect data from all nodes. Either one of the remote nodes is no longer accessible or a system error has occurred.

User Response: Verify that the remote nodes in the partition can be contacted by other means. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-138 The following nodes may be causing connect failures during message passing initialization:

Explanation: The home node has gathered connect data from each of the remote nodes and has determined that one or more nodes have been reported most as not connectable to during message passing initialization. A list of those nodes proceeds this message.

User Response: For jobs using the SP, contact System Administrator to determine if that node is up on the switch. For non-SP jobs, verify that the node can be contacted by other means. Also, refer to the node-specific error message related to mpci_connect for more information on what could be causing the problem (e.g. unauthorized user). If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-139 Could not open socket for debugger.

Explanation: The call to socket() failed when attempting to open a socket for the parallel debugger.

User Response: None.

0031-140 Could not bind local debug socket address.

Explanation: The call to bind() failed when attempting to bind the local address for the debug socket.

User Response: None.

0031-141 Could not accept debugger socket connection.

Explanation: The call to accept() failed when attempting to make a socket connection with the debugger.

User Response: None.

0031-142 Could not write to debug socket.

Explanation: The call to write() failed when attempting to write to the debug socket.

User Response: None.

0031-143 Could not read message from debug socket.

Explanation: The call to read() failed when attempting to read a message from the debug socket.

User Response: None.

0031-144 error creating directory for core files, reason: <*string*>

Explanation: A corefile directory could not be created for the given reason.

User Response: Fix reason and rerun job.

0031-145 error changing to *string* **corefile directory, reason** < *string*>

Explanation: The core file could not be dumped to the named directory for the given reason.

User Response: Fix reason and rerun job

0031-146 MP_CMDFILE is ignored when MP_STDINMODE is set to none

Explanation: If you set the MP_STDINMODE environment variable or the -stdinmode option to "none", the MP_CMDFILE environment variable or the -cmdfile option is ignored.

User Response: To eliminate this WARNING message, you should remove the MP_CMDFILE setting or specify MP_STDINMODE, which is not case sensitive, to another value other than "none".

0031-147 MP_HOLD_STDIN is ignored when MP_STDINMODE is set to none

Explanation: If you set the MP_STDINMODE environment variable or the -stdinmode option to "none", MP_HOLD_STDIN=yes is ignored.

User Response: To eliminate this WARNING message, you should set MP_HOLD_STDIN to "no".

0031-148 Using redirected STDIN for program name resolution

Explanation: You redirected stdin without specifying a program name or command file name, and you did not set the MP_STDINMODE environment variable or the -stdinmode option to "none". Because program behavior is undefined in this case, a warning is issued.

User Response: You should set the MP_STDINMODE environment variable or the -stdinmode option to "none". For more details, see the "Managing Standard Input" section in the *IBM Parallel Environment for AIX: Operation and Use* Volume 1.

0031-149 Unable to load shared objects required for LoadLeveler

Explanation: You submitted a POE job via LoadLeveler and a shared object or library required for LoadLeveler does not exist. This error usually indicates files created at install time have been deleted, moved, or had their permissions changed.

For LoadLeveler, Version 1.3.0 or later, one of the following files cannot be accessed:

/usr/lpp/LoadL/nfs/lib/llapi_shr.o
/usr/lpp/LoadL/nfs/lib/libllapi.a

For LoadLeveler, Version 1.2.0 or 1.2.1, the following file cannot be accessed:

/usr/lpp/LoadL/nfs/lib/libllapi.a

User Response: Contact your system administrator to determine if the files described above are accessible, and correct if possible. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-150 Unable to load shared objects required for Resource Manager

Explanation: The Execution environment (see *IBM Parallel Environment for AIX: Operation and Use*) specified use of the Resource Manager, but one or more of the following shared objects did not exist in /usr/lpp/ssp/lib or /usr/lib:

jm_client.shr.o
libjm_client.a
libSDRs.a

If you submitted the job from an SP node, this error usually indicates that files created at install time have been deleted, moved, or had their permissions changed. If you submitted the job from a non-SP node (using the SP_NAME environment variable), this error usually indicates that the ssp.client fileset has not been installed on the submitting node.

User Response: Contact your system administrator to determine if the files or fileset described above are accessible or installed. If possible, make the files or fileset accessible or reinstall them. Otherwise, you should gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-157 Couldn't flush VT traces

Explanation: The program continues.

User Response: At termination, the Partition Manager was unable to successfully terminate trace processing for VT. Check any messages issued by VT.

0031-158 select

Explanation: An explanatory sentence follows. The Partition Manager terminates.

User Response: The select call to the sockets connecting the Partition Manager with the remote nodes failed. Presumably connection has been lost. The explanatory sentence may give an indication of the source of failure.

0031-160 I/O error on socket connection with task *number*

Explanation: An explanatory sentence follows. The Partition Manager continues. A read on the socket used to connect the Home Node with the indicated remote task failed. Probably the remote node has closed the connection. The task is marked as exited and processing continues.

User Response: Examine the communication subsystem for failure.

0031-161 EOF on socket connection with task *number*

Explanation: Processing continues. The socket used to connect the Home Node with the indicated remote task has closed. Probably the remote node has closed the connection.

User Response: Examine the communication subsystem for failure.

0031-164 process_io: read(io command)

Explanation: Processing continues. The command sent to the Partition Manager is ignored.

User Response: Probable system error. An incomplete or invalid I/O command was received by the Partition Manager.

0031-169 pm_remote_shutdown

Explanation: Processing continues. An explanatory sentence is appended.

User Response: A quit message being sent to all remote nodes could not be written to one of the sockets.

0031-171 unknown io command

Explanation: Processing continues. The data is ignored.

User Response: An unsupported or invalid I/O command code was received by the Partition Manager from a remote node.

0031-172 I/O buffer overflow

Explanation: The stdout or stderr string overflows the output buffer (8K). The excess is discarded.

User Response: Probable internal error. Normally, the output is automatically flushed if it exceeds the buffer length. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-179 Unable to acknowledge profiling request for task *number*

Explanation: An error occurred writing a message to the indicated task, allowing it to begin to write the profiling data to disk.

User Response: Probable internal error. Verify that the indicated node is still connected in the partition. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-180 read(PROF)

Explanation: Processing continues. An explanatory sentence is appended.

User Response: The Partition Manager cannot read the remote node's response to a SIGUSR1 profiling signal.

0031-183 Connection to task *number* **blocked. Task abandoned.**

Explanation: While trying to stop the indicated task on a remote node, the Partition Manager discovered that the socket connection was blocked (unavailable). The remote task is marked as inactive and the Partition Manager continues.

User Response: Manual intervention may be required to kill the job on the remote node.

0031-200 pmd: getpeername <*string*>

Explanation: The daemon is unable to identify the partition manager.

User Response: Probable system or communication subsystem failure.

0031-201 pmd: setsockopt(SO_KEEPALIVE): <*string*>

Explanation: The daemon is unable to set the indicated socket option. Explanatory sentence is provided.

User Response: Probable system or communication subsystem failure.

0031-202 pmd: setsockopt(SO_LINGER): <*string*>

Explanation: The daemon is unable to set the indicated socket option. Explanatory sentence is provided.

User Response: Probable system or communication subsystem failure.

0031-203 malformed from address: <*string*>

Explanation: The socket address family is incorrect.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-207 pmd: sigaction <*string*>

Explanation: Error when setting up to handle a signal.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-208 pmd: fork <*string*>

Explanation: The **pm** daemon is unable to fork to execute the user application.

User Response: Probable system error.

0031-212 pmd: node *string***: user** *string* **denied from access from host** *string*

Explanation: The user is not permitted to run on the indicated node. The Partition Manager exits.

User Response: Make sure that the Partition Manager home node machine and user id are identified, for example, in $HOME/.rhosts or in /etc/hosts.equiv for this user on this machine. The access requirements are the same as for remote shell (rsh) access to the node.

0031-213 pmd: setuid <*number*>

Explanation: The **setuid** function failed for a given userid.

User Response: Make sure that the user is known by the same number on all systems.

0031-214 pmd: chdir <*string*>

Explanation: An attempt to change to the indicated directory failed.

User Response: Make sure that the directory exists. Check to see that the indicated directory can be properly mounted by the Automount daemon, if the directory is part of a mounted file system. To change the name of the directory to be mounted, set the environment variable MP_REMOTEDIR=some_script, where some_script is the name of a script or quoted command that echoes a directory name. For example, MP_REMOTEDIR='echo /tmp' will request that /tmp be the current directory on the remote nodes.

For non-Korn shell users, the script mpamddir in /usr/lpp/poe/bin may provide a usable name. It tries to match the entries in the Automount list with the user's directory as reported by the **pwd** command.

If the directory is from a DFS file system, the DFS/DCE credentials may not have been properly established, using the poeauth command.

0031-215 can't run parallel tasks as root

Explanation: The userid of the user running the application can not be 0.

User Response: Re-run under a userid other than root.

0031-216 POE (*number*) - pmd (*number*) - user program (*number*) versions incompatible

Explanation: The versions of the POE home node, the pmd and the user's program are incompatible.

User Response: You should first check that the POE home node, the pmd, and libmpi.a are at compatible PE version levels. If necessary, install compatible versions. You should also check that the user program has been compiled with a version of PE that is compatible with the version of PE on the home node and the pmd. If necessary, recompile the user program using compatible POE home node and pmd versions.

0031-217 POE (*number*), pmd (*number*), and dbe (*number*) versions are incompatible.

Explanation: The versions of POE, pmd, and the debug engine (dbe) are incompatible.

User Response: You should check that POE, pmd, and dbe are at compatible PE version levels. If necessary, install compatible versions.

0031-235 invalid userid received

Explanation: The userid is not valid on this node.

User Response: Run under a valid userid.

0031-237 invalid group id received

Explanation: The group id received by the **pm** daemon is either negative or non numeric and therefore not valid.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-243 invalid environment length received

Explanation: The length received by the **pm** daemon is either negative or non numeric and therefore not valid.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-247 pmd: setgid <*number*>

Explanation: The **pmd** was unable to set the groupid for the remote task.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-250 task *number*: *string*

Explanation: The given task has received the given signal.

User Response: No response needed.

0031-251 task *number* **exited: rc=***number*

Explanation: The indicated task has exited. This informational message is displayed when processing completes normally and when the job is terminated by the <Ctrl>C interrupt key.

User Response: No response needed.

0031-252 task *number* **stopped:** *string*

Explanation: The indicated task has been stopped. The second variable in this message indicates the signal that stopped the task.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-253 Priority adjustment call failed: rc = *number***, errno =** *number*

Explanation: The call to start the priority adjustment process failed. Check that the priority adjustment program is executable. Execution continues, but no priority adjustment is applied to this process. The return code and **errno** reported relate to the system function.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-254 User *string* **not authorized on host** *string*

Explanation: The userid is not found on the given host.

User Response: Add the userid to the host with SMIT.

0031-255 Group *string* **does not exist on host** *string*

Explanation: The group id is not found in /etc/group.

User Response: Add the groupid to the host with SMIT.

0031-256 Priority adjustment process has been invoked

Explanation: The user has elected to adjust the priority of the poe job.

User Response: Informational only, no action required.

0031-257 mp_euilib is not us, high priority daemon has been started.

Explanation: User has elected to use high priority for the poe job and the userspace library is not being used.

User Response: Informational only, no action required.

0031-258 User *string* **not authorized for group** *string* **on host** *string***.**

Explanation: The userid is not permitted to access the given groupid on the given host.

User Response: Add the userid to the group access list on the host.

0031-259 /etc/poe.priority file not found; priority adjustment function not started

Explanation: In attempting to start the dispatching priority adjustment function, there was no /etc/poe.priority parameter file found for this task. Most likely, it was not set up or is inaccessible. Normal application execution continues, although the priority adjustment function will not be run.

User Response: Ensure the /etc/poe.priority file exists. Consult the chapter on File Formats in the IBM AIX Parallel Environment: Installation manual for further details.

0031-260 Invalid entry in /etc/poe.priority file for user *string*, class *string*; priority adjustment function not started

Explanation: In attempting to start the dispatching priority adjustment function, there was no entry for the user and class found in the /etc/poe.priority file for this task. Most likely, the entry is missing or in error. Normal application execution continues, although the priority adjustment function will not be run.

User Response: Ensure the entries for this user and class in /etc/poe.priority file exists and are properly defined. Consult the chapter on File Formats in the IBM AIX Parallel Environment: Installation manual for further details.

0031-300 Program statically linked with ip, css library loaded is not ip.

Explanation: The IP library does not exist on the system or the user is specifying the usage of the us library when the program has been linked with IP.

User Response: Make sure the IP library exists. Make sure you're not specifying us when you want to use IP.

0031-301 mp_euilib specifies ip, css library loaded is not ip.

Explanation: The IP library does not exist on the system.

User Response: Make sure the IP library exists. Make sure you're not specifying US when you want to use IP.

0031-302 Program statically linked with us, css library loaded is not us.

Explanation: The US library does not exist on the system or the user is specifying the usage of the IP library when the program has been linked with US.

User Response: Make sure the US library exists. Make sure you're not specifying IP when you want to use US.

0031-303 mp_euilib specifies us, css library loaded is not us.

Explanation: The us library does not exist on the system.

User Response: Make sure the us library exists. Make sure you're not specifying ip when you want to use us.

0031-304 remote child: error restoring stdout.

Explanation: The previously closed stdout cannot be restored.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-305 remote child: error restoring stderr.

Explanation: The previously closed stderr cannot be restored.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-306 pm_atexit: pm_exit_value is *number*.

Explanation: Program exit value

User Response: Informational message. No action required.

0031-307 remote child: error restoring stdin.

Explanation: The previously closed stdin cannot be restored.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-308 Invalid value for *string***:** *string*

Explanation: Indicated value is not a valid setting for the indicated environment variable or command line option.

User Response: Set to a valid value and rerun.

0031-309 Connect failed during message passing initialization, task *number***, reason:** *string*

Explanation: The Communication Subsystem was unable to connect this task to one or more other tasks in the current partition for the reason given.

User Response: If a timeout has occurred, the MP_TIMEOUT environment variable is set to too low of a value. (The default value is 150 seconds.) If you have not explicitly set the MP_TIMEOUT environment variable and the program being run under POE is NFS mounted, 150 seconds may not be sufficient.

If the reason given indicates "Permission denied", you should ensure the login name and user ID of the user submitting the job is consistent on all nodes on which the job is running.

If the reason given indicates "Permission denied" or "Not owner" and the job was submitted under LoadLeveler, you should ensure that the adapter requirement given to LoadLeveler is compatible with the MP_EUILIB environment variable.

If the reason given indicates "No such device", the Communication Subsystem library (libmpci.a) bound into the executable does not match the switch adapter for that node. This error usually occurs when the executable was statically bound on a system that was configured for a different switch adapter. For example, a program that was compiled on a system configured with a TB2 adapter, and was then attempted to be run on a system with a TB3 adapter. In this case, you should recompile the program on a system configured for the same switch adapter as that of node where the executable will be run.

For any other reason, an internal error has occurred. You should gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-310 Socket open failed during message passing initialization, task *number***, reason:** *string*

Explanation: The Communication Subsystem was unable to open a socket for message passing for the indicated task for the reason given.

User Response: If the reason given is No buffer space available, have the System Administrator raise the value of sb_max, using the no command; current suggested value is 128000. For any other reason, an internal error has most likely occurred; gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-330 Error getting environment variable *string*

Explanation: The internal **getenv** function failed to get the specified environment variable. The remote node terminates.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-332 SSM_CSS_INIT expected and it was not received.

Explanation: System error occurred where an SSM_CSS_INIT was expected for the control pipe input. The remote node terminates.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-333 More node information found than expected.

Explanation: An internal error was detected where there was more node information returned from SSM_CSS_INIT than expected. The remote node terminates.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-334 SSM not SSM_ACK to our sync request.

Explanation: An internal error was detected where there was no acknowledgement returned for a synchronization request. The remote node terminates.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-335 SSM subtype not what was expected

Explanation: An internal error was detected where an unexpected message type was returned. The remote node terminates.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-336 Error with VT_trc_set_params_c.

Explanation: An internal error was detected after trying to set up the VT trace parameters. The remote node terminates.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-337 Error in starting the user's code.

Explanation: An internal error was detected after trying to start the user executable code in the remote node. The remote node terminates.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-338 Error sending exit request to home node.

Explanation: An internal error was detected after trying to send an exit request to the home node. The remote node terminates.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-339 VT trace initialization failed.

Explanation: VT trace initialization failed on a remote node. The remote node continues, but no visualization trace file will be created for that node.

User Response: Probable PE error. Check for other messages from VT. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-400 Invalid value *number* **for stdoutmode**

Explanation: User has entered a non-negative value with -stdoutmode or MP_STDOUTMODE which is greater than or equal to the number of processes requested; for SINGLE mode, this value must be between 0 and n-1, where n is the number of processes.

User Response: Re-run with valid value.

0031-401 Invalid value *number* **for stdinmode**

Explanation: User has entered a non-negative value with -stdinmode or MP_STDINMODE which is greater than or equal to the number of processes requested; for SINGLE mode, this value must be between 0 and n-1, where n is the number of processes.

User Response: Re-run with valid value.

0031-402 Using css0 as euidevice for User Space job

Explanation: User specified command line option -euidevice or used environment variable MP_EUIDEVICE with a setting of other than css0, which must be used for User Space jobs. User value has been overridden to allow job to continue.

User Response: None required.

0031-403 Forcing dedicated adapter for User Space job

Explanation: User explicitly specified User Space job using -euilib us or MP_EUILIB=us and poe is making sure the adapter usage requested from the Resource Manager is dedicated. This can also occur if no euilib was specified and the execution environment resulted in an implicit User Space job.

User Response: None required.

0031-404 Forcing shared adapter for IP job

Explanation: User explicitly specified IP job using -euilib ip or MP_EUILIB=ip and poe is making sure the adapter usage requested from the Resource Manager is shared. This can also occur if no euilib was specified and the execution environment resulted in an implicit IP job.

User Response: None required.

0031-405 Hostfile entries for *string* **usage for task** *number* **conflict, using** *string*

Explanation: User has hostfile entry which, for the same node, specifies shared AND dedicated, or multiple AND unique, adapter or cpu usage, respectively.

User Response: Correct conflicting entries and rerun.

0031-406 IP not enabled for node *string*

Explanation: The Resource Manager allocated a node which was not configured to run IP over the switch.

User Response: Have the node configured for IP over the switch, or have the node removed from the pool being used, or change the hostfile entry.

0031-407 LoadLeveler unable to allocate nodes to poe for batch job, rc = *number*

Explanation: An internal error occurred in LoadLeveler. Reason codes are as follows:

-2 Could not get jobid from environment
-5 Socket error
-6 Could not connect to host
-8 Could not get hostlist

User Response: Retry; if problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-408 *number* **nodes allocated by LoadLeveler, continuing...**

Explanation: Loadleveler allocated the indicated number of nodes, which was different than that specified by the poe job (using MP_PROCS or -procs or default). The job is continued with the indicated number of nodes.

User Response: If a fixed number of nodes is required, verify that the min_processors and max_processors keywords in the job command file agree with the number of nodes requested from poe. If they agree and the message continues, contact System Administrator to determine node availability.

0031-409 Unable to start Partition Manager daemon on node *string***, rc =** *number*

Explanation: An error (possibly internal) occurred when LoadLeveler attempted to start /etc/pmdv2 on the indicated node. Reason codes for internal LoadLeveler errors are as follows:

-1 Remote host could not fork new process
-2 Could not get jobid from environment
-3 Could not get hostname
-4 Nameserver could not resolve host
-5 Socket error
-6 Could not connect to host
-7 Could not send command to remote startd

User Response: Check pathname and permissions for /etc/pmdv2. Retry; if problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-410 Invalid cpu usage: *string*

Explanation: User has requested an invalid cpu usage, via the -cpu_use command line option or via the MP_CPU_USE environment variable.

User Response: Correct the request to be either multiple or unique and rerun.

0031-411 Invalid adapter usage: *string*

Explanation: User has requested an invalid adapter usage, via the -adapter_use command line option or via the MP_ADAPTER_USE environment variable.

User Response: Correct the request to be either shared or dedicated and rerun.

0031-412 Invalid pulse value.

Explanation: An invalid value was specified for the MP_PULSE environment variable or the -pulse command line flag.

User Response: Respecify a valid value for MP_PULSE or -pulse.

0031-413 Incompatible version of LoadLeveler installed... terminating batch job

Explanation: Because the SP1RESDBATCH environment variable is set in the current environment, POE is assuming that LoadLeveler 1.1.3, or earlier, is installed, which is incompatible with this version of POE.

User Response: Follow local site procedures to request installation of LoadLeveler 1.2.0, or run the POE job interactively.

0031-414 pm_collect: read select error

Explanation: A system error occurred while reading from a remote node. The system error message is appended. POE terminates.

User Response: Verify that the remote nodes in the partition can be contacted by other means. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-415 Non-zero status *number* **returned from pm_collect**

Explanation: An error has occurred in a lower level function.

User Response: Perform whatever corrective action is indicated for earlier messages and retry. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-416 *string***: no response; rc =** *number*

Explanation: An error occurred on reading data from remote node to home node.

User Response: This is an IP communication error between home and remote node. No acknowledgement of startup was received from the **pmd** daemon running on the indicated node. Check for error message from that node. The return codes are: -1, EOF on connection; 1 I/O error; 2 allocation error

0031-417 unexpected acknowledgment of type *string* **from remote node**

Explanation: The Partition Manager received an unexpected data value from remote node during pm_collect function. The data is ignored and processing continues.

User Response: none

0031-600 Number of tasks (*number***) > maximum (***number***)**

Explanation: User has requested more tasks than maximum number allowed.

User Response: Rerun job within defined limits for number of tasks.

0031-601 Open of file *string* **failed**

Explanation: Specified hostfile could not be opened.

User Response: Check pathname and permissions.

0031-603 Resource Manager allocation for task: *number***, node:** *string***, rc =** *string*

Explanation: Node for indicated task unsuccessfully allocated. Reason codes are as follows:

1 JM_NOTATTEMPTED
2 JM_INVALIDPOOL
3 JM_INVALIDSUBPOOL
4 JM_INVALIDNODENAME
5 JM_EXCEEDEDCAPACITY
6 JM_DOWNONENET

7 JM_DOWNONSWITCH
8 JM_INVALIDUSER
9 JM_INVALIDADAPTER
10 JM_PARTITIONCREATIONFAILURE
11 JM_SWITCHFAULT
12 JM_SYSTEM_ERROR

User Response: For reason codes 1, 6, or 7, use environment variable MP_RETRYCOUNT or command line flag **-retrycount** to the number of times that the Resource Manager attempts to allocate the node. If that fails, contact System Administrator to determine node availability.

0031-604 Unexpected non-numeric entry in hostfile

Explanation: A non-numeric pool number exists in **hostfile.**

User Response: Correct the hostfile entry.

0031-605 Unexpected EOF on allocation file for task *number*

Explanation: There were not enough entries in the hostfile for the number of processes specified.

User Response: Lower the number of processes or add more entries to the hostfile.

0031-606 Pool request not allowed in hostfile unless using Resource Manager

Explanation: Execution environment (see IBM AIX Parallel Environment Operation and Use) did not specify use of the Resource Manager, but a hostfile entry contained a pool request.

User Response: If Resource Manager use was intended, check environment variables. Otherwise, remove pool request from hostfile.

0031-607 Pool requests and host entries may not be intermixed in hostfile

Explanation: Pool requests and host entries co-existed in hostfile.

User Response: Modify hostfile to contain only pool requests or only hostnames.

0031-608 Unrecognized option for task *number***:** < *string***>**

Explanation: An option other than **shared**, **dedicated**, **multiple**, or **unique** was found in the hostfile.

User Response: Correct hostfile entry.

0031-609 Unable to open save_hostfile *string*

Explanation: Specified save hostfile could not be opened.

User Response: Check pathname and permissions.

0031-610 Error in command broadcast

Explanation: An error occurred in broadcasting the **poe** command to the partition. Probably one of the remote nodes is no longer accessible. POE terminates.

User Response: Verify that the remote nodes in the partition can be contacted by other means. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-611 Unable to open command file *<string>*

Explanation: The file designated to issue POE commands can not be opened. POE terminates.

User Response: Verify that the file name is spelled correctly and is readable.

0031-612 pm_contact: write select error

Explanation: A system error occurred while writing to a remote node. The system error message is appended. POE terminates.

User Response: Verify that the remote nodes in the partition can be contacted by other means. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-613 Unable to send command to task *number*

Explanation: An error occurred in sending the **poe** command to the indicated task. Probably the remote node is no longer accessible. POE terminates.

User Response: Verify that the remote node in the partition can be contacted by other means. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-614 Unable to send single command to task *number*

Explanation: An error occurred in sending the **poe** command to the indicated task. Probably the remote node is no longer accessible. POE terminates.

User Response: Verify that the remote node in the partition can be contacted by other means. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-615 strappend failed for *string* **, rc =** *number*

Explanation: The internal string append function failed. The system terminates.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-616 gethostbyname failed for home node

Explanation: The internal **gethostbyname** function failed. The system terminates.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-617 pm_getcwd failed, rc = *number*

Explanation: The internal **pm_getcwd** function failed. A return code of 1 implies either can't open pipe to **ksh** or command failed. A return code of 2 means the working directory string is longer than **bufsize.** The system terminates.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-618 The following nodes were not contacted:

Explanation: See message 0031-623 for a list of the remote nodes that did not respond during the phase indicated by the code in message 0031-631. It is possible that some nodes were not tried, so the list doesn't necessarily indicate that all the nodes were unavailable. POE terminates.

User Response: Probably connectivity to one of the listed nodes has been lost. Verify that the node can be contacted by other means. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-619 *string*

Explanation: The text is explanatory text as would be provided by the **perror()** or **psignal()** functions. For **perror(),** it is the text contained in **sys_errlist[errno]** for the error **errno.** For **psignal(),** it is the text contained in **sys_siglist[signal]** for signal **signal.** A preliminary 0031-*number* message indicates the context.

0031-620 pm_SSM_write failed in sending the user/environment for taskid *number*

Explanation: The internal **pm_SSM_write** function failed. The system terminates.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-621 pm_SSM_write failed in sending the partition map information for taskid *number*

Explanation: The internal **pm_SSM_write** function failed. The system terminates.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-622 unexpected msg from task *number***, type** *number* **Text:** *string*

Explanation: An unexpected message was returned from the indicated task. The system continues.

User Response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-623 task *number***: hostname** *string*

Explanation: The line indicates the task number and associated host name. See message 0031-618 and 0031-631 for more information.

User Response: The list may contain names of failing nodes. Verify that connectivity exists and the the **pmd** daemon is executable on that node.

0031-624 Error from sigprocmask for blocking stop signals

Explanation: An error occurred in setting the signal mask to block stop signals during installation. POE terminates.

User Response: Probable PE internal error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-625 sigaction(SIGSTOP)

Explanation: An error occurred in setting the flags for the SIGSTOP signal. POE terminates.

User Response: Probable PE internal error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-626 got signal *number*; **awaiting response from signal** *number*

Explanation: POE received a signal while processing the responses to a previous signal. The new signal is ignored unless it is the SIGKILL signal.

User Response: Often this means that a remote node is not responding. Verify that the node can be contacted by other means. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-627 Task *number* **connection blocked. Task will be abandoned.**

Explanation: While shutting down the partition, POE was unable to write to the indicated task, because the socket was blocked. The socket and task are subsequently ignored and the shutdown continues.

User Response: Often this means that a remote node is not responding. The tasks running on this node must be terminated manually. Verify that the node can be contacted by other means. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-628 pm_contact: read select error

Explanation: A system error occurred while reading from a remote node. The system error message is appended. POE terminates.

User Response: Verify that the remote nodes in the partition can be contacted by other means. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-629 pm_contact: write timeout occurred; nprocs = *number*

Explanation: The select statement timed out waiting for ready to write to a remote node. A list of nodes not contacted is appended. POE terminates.

User Response: Verify that the remote nodes in the partition can be contacted by other means. If necessary, the timeout interval may be set with the environment variable MP_TIMEOUT. The default is 150 seconds. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-630 pm_contact: read timeout occurred; nprocs = *number*

Explanation: The select statement timed out waiting for ready to read from a remote node. A list of nodes not contacted is appended. POE terminates.

User Response: Verify that the remote nodes in the partition can be contacted by other means. If necessary, the timeout interval may be set with the environment variable MP_TIMEOUT. The default is 150 seconds. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-631 pm_contact: signal received; nprocs = *number*, **code =** *number*

Explanation: Operation was terminated by a signal, either created by the user (SIGINT), or with the system (for example, SIGPIPE). POE terminates. The code indicates where in the contact sequence the signal occurred as follows:

2 - connect
3 - write select
4 - write message 1
5 - write message 2
6 - read select
7 - read acknowledgement
8 - end of contact routine

User Response: The remote node(s) do not respond. Verify that the node can be contacted by other means. Verify that the **pmdv2** daemon is executable on the indicated remote node. If necessary, the timeout interval may be set with the environment variable MP_TIMEOUT. The default is 150 seconds. If the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-632 Can't connect to PM Array. errno = *number*

Explanation: POE tried to connect to the Program Marker Array tool, but was unsuccessful. The system error number is returned. Most likely, the Program Marker Array has not been started.

User Response: If the Program Marker Array is not being used, ignore this message. Otherwise, terminate POE, start the **pmarray**, and restart POE. If Program Marker Array has been started, verify the value of the environment variable MP_USRPORT for a valid port number for connection.

0031-633 Unexpected EOF on socket to task *number*

Explanation: POE got a socket EOF when trying to broadcast a message to the partition. The affected node is marked as not active, and the broadcast continues. The broadcast calling routine may take additional actions.

User Response: Verify the reason for loss of connection. Often this means that a remote node is not responding. Verify that the node can be contacted by other means. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-634 Non-zero status *number* **returned from pm_parse_args**

Explanation: An error has occured parsing the parameters.

User Response: More information or error messages should accompany this message, describing the errors in more detail. Correct the invalid values and retry.

0031-635 Non-zero status *number* **returned from pm_mgr_init**

Explanation: An error has occurred in a lower level function.

User Response: Perform whatever corrective action is indicated for earlier messages and retry. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-636 User requested or EOF termination of pm_command

Explanation: End of file was reached in the specified command file or user typed **quit**.

User Response: If termination is unexpected, verify that command file contains correct number of commands based on MP_PROCS and MP_PGMMODEL settings.

0031-637 Non-zero status *number* **returned from pm_command**

Explanation: An error has occurred in a lower level function.

User Response: Perform whatever corrective action is indicated for earlier messages and retry. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-638 Non-zero status *number* **returned from pm_respond**

Explanation: An error has occurred in a lower level function.

User Response: Perform whatever corrective action is indicated for earlier messages and retry. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-639 Exit status from pm_respond = *number*

Explanation: The **pm_respond** function exited with the indicated status.

User Response: If other error messages occurred, perform corrective action indicated for the message(s); otherwise, no action is required.

0031-641 Unrecoverable failure in Resource Manager, terminating partition...

Explanation: A non-zero return code was returned from the SP Resource Manager message interpretation function. The Partition Manager terminates the partition. The return code value is printed. The defined values are:

1 - A system error occurred. An explanatory message follows.
3 - A socket error occurred. Probably the Resource Manager has failed. If this is a batch job running under LoadLeveler, the job will be terminated.

User Response: Correct the condition causing the non-zero return code, and restart POE.

0031-642 End of File from Program Marker Array

Explanation: The socket connecting POE to the Program Marker Array has returned EOF. Execution of POE continues.

User Response: If the Program Marker Array has not been deliberately terminated, determine the cause of the EOF, and, if desired, restart POE. Otherwise, ignore the message and allow the POE job to terminate normally.

0031-643 Error read from Program Marker Array

Explanation: The socket connecting POE to the Program Marker Array has returned an error condition. POE continues. The defined error codes are:

1 - I/O error on the socket. An explanatory message is appended if **errno** is set.
2 - POE was unable to allocate storage for the message from PM Array. Probable internal error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.
3 - Some other error. An explanatory message is appended if errno is set.

User Response: If the Program Marker Array has not been deliberately terminated, determine the cause of the error, and, if desired, restart POE. Otherwise, ignore the message and allow the POE job to terminate normally. If the error code was 2 or 3, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-644 Can't route PM Array message to task *number*

Explanation: An error occurred while trying to forward a message from the Program Marker array to the indicated task. POE continues, but the connection to PM Array is closed.

User Response: Probably the remote task is no longer active, but the Program Marker array responses are backlogged. In this case, the messages can be ignored. Otherwise, look for other failures that may also cause this symptom.

0031-645 PM Array message to unknown destination *number*

Explanation: The PM Array message is not to a remote task and not for the Home Node. The destination code is given. POE continues, but the connection to PM Array is closed.

User Response: Probably the PM Array tool is issuing invalid messages. Check the PM Array application.

0031-646 PM Array is trying to tell us something ...

Explanation: A message from PM Array is directed to the Home Node. At present there are no Home Node functions responding to the PM Array, so the message text is just printed out.

User Response: Verify that the PM Array tool is working correctly.

0031-647 *string*

Explanation: This is the message buffer text from PM Array as described in message 0031-646.

User Response: Verify that the PM Array tool is working correctly.

0031-648 Couldn't tell world about EOF on STDIN

Explanation: An error occurred while broadcasting EOF on STDIN to the partition. The partition is terminated, and POE exits.

User Response: Verify that the remote nodes are accessible and restart POE. If the failure continues, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-649 Couldn't tell task *number* **about EOF on STDIN**

Explanation: An error occurred while sending EOF on STDIN to the indicated task. The partition is terminated, and POE exits.

User Response: Verify that the remote node is accessible and restart POE. If the failure continues, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-650 No receiver for STDIN bound for *number*

Explanation: STDINMODE defines a task number that is not active.

User Response: Probable user error. Verify the value of STDIN mode set by the environment variable or under program control.

0031-651 Error reading input command file

Explanation: An I/O error occurred reading the input command file describing the initialization sequence for **pdbx** and **pedb.** Input reverts to STDIN.

User Response: If possible, determine which file is being read and correct it. If the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-652 Error reading STDIN

Explanation: An I/O error occurred reading STDIN. STDIN is subsequently ignored.

User Response: Verify that the file used for STDIN is readable. If the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-653 Couldn't route data from STDIN to task *number*

Explanation: An error occurred routing STDIN to the indicated task. The partition is terminated and POE exits.

User Response: Verify that the remote task is active. If the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-654 Allocation error for SSM_read, task *number*, **length** *number*

Explanation: An error occurred allocating storage for a message from a remote node. The partition is terminated and POE exits. The task id and length requested are printed.

User Response: Verify that sufficient storage is available to run POE on the Home Node, and that the requested length is not excessive. If the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-655 Can't route message to destination *number*

Explanation: An error occurred routing a message to the indicated destination task. The requested routing is not supported.

User Response: If the message is generated by Parallel Environment, this is an internal error. If generated by a user program, this is a user error. Determine the source of the message. If the problem is an internal error, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-656 I/O file *string* **closed by task** *number*

Explanation: The **stdio** stream indicated has been closed by the indicated task.

User Response: Verify if this is the intended operation. If so, ignore the message. This message may also occur at the end of a job that terminates normally.

0031-657 Can't send mpl_init_data to nodes

Explanation: An error occurred in broadcasting the CSS initialization data to the remote nodes. The partition is terminated and POE exits.

User Response: The failing routine is **pm_address.** Look for other symptoms to determine the cause of failure.

0031-658 Can't send termination signal to nodes

Explanation: An error occurred in broadcasting the termination message to the remote nodes. The partition is terminated and POE exits (which is was trying to do, anyway).

User Response: The failing routine is pm_shutdown_job. Look for other symptoms to determine the cause of failure.

0031-659 Can't log accounting data from node *number*

Explanation: An error occurred in logging the accounting records received from the remote nodes. Execution continues.

User Response: The failing routine is pm_acct_response. Look for other symptoms to determine the cause of failure.

0031-660 Partition Manager stopped ...

Explanation: The Home Node (POE) has stopped in response to a SIGTSTOP (<Ctrl>Z) signal. The remote nodes have been stopped.

User Response: To resume the job, issue SIGCONT, or use the shell job control commands **fg** or **bg**.

0031-661 signal_sent = *number* **not recognized**

Explanation: The indicated signal was recorded as being sent to the remote nodes, but is not recognized by POE. Execution continues.

User Response: Probable POE internal error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-662 Node *number* **did not send PROFILE_DONE, sent msgtype** *number*

Explanation: The indicated node did not send the PROFILE_DONE message after profiling, but sent a message of the indicated type. Message 0031-663 gives the text sent.

User Response: Consult the explanatory text. If that fails to disclose the problem, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-663 *string*

Explanation: This is the text of a message received instead of the expected PROFILE_DONE message.

User Response: If the text fails to disclose the problem, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-664 Unknown message type *number* **received**

Explanation: The indicated message type is not known by POE. Execution is terminated.

User Response: Probably the socket contains a non-structured message, which would be a stray. If the source of the stray socket message cannot be determined, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-665 Invalid value for SSM_SINGLE *number*

Explanation: The indicated value is invalid as a destination for SINGLE I/O mode. The specification is ignored.

User Response: Verify that the correct value for SINGLE I/O mode is used.

0031-666 Out of range value for SSM_SINGLE *number*

Explanation: The indicated value is out of range: less than zero, or greater than the number of tasks. The specification is ignored.

User Response: Verify that the correct value for SINGLE I/O mode is used.

0031-667 Invalid value for SSM_UNORDERED *number*

Explanation: The indicated value is invalid as a specification for UNORDERED I/O mode. The specification is ignored.

User Response: Verify that the correct value for I/O mode is used.

0031-668 pm_io_command: error in pm_SSM_write, rc = *number*

Explanation: An error occurred while responding to a STDIO MODE QUERY message. The response is abandoned.

User Response: Probable POE internal error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-669 Can't acknowledge IO_command sync

Explanation: A socket error occurred while broadcasting a synchronization request acknowledgment. The partition is terminated and POE exits.

User Response: One or more remote nodes may not be reachable. Verify that the remote nodes can be contacted, and restart POE. If problems persist, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-670 Illegal stdout mode *number*

Explanation: The indicated value for STDOUT mode is not valid. The requested I/O buffering is not performed.

User Response: Correct the value for STDOUT mode.

0031-671 Can't acknowledge PMArray data from task *number*

Explanation: An error occurred trying to return an acknowledgement to a node sending data to PM Array.

User Response: Probable POE internal error. The error may also be caused by loss of contact with the remote node. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-672 Invalid routing request from task *number* **to task** *number*

Explanation: The Home Node has received a message, but doesn't know how to route it to the indicated task (destination).

User Response: Probable POE internal error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-673 Invalid mode/destination for STDIN: *number*

Explanation: The requested destination for STDIN is invalid. The request to route STDIN is ignored.

User Response: Verify the STDIN I/O mode requested.

0031-674 Unexpected return code *number* **from pm_SSM_write**

Explanation: Internal error has occurred.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-675 Invalid mode *number* **requested**

Explanation: User program has called function MP_STDOUTMODE or **mpc_stdoutmode** with invalid mode.

User Response: Refer to man page for explanation of valid modes.

0031-676 Invalid value *string* for mp_euidevice

Explanation: The **mp_euidevice** specified on the command line with **-euidevice** or in the environment with MP_EUIDEVICE is not valid.

User Response: Refer to IBM AIX Parallel Environment Operation and Use for valid choices and rerun.

0031-677 Unexpected return code *number* from _mp_stdoutmode

Explanation: An error may have occurred in a lower level function.

User Response: If earlier error messages exist, perform whatever corrective action is indicated for these. If there are no other messages or if problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-678 Hostfile may not contain pool requests if not using Resource Manager

Explanation: The user explicitly requested not to use the Resource Manager (with MP_RESD environment variable or **-resd** command line flag), but the hostfile contained pool requests.

User Response: Use hostnames in the hostfile or do not request that the Resource Manager not be used.

0031-679 Profiling may not have completed on node *number*

Explanation: A profiling file may not have been completed for the given node. However, profiling files may exist for other nodes in the job.

User Response: If a profiling file from this node is needed, ensure that there is enough room on the node's filesystem for the profiling file and re-run the job. If the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-680 Invalid mode *number* requested

Explanation: User program has called function MP_STDINMODE or **mpc_stdinmode** with invalid mode.

User Response: Refer to man page for explanation of valid modes.

0031-682 Unexpected return code *number* from _mp_in_mode

Explanation: An error may have occurred in a lower level function.

User Response: If earlier error messages exist, perform whatever corrective action is indicated for these. If there are no other messages or if problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-687 Unsuccessful call to pm_SSM_read

Explanation: Internal error has occurred.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-688 Incorrect subtype *number* **received in structured socket message**

Explanation: Internal error has occurred.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-689 Unexpected return code *number* **from _mp_stdoutmode_query**

Explanation: An error may have occurred in a lower level function.

User Response: If earlier error messages exist, perform whatever corrective action is indicated for these. If there are no other messages or if problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-690 Connected to Resource Manager *string string*

Explanation: Informational message to user to indicate successful connection to Resource Manager.

User Response: None required.

0031-692 Invalid option *number* **requested**

Explanation: User program has called function MP_FLUSH or **mpc_flush** with invalid option.

User Response: Refer to man page for explanation of valid options.

0031-696 Unexpected return code *number* **from _mp_flush**

Explanation: An error may have occurred in a lower level function.

User Response: If earlier error messages exist, perform whatever corrective action is indicated for these. If there are no other messages or if problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-699 Task *number* **waiting to profile...**

Explanation: Designated task is waiting to profile.

User Response: None required, information only.

0031-700 invalid priority received

Explanation: The **priority** received by the **pm** daemon is invalid.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-701 invalid envc received

Explanation: The **envc** received by the **pm** daemon is invalid.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-702 invalid pmdlog argument

Explanation: The **pmdlog** argument received by the **pm** daemon is invalid.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-703 invalid nprocs argument

Explanation: The **nprocs** argument received by the **pm** daemon is invalid.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-704 invalid newjob argument

Explanation: The **newjob** argument received by the **pm** daemon is invalid.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-705 invalid pdbx argument

Explanation: The **pdbx** argument received by the **pm** daemon is invalid.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-706 pmd: Error reading node info from home node.

Explanation: The node info received by the **pm** daemon is invalid.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-707 pmd: error sending node map ack to home node.

Explanation: The **pm** daemon was not able to send a node map **ack** to the home node.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-708 pmd: invalid JOBID.

Explanation: The **pm** daemon was not able to send a node map **ack** to the home node.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-709 pmd: SSM recv'd not cmd str or exit

Explanation: An incorrect SSM was received by the **pm** daemon from the home node.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-710 pmd: pipe creation error

Explanation: The **pm** daemon was unable to create pipes to its child.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-711 parent select errno = *number*

Explanation: select error from **pmd** parent.

User Response: Probable system error.

0031-712 parent error reading STDIN, rc = *number*

Explanation: **pm** daemon parent was unable to read STDIN.

User Response: Probable system error.

0031-713 pmd parent: error w/ack for sig req to home

Explanation: **pm** daemon parent had error sending **ack** for **sig** request.

User Response: Probable system error.

0031-714 pmd parent: error writing to child's STDIN

Explanation: **pm** daemon parent was not able to write to its child's STDIN.

User Response: Probable system error.

0031-715 pmd parent: error writing to child's cntl

Explanation: **pm** daemon parent was not able to write to its child's control pipe.

User Response: Probable system error.

0031-716 pmd parent: error reading STDOUT from child

Explanation: **pm** daemon parent was not able to read STDOUT from the child.

User Response: Probable system error.

0031-717 pmd parent: error writing to STDOUT

Explanation: **pm** daemon parent was not able to write to STDOUT.

User Response: Probable system error.

0031-718 pmd parent: error reading control from child

Explanation: **pm** daemon parent was not able to read the control pipe from the child.

User Response: Probable system error.

0031-719 AFS authorization failed in settokens

Explanation: **settokens()** failed in **pmd** child when given the **afstoken.**

User Response: Probable system error.

0031-720 child: initgroups error - errno = <*number*>

Explanation: **initgroups** failed, errno given.

User Response: Probable system error.

0031-721 unable to set user info

Explanation: **userinfo()** was unable to set user info.

User Response: No response needed.

0031-722 can't set priority to *number*

Explanation: **setpriority()** failed in **pmd** child.

User Response: No response needed.

0031-723 userid = <*number*>

Explanation: **userid** is set to the given userid.

User Response: No response needed.

0031-724 Executing program: <*string*>

Explanation: The child is executing the given program.

User Response: No response needed.

0031-725 Failed to exec program *string***; errno =** *number*

Explanation: The child failed to execute the given program.

User Response: Probable system error. POE's /usr/lpp/ppe.poe/lib/libc.a may not be up to date. Have the system administrator run the following script to rebuild POE's libc.a: /usr/lpp/ppe.poe/bin/makelibc. Verify that the euilibpath includes the following path: /usr/lpp/ppe.poe/lib.

0031-726 pmd: error sending node attach data record to home node.

Explanation: The remote node PMD was not able to send the node attach data via IP communications to home node. The remote node will now exit.

User Response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-727 pmd parent: error writing to child's debug engine pipe

Explanation: **pm** daemon parent was not able to write to debug engine pipe, which is used to communicate with the node debug server.

User Response: Probable system error.

0031-728 Cannot set *string* **limit to** *number***, hard limit is** *number***.**

Explanation: If the user's soft limit is greater than the pmd2 hard limit, then soft limit will only get changed to the hard limit value.

User Response: If this causes a problem, contact System Administrator to increase hard limit values for pmd2.

0031-729 ident_match failed; user identification failed.

Explanation: The user is not authorized to communicate via the TCP/IP socket between the POE home node and partition manager daemon.

User Response: Ensure the user is properly authorized to use POE, and ensure ident_match routine is properly installed & available.

0031-730 POE DFS credentials file is empty; DFS credentials cannot be established.

Explanation: POE was unable to locate the DFS credentials, because the /tmp/poedce_master file was empty. As a result, DFS authentication cannot be established.

User Response: Contact the system administrator to ensure the DFS credentials files were successfully copied using the poeauth command.

0031-731 Error getting and setting DFS credentials.

Explanation: The PMD called the poe_dce_set function to get and set the current context for establishing the DFS/DCE credentials when it encountered an error. poe_dce_set should have issued additional messages describing the errors.

User Response: Contact the system administrator to ensure the DFS/DCE credentials are properly set up. If the problem persists, Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-732 Error loading POE DFS/DCE routines.

Explanation: The Partition Manager Daemon attempted to load poe_dce_set.o, the loadable object for the DFS/DCE routines it uses for setting up the user's credentials. Possibly DFS/DCE was not installed or is inoperable, or the required installation steps for running POE with DFS were not done.

User Response: Contact the system administrator to ensure that DFS/DCE is properly installed and that the necessary POE installation steps were completed. If the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-733 The initialization of the remote debug engine failed.

Explanation: The Partition Manager Daemon detected an error while starting the remote debug engine. The debugger is terminated.

User Response: The remote debug engine portion of pdbx and pedb depend on the bos.adt.debug fileset. Contact your system adminstrator to make sure that the fileset bos.adt.debug is properly installed on the nodes where the job runs.

0031-734 POE DFS master file was not found. DFS credentials cannot be established.

Explanation: POE did not find the POE DFS credentials master file, /**tmp**/**poedce_master**,<*uid*>. DFS user authentication was selected (by specifying **MP_AUTH = DFS**), but most likely the **poeauth** command was not run to set up the DFS/DCE credentials. As a result, DFS authentication cannot be established and the job is terminated.

User Response: Make sure a valid set of DFS/DCE credentials were successfully copied using a **dce_login** and running the **poeauth** command, then run the POE job again.

0031-800 -procs *string* **ignored in remote child**

Explanation: **-procs** interpreted only in parent code.

User Response: No response needed.

0031-801 -hostfile *string* **ignored in remote child**

Explanation: **-hostfile** interpreted only in parent code.

User Response: No response needed.

0031-802 -newjob *string* **ignored in remote child**

Explanation: **-newjob** interpreted only in parent code.

User Response: No response needed.

0031-803 -pmdlog *string* **ignored in remote child**

Explanation: **-pmdlog** interpreted only in parent code.

User Response: No response needed.

0031-804 -pgmmodel *string* **ignored in remote child**

Explanation: **-pgmmodel** interpreted only in parent code.

User Response: No response needed.

0031-805 Invalid programming model specified: *string*

Explanation: **-pgmmodel** should be either SPMD or MPMD.

User Response: Re-enter **-pgmmodel** with either SPMD or MPMD.

0031-806 Invalid retry count *string*

Explanation: Retry count should be an integer.

User Response: Re-enter **-retry** followed by an integer.

0031-807 Invalid node pool specified: *string*

Explanation: **-rmpool** should be an integer >= 0.

User Response: Re-enter **-rmpool** followed by an integer >= 0.

0031-808 Hostfile or pool number must be used to request nodes

Explanation: When using the Resource Manager, the environment variable MP_RMPOOL or the command line option -rmpool must be used to specify the pool number, since a hostfile did not exist.

User Response: Ensure that absence of hostfile was intended, verify command-line or environment variable settings of hostfile, resd, and rmpool, and re-try. Refer to IBM AIX Parallel Environment Operation and Use for further information.

0031-809 -tracefile *string* **ignored in remote child**

Explanation: **-tracefile** interpreted only in parent code.

User Response: No response needed.

0031-810 -tracelevel *string* **ignored in remote child**

Explanation: **-tracelevel** interpreted only in parent code.

User Response: No response needed.

0031-900 Can't request profiling for task *number*

Explanation: A communication failure has occurred.

User Response: Retry; if problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-901 Didn't get response to profiling request for task *number*

Explanation: A communication failure has occurred.

User Response: Retry; if problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-902 Unexpected response to profiling request for task *number*

Explanation: A stray message may have been received during profiling.

User Response: Retry; if problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-903 Can't confirm profiling for task *number*

Explanation: A communication failure has occurred.

User Response: Retry; if problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-904 Can't rename profiling file to *string*

Explanation: A communication failure may have occurred, or the profiling file could not be opened.

User Response: Check path name and permissions. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-906 Task *number* **finished profile...**

Explanation: Designated task has finished profile.

User Response: None required, information only.

0031-907 Task *number* **terminating due to pulse timeout**

Explanation: Designated task has been terminated due to a timeout in the POE pulse processing. The connection to the home node may have dropped, or the job may have been hung or abnormally functioning.

User Response: It is possible that the pulse interval was too small to allow sufficient time for the task to complete. Verify that the node is still up, or that the job was not doing something abnormal. You may also want to increase your interval value with the MP_PULSE environment variable or -pulse command line flag.

0031-908 SSM_PULSE acknowledgment failed for task *number***.**

Explanation: There was a failure in sending the acknowledgment message for the POE pulse function from POE to pmd for the indicated task.

User Response: Possible system error, unless the network connection between the nodes dropped. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-909 POE terminating due to pulse timeout for task *number***.**

Explanation: POE has determined that there were remote nodes which did not respond during POE pulse processing. There was not enough responses prior to the pulse timeout interval. The connection to the home node may have dropped, or the job may have been hung or abnormally functioning.

User Response: It is possible the that the pulse interval was too small to allow sufficient time for the task to complete. Verify that the nodes are still up, or that the job was not doing something abnormal. You may also want to increase your interval value with the MP_PULSE environment variable or -pulse command line flag.

0031-A400 Error in creating socket

Explanation: The program **pmarray** terminates. An explanatory sentence is appended.

User Response: Probable system error. Check the condition(s) given in the explanatory sentence.

0031-A401 Error in binding socket

Explanation: The program **pmarray** terminates. An explanatory sentence is appended.

User Response: Probable system error. Check the condition(s) given in the explanatory sentence.

0031-A402 Error in listen

Explanation: The program **pmarray** terminates. An explanatory sentence is appended.

User Response: Probable system error. Check the condition(s) given in the explanatory sentence.

0031-A403 Error in accept

Explanation: The program **pmarray** terminates. An explanatory sentence is appended.

User Response: Probable system error. Check the condition(s) given in the explanatory sentence.

0031-A404 Error in socket read. File descriptor = *number*

Explanation: The program **PMArray** terminates. An explanatory sentence is appended.

User Response: Probable system error. Check the condition(s) given in the explanatory sentence.

0031-A405 Unsupported data type *number* **received by PMArray, task** *number*

Explanation: Execution continues. The data is ignored.

User Response: **PMArray** received data which was not recognized. This probably indicates that the **PMArray** program is not connected properly to the Partition Manager.

0031-A406 Bad message type *number*

Explanation: Internal error has occurred.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-A407 Internal error reading socket message

Explanation: Internal error has occurred.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-A409 Invalid action code *number*, **msg type** *number*

Explanation: An unexpected message was received during initialization of the Program Marker Array.

User Response: Restart **pmarray;** If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

Chapter 5. MPI Messages

0032-001 Invalid source task (*number*) in *string*, task *number*

Explanation: The value of **src** (source task ID) is out of range.

User Response: Make sure that the source task id is within the range 0 to N-1, where N is the number of tasks in the partition.

0032-002 Invalid destination task (*number*) in *string*, task *number*

Explanation: The value of **dest** (destination task id) is out of range.

User Response: Make sure that the destination task id is within the range 0 to N-1, where N is the number of tasks in the partition.

0032-003 Invalid message length (*number*) in *string*, task *number*

Explanation: The value specified for message length or block length is out of range.

User Response: Make sure that the message length is not less than zero.

0032-004 Invalid message type (*number*) in *string*, task *number*

Explanation: The value specified for **type** (message type) is out of range.

User Response: Make sure that the message type is within the allowable range as specified by MP_TASK_QUERY (**qtype**=2).

0032-005 Invalid message id (*number*) in *string*, task *number*

Explanation: The value specified for **msgid** (message id) is invalid.

User Response: Make sure that the message id is not less than 0.

0032-006 Invalid message buffer addr= *number* in *string*, task *number*

Explanation: The message buffer address cannot be valid.

User Response: Make sure that the buffer is correctly identified in the call.

0032-007 Invalid message offset (*number*) in *string*, task *number*

Explanation: The value specified for **offset** is invalid.

User Response: Make sure that **offset** is not less than **blklen.**

0032-008 Invalid blknum (*number*) in *string*, task *number*

Explanation: The value specified for **blknum** is invalid.

User Response: Make sure that **blknum** is not less than 0.

0032-009 Invalid stype value (*number*) in *string*, task *number*

Explanation: The value specified for **stype** is invalid.

User Response: Make sure that **stype** is either 1, 2, or 3.

0032-010 Invalid nbuf value (*number*) in *string*, task *number*

Explanation: The value specified in **nbuf** is invalid.

User Response: Make sure that **nbuf** contains valid data.

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0032-011 Invalid qtype value (*number*) in *string*, task *number*

Explanation: The value specified for **qtype** is invalid.

User Response: Make sure that **qtype** is either 1, 2, or 3.

0032-012 Invalid nelem value (*number*) in *string*, task *number*

Explanation: The value specified for **nelem** is invalid.

User Response: Make sure that **nelem** is not less than 0.

0032-013 Out of memory, task *number*

Explanation: There is insufficient memory available to continue.

User Response: Reduce the size of user storage required per task.

0032-014 Internal error: *string*, task *number*

Explanation: An internal software error occurred during execution.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0032-015 System error: *string*, task *number*

Explanation: A system software error occurred during execution.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0032-016 Deadlock detected, task *number*

Explanation: A software-generated deadlock was detected.

User Response: Make sure that your application code does not contain potential deadlock conditions. Refer to IBM Parallel Environment for AIX: Parallel Programming Reference (SH26-7228).

0032-017 Receive buffer too small, task *number*

Explanation: The buffer specified for the operation was too small to hold the received message.

User Response: Increase the size of the buffer or reduce the size of the message.

0032-018 Too many messages, task *number*

Explanation: Too many outgoing and incoming messages have been posted without being completed.

User Response: Make sure that MP_WAIT (**mpc_wait**) or MP_STATUS (**mpc_status**) is being called to complete pending non-blocking sends and receives. In addition, make sure that for each message sent, there is a corresponding receive issued by some task.

0032-019 Invalid group id (*number*) in *string*, task *number*

Explanation: The value of **gid** (group id) is out of range.

User Response: Make sure that **gid** is not less than 0. In addition, make sure that the value specified for **gid** is a value that was returned by either MP_GROUP (**mpc_group**) or MP_PARTITION (**mpc_partition**).

0032-020 Invalid task id (*number*) in *string*, task *number*

Explanation: The value specified for **taskid** is out of range.

User Response: Make sure that **taskid** is within the range 0 to N-1, where N is the number of tasks in the partition.

0032-021 Invalid task rank (*number*) in *string*, task *number*

Explanation: The value specified for **rank** is out of range.

User Response: Make sure that **rank** is within the range 0 to N-1, where N is the number of tasks in the group referenced by gid.

0032-022 Invalid step value (*number*) in *string*, task *number*

Explanation: The value specified by **step** is out of range.

User Response: Make sure that **step** is in the range -N to N, where N is the number of tasks in the group referenced by **gid**.

0032-023 Invalid gsize value (*number*) in *string*, task *number*

Explanation: The value specified by **gsize** is out of range.

User Response: Make sure that **gsize** is in the range 1 to N, where N is the number of tasks in the partition.

0032-024 Invalid task group list (*number*) in *string*, task *number*

Explanation: The list of task ids for the group (**glist**) contains one or more invalid task ids.

User Response: Make sure that the local task id is included in the group list, and that all of the task ids in the list are within the range 0 to N-1, where N is the number of tasks in the partition.

0032-025 Duplicate task id (*number*) in *string*, task *number*

Explanation: A duplicate task id was found in the group list.

User Response: Make sure that each task in the group list is included only once.

0032-026 Inconsistent source task in *string*, task *number*

Explanation: The same source task was not specified by each task in the group.

User Response: Make sure that each task specifies the same source task.

0032-027 Inconsistent destination task in *string*, task *number*

Explanation: The same destination task was not specified by each task in the group.

User Response: Make sure that each task specifies the same destination task.

0032-028 Inconsistent message length in *string*, task *number*

Explanation: The same message length was not specified by each task in the group.

User Response: Make sure that each task specifies the same message length.

0032-029 Inconsistent step value in *string*, task *number*

Explanation: The same value of **step** was not specified by each task in the group.

User Response: Make sure that each task specifies the same **step** value.

0032-030 Inconsistent flag value in *string*, task *number*

Explanation: The same value of **flag** was not specified by each task in the group.

User Response: Make sure that each task specifies the same **flag** value

0032-031 Inconsistent gsize value in *string*, task *number*

Explanation: The same value of **gsize** was not specified by each task in the group.

User Response: Make sure that each task specifies the same **gsize** value.

0032-032 Inconsistent label value in *string*, task *number*

Explanation: The same value of **label** was not specified by each task in the group.

User Response: Make sure that each task specifies the same **label** value.

0032-033 Inconsistent task group list in *string*, task *number*

Explanation: The same task group list was not specified by each task in the group.

User Response: Make sure that each task specifies the same task group list.

0032-034 Buffering cannot be turned on twice, task *number*

Explanation: A task called MP_TASK_SET (**mpc_task_set**) with **stype**=3 twice.

User Response: Make sure that each task makes the indicated call no more than once.

0032-035 Buffer changed before message completion, task *number*

Explanation: The contents of a buffer posted by a non-blocking send operation were modified before the send was completed.

User Response: Make sure that the buffer used to send a message is not reused before a WAIT or STATUS operation indicates that the send is complete.

0032-036 Calling *string* from a RCVNCALL handler is invalid, task *number*

Explanation: MPL routines for Collective Communication as well as those which can modify the operation mode of MPL are not valid within Receive and Call handler code.

User Response: Use only point to point subroutines for messaging within a Receive and Call handler. Do not attempt to change any MPL operating mode or use Collective Communications from within a handler.

0032-050 Invalid buffer pointer

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred. Since much of the information defining an MPI message buffer is buried in the MPI_Datatype, accurate detection of an invalid buffer would be prohibitively expensive. Although this error class is defined by the MPI Standard, it is not used.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_BUFFER

0032-051 Invalid count argument

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_COUNT

0032-052 Invalid datatype argument

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_TYPE

0032-053 Invalid tag argument

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_TAG

0032-054 Invalid communicator

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_COMM

0032-055 Invalid rank

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_RANK

0032-056 Invalid request (handle)

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_REQUEST

0032-057 Invalid root

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_ROOT

0032-058 Invalid group

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_GROUP

0032-059 Invalid operation

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_OP

0032-060 Invalid topology

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_TOPOLOGY

0032-061 Invalid dimension argument

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_DIMS

0032-062 Invalid argument

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_ARG

0032-063 Unknown error

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_UNKNOWN

0032-064 Message truncated on receive

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_TRUNCATE

0032-065 Known error not in this list

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_OTHER

0032-066 Internal MPI error

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_INTERN

0032-067 Error code is in status

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_IN_STATUS

0032-068 Pending request

Explanation: This is an MPI error class, returned by MPI_Error_class. It provides a broad description of the type of error that occurred.

User Response: See the entry for the specific error code returned by the MPI function.

ERROR CLASS: MPI_ERR_PENDING

0032-100 No error

Explanation: The function completed successfully.

User Response: No response required.

ERROR CLASS: MPI_SUCCESS

0032-101 Invalid source rank (*number***) in** *string***, task** *number*

Explanation: The value of **source** (source rank) is out of range.

User Response: Make sure that the source rank is within the range 0 to N-1, where N is the number of tasks in the communicator group.

ERROR CLASS: MPI_ERR_RANK

0032-102 Invalid destination rank (*number***) in** *string***, task** *number*

Explanation: The value of **dest** (destination rank) is out of range.

User Response: Make sure that the destination rank is within the range 0 to N-1, where N is the number of tasks in the communicator group.

ERROR CLASS: MPI_ERR_RANK

0032-103 Invalid count (*number***) in** *string***, task** *number*

Explanation: The value of **count** (element count) is out of range.

User Response: Make sure that the count is greater than or equal to zero.

ERROR CLASS: MPI_ERR_COUNT

0032-104 Invalid message tag (*number*) in *string*, task *number*

Explanation: The value specified for **tag** (message tag) is out of range.

User Response: Make sure that the message tag is within the range zero to val, as specified by MPI_Attr_get(MPI_COMM_WORLD,MPI_TAG_UB,&val, &flag).

ERROR CLASS: MPI_ERR_TAG

0032-105 Invalid group handle (*number*) in *string*, task *number*

Explanation: The specified group handle is undefined or NULL.

User Response: Make sure that the group handle is either predefined or was returned by an MPI function.

ERROR CLASS: MPI_ERR_GROUP

0032-106 Negative length or position for buffer (*number*) in *string*, task *number*

Explanation: The values specified for buffer size and position must be positive.

User Response: Specify a proper size and/or position for the pack or unpack buffer.

ERROR CLASS: MPI_ERR_ARG

0032-107 Invalid stride (*number*) in *string*, task *number*

Explanation: The value specified for **stride** is invalid.

User Response: Make sure that the value(s) of stride (ranges[?][2] in C, or ranges(3,?) in FORTRAN is non-zero.

ERROR CLASS: MPI_ERR_ARG

0032-108 Invalid use of NULL request in *string*, task *number*

User Response:

ERROR CLASS: MPI_ERR_REQUEST

0032-109 Uncommitted datatype (*number*) in *string*, task *number*

Explanation: The **datatype** handle has not been committed.

User Response: Make sure that you call MPI_Type_commit to commit the datatype before using it in the specified function.

ERROR CLASS: MPI_ERR_TYPE

0032-110 Attempt to free a predefined datatype (*number*) in *string*, task *number*

Explanation: It is illegal to try to free a predefined datatype.

User Response: Only call MPI_Type_free for user-defined datatypes.

ERROR CLASS: MPI_ERR_TYPE

0032-111 Invalid blocklength (*number*) in type constructor *string*, task *number*

Explanation: The value specified for **blocklength** is invalid.

User Response: Make sure that blocklength is greater than or equal to zero.

ERROR CLASS: MPI_ERR_ARG

0032-112 Collective requests not supported in *string*, **task** *number*

Explanation: This function does not support the non-blocking collective communication extensions to MPI.

User Response: Only use point-to-point request handles with this function.

ERROR CLASS: MPI_ERR_REQUEST

0032-113 Out of memory in *string*, **task** *number*

Explanation: There is insufficient memory available to continue.

User Response: Reduce the size of user storage required per task.

ERROR CLASS: MPI_ERR_INTERN

0032-114 Internal error: *string* **in** *string*, **task** *number*

Explanation: An internal software error occurred during execution.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

ERROR CLASS: MPI_ERR_INTERN

0032-115 System error: *string*, **in** *string* **task** *number*

Explanation: A system software error occurred during execution.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

ERROR CLASS: MPI_ERR_INTERN

0032-116 Null function not allowed in *string*, **task** *number*

Explanation: The value NULL (zero) was specified for **function**.

User Response: A valid function must be specified. If a do-nothing function is desired, it must be supplied by the user.

ERROR CLASS: MPI_ERR_OTHER

0032-117 User pack or receive buffer too small (*number***) in** *string*, **task** *number*

Explanation: The buffer specified for the operation was too small to hold the message. In the PACK and UNPACK cases it is the space between current position and buffer end which is too small.

User Response: Increase the size of the buffer or reduce the size of the message.
ERROR CLASS: MPI_ERR_TRUNCATE

0032-118 Invalid datatype (*number***) in** *string*, **task** *number*

Explanation: The **datatype** is not a valid argument to the function.

User Response: The MPI_Datatypes (MPI_LB, MPI_UB, MPI_PACKED) are not valid in all functions. Make sure the type being use is valid for the function.

ERROR CLASS: MPI_ERR_TYPE

0032-119 Datatype already committed (*number*) in *string*, task *number*

Explanation: It is invalid to try to commit an **datatype** that is already committed.

User Response: Avoid calling MPI_Type_commit more that once per user defined datatype.

ERROR CLASS: MPI_ERR_TYPE

0032-120 Declaration has upper bound < lower bound (*number*) in *string*, task *number*

Explanation: No **datatype** can be defined with negative extent (upper bound less than lower bound).

User Response: Make sure any MPI_LB or MPI_UB argument to MPI_Type_struct is consistent with the layout being defined.

ERROR CLASS: MPI_ERR_ARG

0032-121 Invalid rank (*number*) in *string*, task *number*

Explanation: The value specified for **rank** is out of range.

User Response: Make sure that **rank** is within the range 0 to N-1, where N is the number of tasks in the group or communicator.

ERROR CLASS: MPI_ERR_RANK

0032-122 Invalid dimension (*number*) in *string*, task *number*

Explanation: The specified dimension is invalid.

User Response: Make sure that all dimension values are valid for the function.

ERROR CLASS: MPI_ERR_DIMS

0032-123 MPI_DATATYPE_NULL not valid in *string*, task *number*

Explanation: The **datatype** is one which has already been freed.

User Response: Free a datatype only when it is known that it will not be needed again.

ERROR CLASS: MPI_ERR_TYPE

0032-124 Illegal use of predefined key (*number*) in *string*, task *number*

Explanation: The specified **keyval** is predefined.

User Response: Only user-defined keys are allowed with this function.

ERROR CLASS: MPI_ERR_OTHER

0032-125 Duplicate rank (*number*) in *string*, task *number*

Explanation: A duplicate rank was found in the group list.

User Response: Make sure that each rank in the group list is included only once.

ERROR CLASS: MPI_ERR_RANK

0032-126 Inconsistent message size (*number*) in *string*, task *number*

Explanation: Collective operations require that the amount of data sent must equal the amount received, pairwise between nodes.

User Response: Make sure that all (count,datatype) pairs used in collective communication operations specify the same number of bytes for sender and receiver.

ERROR CLASS: MPI_ERR_OTHER

0032-127 Inconsistent reduction operator (*number*) in *string*, task *number*

Explanation: The participants in a collective operation did not all specify the same value for **op**.

User Response: Make sure that op is identical for all tasks making the call.

ERROR CLASS: MPI_ERR_OP

0032-128 Inconsistent root node (*number*) in *string*, task *number*

Explanation: The participants in a collective operation did not all specify the same value for **root**.

User Response: Make sure that root is identical for all tasks making the call.

ERROR CLASS: MPI_ERR_ROOT

0032-129 Can't use an intercommunicator (*number*) in *string*, task *number*

Explanation: Only intra-communicators are valid with this function.

User Response: Make sure that **comm** is a handle for an intra-communicator.

ERROR CLASS: MPI_ERR_COMM

0032-130 Can't use an intracommunicator (*number*) in *string*, task *number*

Explanation: Only inter-communicators are valid with this function.

User Response: Make sure that **comm** is a handle for an inter-communicator.

ERROR CLASS: MPI_ERR_COMM

0032-131 Can't free a predefined communicator (*number*) in *string*, task *number*

Explanation: It is illegal to try to free a predefined communicator.

User Response: Only attempt to free user-defined communicators.

ERROR CLASS: MPI_ERR_COMM

0032-132 Only valid with graph topology (*number*) in *string*, task *number*

Explanation: This function is only valid for communicators with graph topologies.

User Response: Make sure that the communicator has a graph topology. See MPI_Graph_create.

ERROR CLASS: MPI_ERR_COMM

0032-133 Only valid with cartesian topology (*number*) in *string*, task *number*

Explanation: This function is only valid for communicators with cartesian topologies.

User Response: Make sure that the communicator has a cartesian topology. See MPI_Cart_create.

ERROR CLASS: MPI_ERR_COMM

0032-134 A Buffer is already attached in *string*, task *number*

Explanation: An attempt was made to attach a buffer when a buffer was already attached.

User Response: Call MPI_Buffer_detach first to remove the current buffer.

ERROR CLASS: MPI_ERR_OTHER

0032-135 Illegal send buffer update in *string*, **task** *number*

Explanation: The contents of a buffer posted by a non-blocking send operation were modified before the send was completed.

User Response: Make sure that the buffer used to send a message is not reused before a WAIT or STATUS operation indicates that the send is complete.

ERROR CLASS: MPI_ERR_OTHER

0032-136 Invalid communicator (*number***) in** *string*, **task** *number*

Explanation: The value used for **communicator** is not a valid communicator handle.

User Response: Make sure that the communicator is valid (predefined or created by an MPI function) and has not been freed by MPI_Comm_free.

ERROR CLASS: MPI_ERR_COMM

0032-137 Invalid keyval (*number***) in** *string*, **task** *number*

Explanation: The value used for **keyval** is not a valid attribute key handle.

User Response: Make sure that the key handle is valid (predefined or created by an MPI function) and has not been freed by MPI_Keyval_free.

ERROR CLASS: MPI_ERR_ARG

0032-138 Undefined datatype (*number***) in** *string*, **task** *number*

Explanation: The **datatype** handle does not represent a defined datatype.

User Response: Make sure the MPI_Datatype argument is either an MPI predefined type or has been defined by an MPI type constructor function.

ERROR CLASS: MPI_ERR_TYPE

0032-139 Invalid reduction operation (*number***) in** *string*, **task** *number*

Explanation: The value used for **op** is is not a valid reduction operation handle.

User Response: Make sure that the op handle is valid (predefined or created by an MPI function) and has not been freed by MPI_Op_free.

ERROR CLASS: MPI_ERR_OP

0032-140 Invalid error code (*number***) in** *string*, **task** *number*

Explanation: The value used for **code** is not a valid error code.

User Response: Make sure that the error code was returned by an MPI function.

ERROR CLASS: MPI_ERR_ARG

0032-141 Invalid error handler (*number***) in** *string*, **task** *number*

Explanation: The value used for **errhandler** is not a valid error handler handle.

User Response: Make sure that the errhandler handle is valid (predefined or created by an MPI function) and has not been freed by MPI_Errhandler_free.

ERROR CLASS: MPI_ERR_ARG

0032-142 Invalid node count (*number*) in *string*, task *number*

Explanation: An invalid number of nodes was specified (either explicitly, or implicitly).

User Response: Make sure that the number of nodes is non-negative, and is not greater than the size of the communicator.

ERROR CLASS: MPI_ERR_ARG

0032-143 Invalid dimension count (*number*) in *string*, task *number*

Explanation: The value specified for **ndims** is invalid.

User Response: Make sure that the number of dimensions is greater than zero.

ERROR CLASS: MPI_ERR_DIMS

0032-144 There is no solution in *string*, task *number*

Explanation: There is no set of dimensions which satisfies the conditions required by a call to MPI_Dims_create.

User Response: Modify the parameters used in the call to MPI_Dims_create so that a solution is possible.

ERROR CLASS: MPI_ERR_DIMS

0032-145 Invalid array size (*number*) in *string*, task *number*

Explanation: An array size was specified to be less than zero.

User Response: Make sure that all array sizes (specified by maxdims, maxedges, maxindex, etc.) are non-negative.

ERROR CLASS: MPI_ERR_ARG

0032-146 Invalid neighbor rank (*number*) in *string*, task *number*

Explanation: An invalid rank was used for an element of the edges array.

User Response: Make sure that all elements of the edges array are greater than or equal to zero, and less than nnodes.

ERROR CLASS: MPI_ERR_RANK

0032-147 Invalid coordinate (*number*) in *string*, task *number*

Explanation: The value specified is not a valid process coordinate in the communicator **comm**.

User Response: Make sure that each coordinate is in the range zero to N-1, where N is the size of the corresponding dimension of the cartesian topology associated with **comm**

ERROR CLASS: MPI_ERR_ARG

0032-148 Invalid root (*number*) in *string*, task *number*

Explanation: The value specified for **root** is not a valid process rank in the communicator **comm**.

User Response: Make sure that **root** is within the range zero to N-1, where N is the number of tasks in the group associated with **comm**. N can be determined by calling MPI_Comm_size.

ERROR CLASS: MPI_ERR_ROOT

0032-149 MPI is already initialized in *string*, task *number*

Explanation: A call to MPI_Init was made when MPI was already initialized.

User Response: If in doubt, make sure that MPI is not already initialized (by calling MPI_Initialized) before calling MPI_Init.

ERROR CLASS: MPI_ERR_OTHER

0032-150 MPI is not initialized in *string*, task *number*

Explanation: A call to an MPI function other than MPI_Init or MPI_Initialized was made before MPI was initialized.

User Response: Call MPI_Init before any other MPI function other than MPI_Initialized.

ERROR CLASS: MPI_ERR_OTHER

0032-151 MPI is already finalized in *string*, task *number*

Explanation: A call to an MPI function was made when MPI was in the finalized state.

User Response: Do not call any MPI function after calling MPI_Finalize.

ERROR CLASS: MPI_ERR_OTHER

0032-152 Inconsistent algorithm selected in *string*, task *number*

Explanation: The collective function resulted in different algorithms being selected by different nodes.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

ERROR CLASS: MPI_ERR_INTERN

0032-153 Inconsistent datatype (*number*) in *string*, task *number*

Explanation: Different datatypes were used by different tasks in the collective communication operation.

User Response: Make sure that all tasks use the same datatype.

ERROR CLASS: MPI_ERR_TYPE

0032-154 Not a persistent request (*number*), *string*, task *number*

Explanation: An attempt was made to start a non-persistent request.

User Response: Make sure that the request handle is associated with a persistent request (i.e., it was returned by MPI_Send_init, MPI_Recv_init, etc.).

ERROR CLASS: MPI_ERR_REQUEST

0032-155 Invalid number of ranks specified (*number*) in *string*, task *number*

Explanation: The number of process ranks specified (either explicitly or implicitly) is out of range.

User Response: Make sure that the rank count is between zero and the number of tasks in the group, inclusive.

ERROR CLASS: MPI_ERR_ARG

0032-156 Group is not a subset of communicator (*number*), in *string*, task *number*

Explanation: The group specified in MPI_Comm_create is not a subset of the group associated with **comm**.

User Response: Make sure that all of the process ranks in **group** are also in **comm**.

ERROR CLASS: MPI_ERR_GROUP

0032-157 Invalid request handle (*number*) in *string*, task *number*

Explanation: The value specified is not a valid request handle.

User Response: Make sure that the request handle was returned by an MPI function.

ERROR CLASS: MPI_ERR_REQUEST

0032-158 Persistent request already active (*number*) in *string*, task *number*

Explanation: An attempt was made to start a persistent request when the request was already active.

User Response: Complete the request by calling MPI_Wait, MPI_Test, etc. before starting it again.

ERROR CLASS: MPI_ERR_REQUEST

0032-159 Can't free an active receive request (*number*) in *string*, task *number*

Explanation: An attempt was made to free an active receive request (by calling MPI_Request_free).

User Response: Active receive requests should never be freed, as there is no way to verify that the receive has completed.

ERROR CLASS: MPI_ERR_REQUEST

0032-160 Too many communicators (*number*) in *string*, task *number*

Explanation: MPI is unable to create a new communicator because the maximum number of simultaneous communicators would be exceeded.

User Response: Be sure to free unneeded communicators with MPI_Comm_free so that they can be reused.

ERROR CLASS: MPI_ERR_COMM

0032-161 Can't free a predefined reduction op (*number*) in *string*, task *number*

Explanation: An attempt was made to free a predefined MPI reduction op.

User Response: Only use MPI_Op_free to free user-defined ops.

ERROR CLASS: MPI_ERR_OP

0032-162 Can't free a predefined error handler (*number*) in *string*, task *number*

Explanation: An attempt was made to free a predefined MPI error handler.

User Response: Only use MPI_Errhandler_free to free user-defined error handlers.

ERROR CLASS: MPI_ERR_ARG

0032-163 Copy callback failed in *string*, task *number*

Explanation: A non-zero return code was returned by the copy callback function associated with an attribute keyval. The specific value returned by the copy callback function is not available via MPI.

User Response: Make sure that user-defined copy callback functions are functioning correctly, and are returning MPI_SUCCESS upon successful completion.

ERROR CLASS: MPI_ERR_OTHER

0032-164 Delete callback failed in *string*, task *number*

Explanation: A non-zero return code was returned by the delete callback function associated with an attribute keyval. The specific value returned by the delete callback function is not available via MPI.

User Response: Make sure that user-defined delete callback functions are functioning correctly, and are returning MPI_SUCCESS upon successful completion.

ERROR CLASS: MPI_ERR_OTHER

0032-165 Out of buffer space in *string*, task *number*

Explanation: There is insufficient buffer space available to complete the buffered send.

User Response: Use MPI_Buffer_attach to attach a larger buffer.

ERROR CLASS: MPI_ERR_OTHER

0032-166 Local and remote leaders are the same (*number*) in *string*, task *number*

Explanation: The local and remote leaders are not allowed to be the same task, as this would create an intercommunicator with overlapping local and remote groups.

User Response: Make sure the local and remote leaders are distinct.

ERROR CLASS: MPI_ERR_RANK

0032-167 Local and remote groups overlap (*number*) in *string*, task *number*

Explanation: The local and remote groups are not allowed to overlap.

User Response: Make sure the local and remote groups are disjoint.

ERROR CLASS: MPI_ERR_RANK

0032-168 Invalid reduction operation/datatype combination (*number*) in *string*, task *number*

Explanation: The combination of reduction operation and datatype specified is not allowed.

User Response: Check the MPI documentation to determine which datatypes are allowed with each reduction operation.

ERROR CLASS: MPI_ERR_TYPE

0032-169 Invalid buffer size (*number*) in *string*, task *number*

Explanation: The size of a buffer must be greater than or equal to zero.

User Response: Make sure that the buffer size is non-negative.

ERROR CLASS: MPI_ERR_ARG

0032-170 Invalid direction (*number*) in *string*, task *number*

Explanation: The direction value was out of range.

User Response: Make sure that the direction is between zero and N-1, where N is the number of dimensions in the communicator topology.

ERROR CLASS: MPI_ERR_DIMS

0032-171 Buffer is still attached in *string*, task *number*

Explanation: MPI_Finalize was called with a user buffer still attached.

User Response: Make sure that you detach the buffer with MPI_Buffer_detach before terminating MPI processing with MPI_Finalize.

ERROR CLASS: MPI_ERR_OTHER

0032-172 Invalid color (*number*) in *string*, task *number*

Explanation: A negative value was used for color.

User Response: Make sure that color is greater than or equal to zero, or is MPI_UNDEFINED.

ERROR CLASS: MPI_ERR_ARG

0032-173 Invalid node degree (*number*) in *string*, task *number*

Explanation: A negative value was used for an element of the index array.

User Response: Make sure that the index array contains only non-negative entries.

ERROR CLASS: MPI_ERR_ARG

0032-174 Too many messages in *string*, task *number*

Explanation: Too many outgoing and incoming messages have been posted without being completed.

User Response: Make sure that MPI_WAIT, MPI_TEST, or one of the other MPI wait or test functions is being called to complete pending sends and receives. In addition, make sure that for each message sent, there is a corresponding receive issued by some task.

ERROR CLASS: MPI_ERR_OTHER

0032-175 No receive posted for ready mode send in *string*, task *number*

Explanation: A ready mode send was posted for which there was no corresponding receive. This error is flagged only at the destination. It cannot be detected at the sender.

User Response: When ready mode send (MPI_RSEND, MPI_IRSEND) is used, make sure that the corresponding receive has already been posted on the destination node. This error always uses MPI_ERRORS_ARE_FATAL as its error handler. Any user defined error handler is ignored.

ERROR CLASS: MPI_ERR_OTHER

0032-176 One or more tasks became unreachable via *string*, task *number*

Explanation: Some node or switch adapter that is part of the MPI job has been reset or shutdown. There may be hardware problems.

User Response: Restart job. Consider checking with local system support first to learn whether they are aware of the underlying problem and are dealing with it.

ERROR CLASS: MPI_ERR_OTHER

0032-177 A nonblocking collective communication failed to complete, *string*, task *number*

Explanation: A nonblocking collective communication operation has failed to complete at the time MPI_Finalize is called. This is most likely the result of an infinite loop in a reduction operation.

User Response: This message should not be seen in a program which has correctly waited on every nonblocking request. Make sure every request is completed before calling MPI_FINALIZE.

ERROR CLASS: MPI_ERR_OTHER

0032-178 A negative number of triplets was specified (*number*) in *string*, task *number*

Explanation: The number of range triplets specified must be positive. A zero is accepted as a valid number though calling the range include or exclude function with zero ranges is probably not useful.

User Response: Correct the number of ranges argument.

ERROR CLASS: MPI_ERR_ARG

0032-179 The values of first and last are inconsistent with stride (*number*) in *string*, task *number*

Explanation: For each range, the value of last need not be greater than the value of first but when last is less than first, the stride must be negative and when it is greater, the stride must be positive.

User Response: Use values of (first, last, stride) which agree.

ERROR CLASS: MPI_ERR_ARG

0032-180 MPI_CANCEL was attempted on an inactive persistent request (*number*) in *string*, task *number*

Explanation: A persistent request only represents a communication when it is active. It is made active by an MPI_START and made inactive by MPI_WAIT or MPI_TEST. Since there is no communication to cancel, MPI_CANCEL cannot be applied to an inactive request.

User Response: Avoid using MPI_CANCEL on a persistent request that does not currently involve a communication.

ERROR CLASS: MPI_ERR_REQUEST

0032-181 MPI calls are not permitted on MPL callbacks *string*, task *number*

Explanation: The Receive and call facility is part of MPL and does not support MPI calls on handlers created by MP_RCVNCALL.

User Response: Use only the prescribed set of MPL calls on callbacks.

ERROR CLASS: MPI_ERR_OTHER

0032-182 The value given for high disagrees with rank zero *string*, task *number*

Explanation: All members of the intercommunicator local group must give the same value for high. For the purpose of this error message, rank zero is presumed to have the correct value with which others can be compared.

User Response: Decide which value is correct and use it for the entire group.

ERROR CLASS: MPI_ERR_ARG

0032-183 An asymmetric graph was specified *string*, **task** *number*

Explanation: For each edge, a to b specified in a graph there must also be an entry in edges to specify the edge b to a.

User Response: Correct the asymmetry in the graph.

ERROR CLASS: MPI_ERR_ARG

Chapter 6. VT Messages

0033-1001 Node is inactive

Explanation: The node selected for monitoring is not active.

Cause: The selected square does not represent a node that is communicating with the performance monitor.

User Response: Select a different square.

0033-1002 Monitoring is currently ON. Changes will not be effective until monitoring is stopped and restarted.

Explanation: You have tried to add or remove a node for monitoring while monitoring was in progress. Changes are only registered when monitoring is off.

Cause: Selecting or deselecting a node while monitoring is active.

User Response: Stop monitoring and restart it to let the requested change(s) take effect.

0033-1003 *string* **was requested for monitoring but is not a known host**

Explanation: The monitoring program attempted to contact the named host for monitoring but was unable to determine its network address.

Cause: The gethostbyname() function failed to locate the host.

User Response: Ensure that the host can be contacted on the network.

0033-1004 Failed to fork PM statistics collector program because *string*

Explanation: A process to run the Performance Monitor statistics collection program could not be started.

Cause: The fork() function failed for the indicated reason.

User Response: Correct the specified problem.

0033-1005 Unable to execute *string* **program Error is** *string*

Explanation: The Performance Monitor statistics collection program could not be run.

Cause: The dug executable could not be invoked for the indicated reason.

User Response: Correct the specified problem.

0033-1006 Failed to create socket for the data collector because *string*

Explanation: The socket for communicating between the Performance Monitor and the dug program could not be created.

Cause: The socket() function failed for the indicated reason.

User Response: Correct the specified problem.

0033-1007 Bind failed for the data collector socket.errno= *number*

Explanation: bind could not be done on the socket for communicating between the Performance Monitor and the dug program

Cause: The bind function failed for the indicated reason.

User Response: Correct the specified problem.

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0033-1008 Accept failed for the PM data collector

Explanation: A connection on the socket for communicating between the Performance Monitor and the dug program could not be accepted.

Cause: The accept() function failed.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1009 Select a node before starting monitoring

Explanation: Monitoring can not be done unless at least one node to monitor has been specified.

Cause: You requested monitoring to start before specifying any nodes to monitor.

User Response: Select at least one node to monitor before starting the monitoring process.

0033-1010 Select a View to see statistics before starting monitoring

Explanation: Monitoring is not done unless one view of the performance data has been specified.

Cause: You requested monitoring to start before specifying what view(s) of the data to display.

User Response: Select at least one view of the data before starting the monitoring process.

0033-1011 Unable to connect to host names : *string*

Explanation: The indicated nodes did not respond to the Performance Monitoring initiation sequence and therefore cannot be monitored.

Cause: Usually because the performance data gathering daemon is not running on the indicated host(s).

User Response: Ensure that the performance data gathering daemon is running on the requested hosts. If the daemon appears to be running, ensure that it is at the proper level.

0033-1012 Error connecting to stream socket

Explanation: Internal Program error.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1013 Error *number* **opening file node_list**

Explanation: Internal Program error.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1014 Error opening stream socket

Explanation: Internal Program error.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1015 Error *number* **reading node list file** *string*

Explanation: Internal Program error.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1016 Error writing socket during allocation

Explanation: Internal Program error.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1017 Error writing socket during deallocation

Explanation: Internal Program error.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1018 Unable to query the Resource Manager

Explanation: Internal Program error.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1019 Host number missing in node list file *string*

Explanation: Internal Program error.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1020 pm_read_msg: Socket read failed *string***. Error is** *string*

Explanation: The Performance Monitor encountered an error when communicating with the dug statistics collection program.

Cause: The socket read() function failed for the indicated reason.

User Response: Correct the specified problem.

0033-1021 pm_send_msg: Socket write failed *string***. Error is** *string*

Explanation: The Performance Monitor encountered an error when communicating with the dug statistics collection program.

Cause: The socket write() function failed for the indicated reason.

User Response: Correct the specified problem.

0033-1022 dug: Unknown command *number* **from pm_dug**

Explanation: The dug statistics collection program encountered an unknown command on the socket for communicating with the Performance Monitor.

Cause: Usually the Performance Monitor has been terminated ungracefully without being able to notify dug.

User Response: dug will terminate after a consecutive series of unknown commands. If the Performance Monitor is still active, contact program support.

0033-1023 dug: socket() failed. Error is *string*

Explanation: The socket for communicating between the Performance Monitor and the dug program could not be created by dug.

Cause: The socket() function failed for the indicated reason.

User Response: Correct the specified problem.

0033-1024 dug: socket read failed *string***, Node=** *string***. Error is** *string*

Explanation: The dug statistics collection program encountered an error reading the socket from the statistics gathering daemon.

Cause: The socket read() function failed for the indicated reason.

User Response: Correct the specified problem.

0033-1025 dug: socket write failed *string***, Node=** *string***. Error is** *string*

Explanation: The dug statistics collection program encountered an error writing the socket from either the Performance Monitor or the statistics gathering daemon.

Cause: The socket write() function failed for the indicated reason.

User Response: Correct the specified problem.

0033-1026 dug: socket select failed. Error is *string*

Explanation: The dug statistics collection program encountered an error waiting for input from the statistics gathering daemon on one of the nodes being monitored.

Cause: The select() function failed for the indicated reason.

User Response: Correct the specified problem.

0033-1027 dug: connect_dig_socket(), socket() system call failed for node *string***. Error is** *string*

Explanation: Socket system call failed

Cause: The socket() function failed for the indicated reason.

User Response: Correct the specified problem.

0033-1028 dug: connect_dig_socket(), connect() failed for the node *string***. Error is** *string*

Explanation: The dug statistics collection program did not get a response from the Performance Monitor while it was trying to write data. dug will assume that the Performance Monitor has been terminated and will terminate itself.

Cause: Usually because the Performance Monitor has been terminated ungracefully without being able to notify dug.

User Response: If the Performance Monitor is still active, contact program support.

0033-1029 dug: *number* **unknown commands were received. VT is presumed to be no longer active and dug is terminating**

Explanation: The performance statistics collection program, dug, has received the indicated number of unknown commands and is terminating because it assumes that the Performance Monitor is no longer active.

Cause: Usually because the Performance Monitor has been terminated ungracefully without being able to notify dug.

User Response: If the Performance Monitor is still active, contact program support.

0033-1030 pm_connect_dug() : tmpnam() failed. Unable to get Unix stream socket pathname. Error is *string*

Explanation: The Performance Monitor was not able to establish a communication channel with the performance statistics collection program, dug.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1031 pm_connect_dug() Select Failed for the Unix socket. Error is *string*

Explanation: The Performance Monitor experienced an internal program error on its communication channel to the performance statistics collection program, dug.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1032 pm_connect_dug() Connection with dug timed out after *number* **seconds.**

Explanation: The Performance Monitor did not receive a response from the performance statistics collection program, dug, after a reasonable amount of time.

Cause: The dug program may not have been started successfully or may have been terminated after starting.

User Response: Ensure that the dug program can be invoked and continues to execute.

0033-1033 pm_connect_digq() : tmpnam() failed. Unable to get Unix stream socket pathname. Error is *string*

Explanation: The Performance Monitor was not able to establish a communication channel with the program digq which queries the nodes that are running the performance statistics monitor daemons, dig.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1034 Failed to fork PM Dig Query program because *string*

Explanation: A process to run the Dig Query program could not be started.

Cause: The fork() function failed for the indicated reason.

User Response: Correct the specified problem.

0033-1035 Unable to execute *string* **program Error is** *string*

Explanation: The Dig Query program could not be run.

Cause: The digquery executable could not be invoked for the indicated reason.

User Response: Correct the specified problem.

0033-1036 Failed to create socket for the Dig Query because *string*

Explanation: The socket for communicating between the Performance Monitor and the Dig Query program could not be created.

Cause: The socket() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1037 pm_connect_digq() Connection with digq timed out after *number* **seconds.**

Explanation: The Performance Monitor did not receive a response from the dig query program, digq, after a reasonable amount of time.

Cause: The digq program may not have been started successfully or may have been terminated after starting.

User Response: Ensure that the digq program can be invoked and continues to execute.

0033-1038 pm_read_msg: Socket read failed *string***. Error is** *string*

Explanation: The Performance Monitor encountered an error when communicating with the Dig Query program.

Cause: The socket read() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1039 pm_send_msg: Socket write failed *string***. Error is** *string*

Explanation: The Performance Monitor encountered an error when communicating with the Dig Query program.

Cause: The socket write() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1040 digq():Cannot create socket for broadcast query. Error is *string*

Explanation: The performance statistics query program, digq, was unable to create a socket with which to query the nodes that are running the performance statistics daemon.

Cause: The socket() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1041 digq():Cannot set socket to broadcast. Error is *string*

Explanation: The performance statistics query program, digq, was unable to set the SO_BROADCAST socket option. It must broadcast in order to query all the nodes running the performance statistics daemon.

Cause: The setsockopt() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1042 digq():Error in getting the local domain name. Error is *string*

Explanation: The performance statistics query program, digq, was unable to get the local domain.

Cause: The gethostname() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1043 digq():Error in getting the Internet address of the local host *string***. Error is** *string*

Explanation: The performance statistics query program, digq, was unable to get the Internet address of the local host.

Cause: The gethostbyname() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1044 digq():Cannot send broadcast packet. Error is *string*

Explanation: The performance statistics query program, digq, was unable to broadcast a query to the nodes running the performance statistics daemon.

Cause: The sendto() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1045 digq() failed while waiting for a response from either the Performance Monitor or from the nodes running the performance statistics daemon. Error is *string*

Explanation: The performance statistics query program, digq, experienced a problem while waiting for a response from either the Performance Monitor or from the nodes running the performance statistics daemon.

Cause: The select() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1046 digq():Cannot receive reply to broadcast. Error is *string*

Explanation: The performance statistics query program, digq, received notification that a node running the performance statistics daemon was ready to respond but when it tried to accept the response, an error occurred.

Cause: The recvfrom() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1047 digq():gethostbyaddr() failed. Error in getting the Host name for address *hex number***. Error is** *string*

Explanation: The performance statistics query program, digq, was unable to resolve the name of the host with the indicated Internet address.

Cause: The gethostbyaddr() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1048 digq():Failed to create socket for the Dig Query because *string*

Explanation: The socket for communicating between the Performance Monitor and the Dig Query program could not be created.

Cause: The socket() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1049 digq() was unable to establish a communication channel to the Performance Monitor. Error is *string*

Explanation: The performance statistics query program, digq, was unable to establish a communication channel to the Performance Monitor.

Cause: The bind() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1050 digq() experienced a problem while waiting for input from the Performance Monitor. Error is *string*

Explanation: The performance statistics query program, digq, experienced a problem while waiting for input from the Performance Monitor.

Cause: The select() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1051 digq() experienced a problem accepting input from the Performance Monitor. Error is *string*

Explanation: The performance statistics query program, digq, experienced a problem while waiting for input from the Performance Monitor.

Cause: The accept() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1052 digq() was unable to read a message from the Performance Monitor. Error is *string*

Explanation: The Dig Query program unable to read message from Performance Monitor.

Cause: The socket read() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1053 digq() was unable to send a message to either dig or the Performance Monitor in *string* **Error is** *string*

Explanation: The digquery encountered a error when communicating with the Dig/Performance Monitor program.

Cause: The socket write() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1054 digq()::p;oadcast: Unable to get the socket interface configuration. Error is *string*

Explanation: The performance statistics query program, digq, was unable to get the interface configuration of the socket in order to locate broadcast devices.

Cause: The ioctl() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1055 digq()::p;oadcast: Unable to get socket interface flags. Error is *string*

Explanation: The performance statistics query program, digq, was unable to get the interface flags of the socket in order to locate broadcast devices.

Cause: The ioctl() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-1056 Initialize_socket(), Connection to Resource Manager failed

Explanation: Connection to resource manager failed.

Cause: Resource manager may not be running.

User Response: Start Resource manager daemon.

0033-1057 pm_start_monitor(), Get Time of Day Call failed(), Error is *string*

Explanation: UNIX gettod call failed

User Response: Refer to AIX system documentation

0033-1058 Timer_FunctionPM(), Get Time of Day Call failed(), Error is *string*

Explanation: UNIX gettod call failed

User Response: Refer to AIX system documentation

0033-1059 dug: Only *number* **of** *number* **bytes of** *string* **could be written on socket connection to** *string***.**

Explanation: The indicated message was incompletely written to dig,

Cause: The socket was probably closed because dig terminated

User Response: Make sure dig is still running on the monitored node. if it appears to be, contact local support.

0033-1060 dug: dig on Node *string* **closed the socket connection before** *string* **was read.**

Explanation: The indicated information was not received.

Cause: The socket was probably closed because dig terminated.

User Response: Make sure dig is still running on the monitored node. if it appears to be, contact local support.

0033-1061 dug: dig on Node *string* **sent back** *number* **bytes of** *string* **but** *number* **bytes were expected.**

Explanation: An invalid amount of data was received from dig

Cause: There is probably a version of dig running that is incompatible with the monitoring routine.

User Response: Make sure the right level of dig is running on the monitored nodes

0033-1062 dug: socket read for *string* failed Error is *string*

Explanation: The dug statistics collection program encountered an error reading the socket connection to the monitor program

Cause: The monitor program has probably terminated.

User Response: Make sure the monitor program is still running and it did not experience a problem trying to communicate with the dug program

0033-1063 dug: Monitor program closed the socket connection before *string* was read.

Explanation: The indicated information was not received

Cause: The socket was probably closed because the monitor program terminated.

User Response: Make sure the monitor program is running and did not report any problems trying to communicate with dug.

0033-1064 dug: Monitor program sent back *number* bytes of *string* but *number* bytes were expected.

Explanation: An invalid amount of data was received from the monitor program

Cause: The version of the monitor program is incompatible with the version of dug running.

User Response: Make sure the right level of dug and the monitor program are running.

0033-1065 dug: socket write of *string* to monitor program failed. Error is *string*

Explanation: The dug statistics collection program encountered an error writing the socket from either the Performance Monitor or the statistics gathering daemon.

Cause: The socket write() function failed for the indicated reason.

User Response: Correct the specified problem.

0033-1066 dug: Only *number* of *number* bytes of *string* could be written on socket connection to monitor program.

Explanation: The indicated message was incompletely written to the monitor program

Cause: The socket was probably closed because the monitor program terminated.

User Response: Make sure the monitor program is still running and did not errors while contacting dug

0033-2002 Add: meter name was not specified

Explanation: The display meter for a manual configuration was not specified.

Cause: During the manual creation of an event/display pair, the display meter was not specified.

User Response: Be sure both the event and the display meter are specified during manual configuration.

0033-2003 Add: event name was not specified

Explanation: The event widget for a manual configuration was not specified.

Cause: During the manual creation of an event/display pair, the meter widget was not specified.

User Response: Be sure both the event and the display meter are specified during manual configuration.

0033-2004 AddHostname() could malloc *number* bytes for the first element of the history buffer

Explanation: The Performance Monitor could not allocate sufficient storage for the internal representation of the first node to be monitored.

Cause: Insufficient memory is currently available on the system for Performance Monitoring to operate.

User Response: Remove some of the concurrently executing processes or add more memory to the system.

0033-2005 AddHostname() could malloc *number* bytes for a subsequent element of the history buffer

Explanation: The Performance Monitor could not allocate sufficient storage for the internal representation of one of the nodes to be monitored.

Cause: Insufficient memory is currently available on the system for Performance Monitoring to operate.

User Response: Remove some of the concurrently executing processes or add more memory to the system.

0033-2006 "*string*" is not a valid meter name

Explanation: The indicated name was specified as a display meter in a configuration file but is not a recognized meter.

Cause: The configuration file is invalid.

User Response: If the error occurred while using the View Selector, contact local support for the Visualization Tool. If the error occurred while loading a configuration file, correct the entry called out by the error message.

0033-2007 Internal Error: bitmap_index : unable to find given bitmap

Explanation: While attempting to save a display meter configuration, the meters spectrum was not recognized as valid.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-2008 Cannot allocate color for "*string*"

Explanation: The indicated color could not be allocated under X

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-2009 Cannot find the host running the Resource Manager

Explanation: The Resource Manager host could not be located.

Cause: Either the Resource Manager or its host is down or the network connection to the Resource Manager host is down.

User Response: Ensure that the Resource Manager and its host are up and that the network connection to it is up.

0033-2010 Cannot get black color for cspectrum

Explanation: The color black could not be allocated under X

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-2011 Cannot get color for *string* spectrum

Explanation: A color for the indicated spectrum could not be obtained.

Cause: Either the X server where VT is running does not support a named color or no free color cells remain in the colormap.

User Response: If the spectrum identified used resources to select the colors, ensure all the colors specified (either by default or in a resource file) are supported by the X server. Otherwise, run VT with the -cmap option to request a private colormap.

0033-2022 *string* is an illegal time unit because it is not greater than zero

Explanation: The value entered for the time sensitivity of the display (the time resolution) is the frequency with which the display will be updated and must be greater than zero.

Cause: The value entered is not a positive number greater than zero.

User Response: Enter a number greater than zero.

0033-2023 Incorrect password for Configuration Add

Explanation: The configuration add function is enabled only during development and debugging and requires a password for invocation during normal use.

Cause: An incorrect password was supplied.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-2025 *string* is an invalid configuration file

Explanation: The configuration file that was specified to be loaded could not be read.

Cause: The file specified is not a regular file.

User Response: Specify a regular file.

0033-2026 Cannot open configuration file *string* because *string*

Explanation: The configuration file that was specified to be loaded could not be opened to be read.

Cause: The reason is indicated in the message.

User Response: Specify a readable file.

0033-2027 Configuration file *string* cannot be located because *string*

Explanation: The specified configuration file could not be loaded.

Cause: The stat() command failed for the indicated reason.

User Response: Correct the problem with the configuration file.

0033-2028 cx_delete_entry: Internal Error. Attempt to delete unused entry from configuration table

Explanation: An internal program error occurred.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-2029 Cannot close previous trace file because *string*

Explanation: An error occurred while trying to close the previous trace file.

Cause: The fclose() function failed for the indicated reason.

User Response: If the problem appears to be correctable, do so. Otherwise gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-2030 Reset cannot occur because the trace file "*string***" could not be opened**

Explanation: The reset button was pressed but the trace file had not been successfully opened.

Cause: An error occurred with the specified trace file.

User Response: Ensure the trace file is successfully opened before attempting to reset.

0033-2031 Cannot open help file *string*

Explanation: The text file for the requested help could not be located.

Cause: Either the file is not installed in the proper location or it is not installed with the proper permissions.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-2032 An error occurred while reading help file *string***. The reason is** *string*

Explanation: It was not possible to successfully read the text file for the requested help.

Cause: The read() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-2033 Internal Error: iwc_remove : unable to find "*string***" event type**

Explanation: An internal program error occurred.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-2035 Internal Error DialogAcceptCB received unknown event

Explanation: An internal program error occurred.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-2036 Internal Error DialogCancelCB received unknown event

Explanation: An internal program error occurred.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-2037 Internal Error MenuCB received unknown event

Explanation: An internal program error occurred.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-2041 Internal Error make_menu_item: Invalid Item Type

Explanation: An internal program error occurred.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-2042 *string* **is not valid for the sampling interval** *number* **will be used**

Explanation: An invalid sampling frequency was specified and the default will be used instead.

Cause: The sampling frequency must be between 1 an 999 seconds.

User Response: Respecify a valid frequency or accept the default.

0033-2043 Internal Error panel_updateCB() was called with invalid data

Explanation: An internal program error occurred.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-2044 A trace file is required but was not specified

Explanation: Trace display can only occur if a trace file is specified.

Cause: The field where the trace file name is entered was left empty.

User Response: Specify a trace file name before attempting to display the trace file.

0033-2045 Could not open trace file "*string***" because** *string*

Explanation: The specified trace file could not be opened.

Cause: The fopen() function failed for the indicated reason.

User Response: Ensure that the specified trace file can be opened.

0033-2046 "*string***" is not a regular file**

Explanation: Although it exists, the specified trace file is not a regular file and it must be in order to be used as input.

Cause: The name specified is not the name of a regular file.

User Response: Ensure that the specified trace file is a regular file.

0033-2047 Event widgets must produce port numbers.

Explanation: The widget specified cannot be used as an event widget.

Cause: The widget specified cannot drive a display widget.

User Response: Specify a valid widget.

0033-2048 Event widget class is invalid. Configuration cannot be created.

Explanation: An event/display chain was being created but the specified event widget is not valid.

Cause: If this message occurs using the Icon View Selector, it indicates a bad configuration file. If it occurs while manually creating a chain, it indicates the specified event widget is not legal.

User Response: Ensure that the configuration file or the manual process specifies a valid event widget.

0033-2049 Event widgets must accept multiple ports. Configuration cannot be created.

Explanation: An event/display chain was being created but the specified event widget cannot handle multiple processes.

Cause: The 'single' attribute of the event widget is set to TRUE which indicates it cannot handle multiple processes.

User Response: Ensure that the specified event widget can handle multiple processes.

0033-2050 Incompatible events selected. Configuration cannot be created.

Explanation: The event widgets selected do not generate the same type of events and cannot drive the same display meters.

Cause: The type attributes of the specified event widgets are not the same.

User Response: Ensure that the selected event widgets produce the same type of events.

0033-2051 Filter widget class is invalid. Configuration cannot be created.

Explanation: An event/display chain was being created but the specified filter widget is not valid.

Cause: If this message occurs using the Icon View Selector, it indicates a bad configuration file. If it occurs while manually creating a chain, it indicates the specified filter widget is not legal.

User Response: Ensure that the configuration file or the manual process specifies a valid filter widget.

0033-2052 Meter widget class is invalid. Configuration cannot be created

Explanation: An event/display chain was being created but the specified display meter widget is not valid.

Cause: If this message occurs using the Icon View Selector, it indicates a bad configuration file. If it occurs while manually creating a chain, it indicates the specified filter widget is not legal.

User Response: Ensure that the configuration file or the manual process specifies a valid display meter widget.

0033-2053 Internal Error: Event widget could not be created

Explanation: An error occurred while attempting to create the display meter widget.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-2054 Internal Error Filter could not be created

Explanation: An error occurred while attempting to create the filter widget.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-2055 No configuration file specified

Explanation: The program attempted to load a configuration file but the file name was blank.

Cause: Either the configuration installation is bad or a bad file name was specified on the command line option or environment variable.

User Response: If the configuration file command line option or environment variable was used, ensure it specifies a valid file name. Otherwise, contact program support.

0033-2056 Request to open another display failed. Only 20 displays may be open at any time. Close some displays and try again.

Explanation: Only 20 displays can be opened at a time.

Cause: An attempt was made to open another display while 20 were already opened.

User Response: Close a display before attempting to open another.

0033-2057 "*string*" is not a regular file name and cannot be used to save a config file

Explanation: An attempt was made to save a configuration file in something that is not a regular file.

Cause: The name specified for the configuration file is the name of an existing object (eg. a directory) that cannot be written into.

User Response: Specify a name that is not already in use or that is the name of a regular file.

0033-2058 Unable to open View Selection File "*string*"

Explanation: The View Selection File determines the layout of the Icon Selection Panel. The file could not be found.

Cause: The message indicates the place where the file was expected but was not found.

User Response: Ensure that the View Selection File exists in the proper place. The VTDIR environment variable can be used to set the root of the path (up to but not including the ViewSelect subdirectory). If the View Selection File cannot be found, contact program support.

0033-2059 Executable file *string* not found

Explanation: Executable file not found in current path.

Cause: Executable is not found in $PATH; environment variable.

User Response: Exit from VT, reset $PATH, and restart VT.

0033-2060 Source Code file *string* not found

Explanation: Source code file not found in current directory or source path command line variable (-spath) or Resource File (Vt).

Cause: Executable is not found in $PATH; environment variable.

User Response: Without exiting VT, press the mouse 3 button while pointing in the Source Code display and add the directories to the source search path. Otherwise, exit VT and change the directory name(s) from the command line variable (-spath) or Resource File (Vt).

0033-2061 Executable file *string* not compiled with -g option

Explanation: Source not Compiled with -g option.

Cause: Symbol Table information not found in executable.

User Response: Compile the source with -g option.

0033-2062 Command line option *string* **is not recognized or is missing a required parameter. It will be ignored**

Explanation: The indicated option is not recognized and the Visualization Tool does not know what to do with it other than ignore it.

Cause: The option may have been misspelled or may just be wrong.

User Response: Ensure that valid options are passed to the Visualization Tool as command line options.

0033-2063 Invalid release level, *hex number***, for trace file "** *string***" Release level for current VT is** *hex number*

Explanation: VT detected a release level in the trace file it was processing that it did not recognize.

Cause: Either the trace file was generated by a backlevel version of the VT tracing system or the file is not a valid trace file (either it was valid and became corrupted or it never was a valid trace file)

User Response: Verify that the file is a valid trace file and was generated by the same or a compatible level of the VT trace system as the VT visualization system. If it was not, re-generate the trace file. If the file should be a valid, compatible trace file, attempt to locate causes for corruption.

0033-2064 This version of VT was created on *string*

Explanation: This is an informational message that indicates when the VT executable was created.

Cause: Selecting the About button under Help

User Response: None

0033-2065 Insufficient Paging space available to bring up *string* **display. Required Paging Space=** *number***, Available Space=** *number*

Explanation: This is an warning message that indicates the Initialization of widget fails because paging space is low. During Initialization of widgets lot of memory is consumed for the history buffer storage. Thus the approximate requirement is calculated and checked against the available memory either in heap or in the paging space and if required memory is higher than the available memory , Initialization fails and returns with this message and display will not be shown.

Cause: Low paging space.

User Response: Check AIX manual.

0033-2066 Low Paging space detected by VT, increase your paging space

Explanation: This is an warning message that indicates when the paging space is too low.

Cause: Low paging space.

User Response: Check AIX manual.

0033-2067 Invalid Time specified in time field

Explanation: Invalid characters or invalid format specified for the time field.

Cause: User error.

User Response: Respecify a correct time value.

0033-2068 Unable to map trace file "*string*" into memory.

Explanation: During an attempt to load a tracefile, although the file existed, was a regular file, and was successfully opened, the file could not be mapped into memory.

Cause: Available data space insufficiently large to hold mapped file data structure.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-2069 Could not open file "*string*" for print output because *string*

Explanation: The specified file could not be opened to store output for the print request.

Cause: The fopen() function failed for the indicated reason.

User Response: Ensure that the specified file can be opened and is writable

0033-2070 Non zero return code from print command

Explanation: The command specified for printing returned with a non zero exit code.

Cause: The print command may have experienced some sort of failure.

User Response: Ensure that the command is correct and the resulting program or shell script is operating properly. Note that the command may be returning a non zero value when it is actually operating properly. In this case, you may want to write a shell script to invoke the command and return 0 to vt.

0033-2071 Internal error trying to create print output

Explanation: A failure occurred during the processing of the print command.

Cause: This will typically occur due to an X windows failure.

User Response: If the problem persists, gather information about the problem and follow local site procedures for reporting software problems.

0033-2072 Errors were found while post processing tracefile *string*. Details may be found in *string*.

Explanation: During post processing of the named tracefile, errors were found. Details about these errors are in the named log file.

Cause: See the log file for specific causal information.

User Response: If the errors indicate an undesired result, correct the application program and regenerate the tracefile.

0033-2073 Playback is disabled while post processing the tracefile and when using the Performance Monitor. Please wait for post processing to complete or close the Performance Monitor.

Explanation: Trace file playback is disabled when using the Performance Monitor and during the post processing of the trace file.

Cause: One of the trace playback buttons was pressed while trace file playback was disabled.

User Response: Wait for the post processing to complete or close the Performance Monitor. If you do not believe either of these situations exist, gather information about the problem and follow local site procedures for reporting software problems.

0033-2074 Post processing of tracefile *string*. is complete. Details may be found in *string*.

Explanation: During post processing of the named tracefile, information about the tracefile and post processing was logged to the file. See the log file for specific information. found. Details about these errors are in the named log file.

Cause: Post processing of of the tracefile completed without reporting any errors.

User Response: None. This is an informational message.

0033-2075 Unable to open tracefile *string* for postprocessing. Check file permission modes.

Explanation: The tracefile required post processing, but opening the file in read/write mode was unsuccessful because of the file permissions.

User Response: Check file permissions and ownership.

0033-2076 Unable to open tracefile *string* for post processing.

Explanation: The tracefile required post processing, but opening the file in read/write mode was unsuccessful for a reason unrelated to file permissions.

User Response: Retry

0033-2077 Unable to open help message file.

Explanation: The help message file, which defaults to **/usr/lpp/ppe.pedocs/peopsuse2.html**, is unavailable for reading.

Cause: The file set **ppe.pedocs** is not installed.

User Response: Install **ppe.pedocs**.

0033-2078 Unable to open HTML browser.

Explanation: The HTML browser, which defaults to Netscape, is unavailable.

Cause: Netscape is not installed or it is not in your search path.

User Response: Install Netscape or add it to your search path.

0033-2079 Unable to execute the shell script *string*.

Explanation: The shell script, pointed to by the **MP_VT_HELP_SHELL** environment variable, cannot be opened for execution.

Cause: The shell script does not exist or the execution bit is not set.

User Response: Check the name and the permission of the script.

0033-4001 *string* Data record for process *number* received but the largest process number is *number*. Data ignored.

Explanation: During visualization, a data record was marked for a process that does not exists.

Cause: The trace file is either corrupted or out of date.

User Response: For the current visualization session, the data record is ignored but the results of the visualization session are suspect. The trace file should be regenerated, if possible. If the problem persists, contact local support.

0033-4002 *string* **Data record for virtual process number** *number* **which is not a valid process number Data ignored.**

Explanation: During visualization, a data record was marked for a process number that is not valid.

Cause: The trace file is either corrupted or out of date.

User Response: For the current visualization session, the data record is ignored but the results of the visualization session are suspect. The trace file should be regenerated, if possible. If the problem persists, contact local support.

0033-4003 *string* **History buffer position should be 0 but is** *number* **History buffer will be reset**

Explanation: During visualization, the internal semaphores of the display have become unsynchronized.

Cause: Internal program error

User Response: For the current visualization session, the display will reset its history buffer so that any previous data values will be lost. Visualization will attempt to continue but the results are suspect. The problem should be reported to local support.

0033-4004 *string* **Invalid data value,** *number***, received. It will be ignored.**

Explanation: During visualization, an invalid value was received by the indicated display.

Cause: The trace file may be corrupted or an anomaly may have occurred during trace generation.

User Response: The data value will be ignored and visualization will continue but the results may be suspect. Report the problem and provide the trace file to local support.

0033-4005 *string* **Invalid record subtype,** *number***, received. It will be ignored.**

Explanation: During visualization, an invalid record subtype was received by the indicated display.

Cause: The trace file may be corrupted or an anomaly may have occurred during trace generation.

User Response: The record will be ignored and visualization will continue but the results may be suspect. Report the problem and provide the trace file to local support.

0033-4006 *string* **Out of sequence timestamp. Data record received with time stamp:** *timestamp* **But previous data record had timestamp:** *timestamp* **Data record will be ignored.**

Explanation: During visualization, a data record was encountered with a timestamp earlier than a previous record.

Cause: The trace file may be corrupted or an anomaly may have occurred during trace generation.

User Response: The record will be ignored and visualization will continue but the results may be suspect. Report the problem and provide the trace file to local support.

0033-4007 *string* **Internal program error. Invalid timestamp(s) t1 =** *timestamp* **t2 =** *timestamp* **Data record will be ignored.**

Explanation: During visualization, the program attempted to process an invalid pair of timestamps.

Cause: The trace file may be corrupted or an anomaly may have occurred during trace generation.

User Response: The processing operation will be terminated. The program will attempt to continue visualization but results will be suspect. Report the problem and provide the trace file to local support.

0033-4125 *string* **Internal Error processing set. Operation was** *string*

Explanation: During visualization, an internal error occurred in the Connectivity Graph.

Cause: Internal Program Error

User Response: The trace record being processed when the error occurred will be ignored. The Connectivity Display becomes unusable and should be closed. The information presented after the the message should be reported to local support.

0033-3003 VT_trc_init() failed to find a writeable directory Cannot create trace files Error is *string*

Explanation: During trace initialization, neither the temporary directory nor the current working directory were found to be writeable.

Cause: The program could not write into either the directory specified as the temporary directory (/tmp) or the directory specified as the current working directory.

User Response: Ensure that the directories are writeable.

0033-3005 Could not obtain current time for timestamp file because *string*

Explanation: The program could not determine the current time of day to write into the timestamp file.

Cause: The gettimeofday() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3009 VT_trc_capture(), Cannot Open File *string* **Err =** *string*

Explanation: The program was trying to write another trace file record but could not open the ongoing trace file.

Cause: The fopen() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3010 VT_trc_capture(), malloc of *number* **bytes failed. Error is** *string*

Explanation: The program was trying to allocate the memory buffer for AIX statistics information but failed.

Cause: Not enough memory was present for the memory buffer.

User Response: Specify a smaller memory buffer or increase the amount of available memory on the system.

0033-3011 VT_trc_set_params(), realloc of *number* **bytes failed. Error is** *string*

Explanation: The tracing routine attempted to reallocate the trace memory buffer (Tier 1) to the requested size and failed.

Cause: Not enough memory was present for the memory buffer.

User Response: Specify a smaller memory buffer or increase the amount of available memory on the system.

0033-3012 Internal Error: write_trc_data(), Error writing buffer to file. Err = *string*

Explanation: An error occurred while writing a trace record to the intermediate trace file.

Cause: The fwrite() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3015 VT_trc_init(), System call getpwuid() failed, Err : *string*

Explanation: The program was trying to allocate space for the memory buffer for message events but failed.

Cause: Not enough memory was present for the memory buffer.

User Response: Specify a smaller memory buffer or increase the amount of available memory on the system.

0033-3019 Internal Error: Invalid EUIType *number* **found by VT_trc_done()**

Explanation: While merging the temporary trace files, a message event was encountered that was not recognized.

Cause: The indicated subtype is not valid as a message.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3022 Client: Cannot open stream socket for Dig Daemon, Err=*string*

Explanation: The parallel application was attempting to create a unix socket with which to talk to the AIX statistics daemon but failed.

Cause: The socket() function failed.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3023 Client: Cannot connect to the server Dig Daemon, Err : *string*

Explanation: The parallel application attempted to connect to the AIX statistics daemon but failed.

Cause: The connect() function failed.

User Response: Ensure that the dig daemon is running on all of the nodes that the parallel application is executing on. If it is and the message still occurs, contact program support.

0033-3025 PMdig: Error waiting for communication, select() failed. errno= *number*

Explanation: The AIX statistics daemon, dig, experienced a problem while waiting for communication from clients.

Cause: The select() function failed

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3026 PMdig: Error accepting socket connection errno=*number*

Explanation: The AIX statistics daemon, dig, experienced a problem trying to service a client.

Cause: The accept() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3028 PMdig: Unable to send statistics record to *string* **errno=** *number*

Explanation: The AIX statistics daemon, digd, experienced a problem trying to send data to one of its clients.

Cause: The write() function failed

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3029 PMdig: Data read Error from a client, in *string***, Control message was** *number* **bytes but** *number* **bytes were expected Client is** *string* **Cause: The fwrite() function failed on the indicated file for the indicated reason.**

User Response: Refer to AIX product documentation for information on the indicated error number. If the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3068 VT_integrate() Could not open output file "*string***" Error is** *string*

Explanation: While integrating the intermediate trace files, the program could not open an intermediate output file.

Cause: The fopen() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3069 VT_integrate() Could not write output file *string*

Explanation: While integrating the intermediate trace files, the program could not write to the intermediate output file.

Cause: The fwrite() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3070 PMdig: Unable to read the location of the CPU utilization information

Explanation: The AIX statistics program, dig, was unable to read the location of the sysinfo information

Cause: The read() function into the kernel failed.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3071 VT_trc_init(), Invalid trace flag value *number* **Tracing set to off**

Explanation: Invalid Trace flag value.

Cause: User has set invalid value for environment variable or passed wrong value on command line.

User Response: Specify a correct value.

0033-3072 write_tmp_to_usd_file(), Fork failed to the write data on to the user specified directory. Error is *string*

Explanation: While writing the AIX statistics file to the current working directory, the fork which would allow the dig daemon to act on the behalf of the user failed.

Cause: The fork() function failed for the indicate reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3073 write_data_to_usd_file(), setuid() failed from root to user_id= *number***, Can't create AIX trace file, Err=***string*

Explanation: While writing the AIX statistics file to the current working directory, the program was unable to change its user id to the user id that submitted the application program.

Cause: The setuid() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3074 write_data_to_usd_file(), setgid() failed from root to user_gid= *number***, Can't create AIX trace file, Err=***string*

Explanation: While writing the AIX statistics file to the current working directory, the program was unable to change its group id to the group id of the user that submitted the application program.

Cause: The setgid() function failed for the indicated reason.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3075 VT Node Tracing completed. Node merge beginning

Explanation: A node is beginning to merge its intermediate trace files.

Cause: Application has completed on the reporting node.

User Response: None (information only).

0033-3076 VT Node Trace merge completed

Explanation: Informational message. Merge of euitrc and aixtrc node trace files on the originating node has completed, and all data has been sent to the home node. single .trc tracefile.

Cause: Printed during trace processing when the appropriate MP_INFOLEVEL is set.

User Response: None. Refer to the Operation and Use Publication for an explanation on tracing.

0033-3077 VT Final Trace Integration beginning at *string*

Explanation: Informational message. Time printed as merging of all the remote node trace data begins on the home node.

Cause: Printed during trace processing when the appropriate MP_INFOLEVEL is set.

User Response: None. Refer to the Operation and Use Publication for an explanation on tracing.

0033-3078 VT Final Trace Integration completed

Explanation: Informational message. Time printed before merging of all the .vttrc tracefiles into a single .trc tracefile.

Cause: Printed during trace processing when the appropriate MP_INFOLEVEL is set.

User Response: None. Refer to the Operation and Use Publication for an explanation on tracing.

0033-3079 PMdig::Gettimeofday() call failed while getting begin time. errno= *number*

Explanation: UNIX gettod call failed

Cause: Refer to error in message

User Response: Refer to AIX system documentation

0033-3080 PMdig::Gettimeofday() call failed while getting end time. errno= *number*

Explanation: UNIX gettod call failed

Cause: Refer to error in message

User Response: Refer to AIX system documentation

0033-3081 PMdig::write() on socket failed in sending version to *string***. errno=** *number*

Explanation: dig disconnected client because of version mismatch

Cause: May be a version problem

User Response: Check with the system administrator to insure the same version of the dig program is installed on each node, for the respective version of VT or POE.

0033-3082 PMdig::ExtractMessage() Invalid command *hex number* **found from** *string* **client**

Explanation: Invalid data is present in the buffer

Cause: May be a version problem

User Response: Check with the system administrator to insure the same version of the dig program is installed on each node, for the respective version of VT or POE.

0033-3083 VT_trrtn:: select() failed in *string***. Error is** *string*

Explanation: Invalid data is present in the buffer

Cause: System Error as explained in the printed message.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3084 VT_trrtn:: dig_init() failed because dig is already generating traces.

Explanation: Dig is already running traces for some task so currently not available.

Cause: Two or more tasks are running on the same node.

User Response: Execute only one job task per node at a time.

0033-3085 VT_trrtn:: dig_init() failed because dig version is incompatible with the poe-trace version.

Explanation: POE version is different from dig version.

Cause: Versions are different.

User Response: Rerun dig with proper version

0033-3086 VT_trrtn:: dig_init() Unable to contact dig.

Explanation: Not able to communicate with dig

Cause: Dig cannot be located or cannot be run

User Response: check that the dig executable can be found and that the system is not overloaded

0033-3087 VT_trc_capture(),Maximum filesize for intermediate file exceeds the TTEMPSIZE value. Tracing stopped

Explanation: The intermediate trace file size has exceeded the allowed size (either explicitly set with a command option or environment variable or implicitly set to the default of 10M).

Cause: The allowed size of the trace file is smaller than the actual trace file.

User Response: Specify a larger size for the permanent trace file size, reduce the number of trace records being generated (either by changing the trace level flag or by increasing the time between AIX statistics samples) or use the wrap around trace buffer.

0033-3088 VT_trrtn::write_trc_data(), Tracing continued after reducing the max size for temp file from *number* **to** *number*

Explanation: Tracing continued even if write failed on temp disk.

Cause: Temp Disk full.

User Response: Increase the space in the temp disk.

0033-3089 VT_trc_init::get_dir_stat failed for cwd directory *string***, Error is** *string*

Explanation: Cannot access current working directory.

Cause: System Error.

User Response: Refer to the AIX system documentation for cause of the error.

0033-3090 *string***:** *string* **write failed to the dig daemon. AIX Tracing has been stopped. Error is** *string*

Explanation: write on a socket failed.

Cause: Network problem or dig is not running.

User Response: Refer to the AIX system documentation for cause of the error.

0033-3091 Read failed from the dig daemon, Error is *string*

Explanation: read from a socket failed

Cause: Network problem or dig is not running.

User Response: Refer to the AIX system documentation for cause of the error.

0033-3092 VT_trint, statfs call failed, Disk space computation failed. Continuing ... Error is *string*

Explanation: During trace integration on the home node, the statfs system call failed.

Cause: System problem. The specific error number is reported.

User Response: Refer to the AIX system documentation for the possible cause of the error.

0033-3093 Trace Integration stopped , Disk space left is *number***, required is** *number*

Explanation: There is not enough disk space left to write the final trace file on the home node.

Cause: Insufficient disk space on the home node.

User Response: Increase the available disk space.

0033-3094 VT_trc_capture write_buff_to_file() Insufficient disk space to write, space left is *number***, required is** *number*

Explanation: Not Enough disk space left

Cause: Insufficient disk space

User Response: Clean the disk

0033-3095 VT_trc_capture write_buffusd_data() Insufficient disk space to write, Tracing stopped. Space left is *number***, required is** *number*

Explanation: Not Enough disk space left

Cause: Insufficient disk space

User Response: Clean the disk

0033-3096 VT_trc_init() HPSOclk_init *string* **failure, Tracing is disabled. Error is** *string*

Explanation: Clock initialization failed during trace initialization. Tracing cannot continue and is disabled at this time.

Cause: An unknown error was encountered in HPSOclk_init and the errno global variable was set with the error code.

User Response: If the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3097 VT_trc_capture() HPSOclk_gettime failed, Tracing stopped. Error is *string*

Explanation: Cannot read the VT trace record time stamp

Cause: System problem

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3098 VT_trc_init(): High Performance Switch Option was not detected. The time of day clock will be used to timestamp trace records

Explanation: The program is indicating that it is not using the HPSO switch to synchronize VT trace records across nodes. This is not a problem unless the program SHOULD be using the switch.

Cause: The /dev/css0 device is not present, is present but at a back level or is not operating properly.

User Response: Ensure that ssp.css is installed and that /dev/css0 is present. If it appears to be, refer to css documentation for problem determination procedures.

0033-3099 VT_trc_init(): High Performance Switch Option was detected and will be used to timestamp trace records

Explanation: The program is indicating that it is using the HPSO switch to synchronize VT trace records across nodes. This is not a problem unless the program SHOULD NOT be using the switch.

Cause: The /dev/css0 device is present and functioning normally.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3100 VT_trc_init(): Unknown configuration detected during clock initialization.

Explanation: The program is indicating that after the initializing the trace record time stamp, an unknown switch configuration was detected. Since initialization completed successfully, tracing continues but the resulting trace file should be checked for timestamp integrity.

User Response: Even if the trace file appears correct, report the message following local site procedures for reporting hardware and software problems.

0033-3101 VT_trc_set_params(): Setting Temp File size to threshold size. Set Size = *number***, Minimum size =** *number*

Explanation: The happens when user tries to set the size of temporary file to be less than the minimum threshold size. Program then automatically sets the size to the minimum size and continue trace generation.

User Response: Change the parameters in VT_trc_set_param call to be above threshold value.

0033-3103 VT_trc_set_params(): Setting Buffer size to Threshold size. Set Size = *number***, Minimum size =** *number*

Explanation: The happens when user tries to set the trace buffer size to be less than the minimum threshold size. Program then automatically sets the size to the Threshold size and continue trace generation.

User Response: Change the parameters in VT_trc_set_param call to be above threshold value.

0033-3104 VT_trc_set_params(): Setting system statistics sampling frequency to the Threshold value. Set Size = *number***, Minimum size =** *number*

Explanation: The happens when user tries to set the sampling frequency to be less than the minimum threshold size. Program then automatically sets the size to the Threshold value and continue trace generation.

User Response: Change the parameters in VT_trc_set_param call to be above threshold value.

0033-3105 write_buff_to_file(): fstatfs() function failed Error is *string*

Explanation: This a system error. fstatfs returns the disk space left on the temporary or permanent file system.

User Response: Check the AIX system manual.

0033-3106 DIG, Error in *string* **data on broadcast socket. Error is** *string*

Explanation: The is a system error. Recvto or sendto command failed

User Response: Check the AIX system manual.

0033-3107 dig, *string* **client on** *string* **sent a** *number* **byte** *string* **message but** *number* **bytes were expected.**

Explanation: Receive from the client failed

User Response: Check the AIX system manual.

0033-3108 dig: dig daemon running at level *number* **received connection request from a client at level** *number***. Connection refused.**

Explanation: Incompatible version of DIG and the client

User Response: Ensure that the level of dig running on the remote nodes and the level of the monitor program are compatible

0033-3109 connect_dig() Select Failed for the Unix socket. Error is *string*

Explanation: The Tracing routine experienced an internal program error on its communication channel.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3110 Accept failed for the connection from DIG executable. Error is *string*

Explanation: A connection on the socket for communicating between the Application program and dig daemon could not accepted.

Cause: The accept() function failed.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3111 connect_dig() Connection with DIG timed out after *number* **seconds.**

Explanation: The Trace routine did not get response from the aix data collector after a reasonable amount of time.

Cause: The dig program may not have been started successfully or may have been terminated after starting.

User Response: Ensure that the dig program can be invoked and continues to execute.

0033-3112 connect_dig() : tmpnam() failed. Unable to get Unix stream socket pathname. errno is *number*

Explanation: The Trace routine was not able to establish a communication channel with the aix data collector, dig.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3113 Failed to fork DIG, Aix statistics collector program. Error is *string*

Explanation: A process to run the Aix statistics collection program could not be started.

Cause: The fork() function failed for the indicated reason.

User Response: Correct the specified problem.

0033-3114 Unable to execute *string* **program errno is** *number*

Explanation: The Aix statistics collection program could not be run.

Cause: The dig executable could not be invoked for the indicated reason.

User Response: Correct the specified problem.

0033-3115 Bind failed for the data collector socket. Error is *string*

Explanation: bind could not be done on the socket for communicating between the Performance Monitor and the dug program

Cause: The bind function failed for the indicated reason.

User Response: Correct the specified problem.

0033-3116 DIG(), Connection with Application program timed out after *number* **seconds.**

Explanation: The DIG daemon did not receive a response from the Trace client reasonable amount of time.

Cause: The trace client may have died or system delay

User Response: Rerun the application.

0033-3117 DIG(), Version Mismatch. Dig version=*hex number***, Trace Version=***hex number*

Explanation: The version of DIG daemon does not match with the trace routine version of the application program.

Cause: Installation problem.

User Response: Reinstall VT .

0033-3118 dig daemon started on *string*

Explanation: Informational message that indicates when the most recent dig daemon started

User Response: None

0033-3119 dig daemon received *string* **signal**

Explanation: The dig daemon received a signal that may affect its operation

User Response: None

0033-3120 dig daemon was unable to set signal handler for signal *number* **Return code =** *number* **Error is** *string*

Explanation: The dig daemon could not set a signal handler

User Response: Contact local support

0033-3121 dig: Socket read error occurred while trying to check the version of *string* **client on** *string* **errno=** *number*

Explanation: The dig daemon encountered an error while trying to check the version of a trace or monitor client

User Response: Contact local support

0033-3122 dig: Socket was closed by *string* **client on** *string* **before version could be verified.**

Explanation: The dig daemon could not set a signal handler

User Response: Contact local support

0033-3123 dig: Socket read error while trying to read control message from *string* **errno=** *number*

Explanation: The AIX statistics daemon, dig, experienced a problem trying to accept commands from one of its clients.

Cause: A system error occurred that prevented reading the socket

User Response: The system error is reported as part of the message. If the problem cannot be corrected from the system message, contact local support.

0033-3124 Internal program error occurred during trace integration

Explanation: During the trace integration portion of the poe job, a required structure was not initialized properly.

Cause: A program error occurred that prevents trace integration.

User Response: Poe will attempt to continue but all trace data for this job is lost. Report this problem using local support procedures.

0033-3125 Unexpected acknowledgment of type *string* **from remote node** *hex number*

Explanation: The home node received an unexpected acknowledgement during trace integration.

Cause: Communication with a remote node has failed.

User Response: Check the remote node log file to determine the reason for failure. Probable PE error.

0033-3126 SSM interface failure between home node and remote task *hex number***. Return code was** *hex number*

Explanation: During the trace integration portion of the poe job, there was a communications failure between the home node and the node indicated.

Cause: An error occurred that prevented trace integration to continue and this message will be followed by additional information from poe about the exact nature of the failure.

User Response: Follow the actions recommended in subsequent poe messages.

0033-3127 Error getting environment variable *string*

Explanation: The internal **getenv** function failed to get the specified environment variable. The remote node terminates.

Cause: Probable PE error.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3128 Error using the SSM interface during trace integration.

Explanation: The internal **SSM** interface failed during communication of trace data between a remote node and the home node.

Cause: Probable PE error.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0033-3129 Remote node *number* **failed to complete trace integration.**

Explanation: The specified node did not complete sending trace data to the home node.

Cause: Probable PE error.

User Response: This message will most likely be accompanied by other PE messages. Try to isolate the problem using those messages, or gather information about the problem and follow local site procedures for reporting software problems.

0033-3130 Unable to allocate space to store "*string***", which is the name of the temporary kernel statistics trace file.**

Explanation: The dig program (which is spawned from the parallel application) could not save the name of the file that it was supposed to write kernel trace records into.

Cause: Probably low paging space.

User Response: Check paging space on the remote application during execution. If there is a low amount of available paging space, increase the paging space. Otherwise, follow site procedures for reporting software problems.

0033-3131 The dig executable was invoked with *number* **parameters. It requires 2.**

Explanation: The dig program is intended to be invoked only from a process spawned by a parallel application. The parallel application will pass it the name of the socket with which dig can communicate with the original parallel application and the name of the file into which dig should write kernel statistics records.

Cause: dig was invoked in a non-standard manner

User Response: Do not run dig directly.

0033-3132 Unable to allocate *number* **bytes to store the name of the temporary file for communication events.**

Explanation: VT trace generation could not allocate space to create the name of the temporary file for communication events.

Cause: Probably low paging space.

User Response: Check paging space on the remote application during execution. If there is a low amount of available paging space, increase the paging space. Otherwise, follow site procedures for reporting software problems.

0033-3133 Unable to allocate *number* **bytes to store the name of the temporary file for kernel statistics.**

Explanation: VT trace generation could not allocate space to create the name of the temporary file for kernel statistics.

Cause: Probably low paging space.

User Response: Check paging space on the remote application during execution. If there is a low amount of available paging space, increase the paging space. Otherwise, follow site procedures for reporting software problems.

0033-3134 Unable to create temporary name for communication events file. Error is *string*

Explanation: VT trace generation could not create a temporary name for the file to record communication events. The message gives the reason the system call failed.

Cause: Unknown

User Response: Attempt to correct the cause identified in the message. If that is not possible, follow local site procedures for reporting software problems.

0033-3135 Unable to create temporary name for kernel statistics file. Error is *string*

Explanation: VT trace generation could not create a temporary name for the file to record kernel statistics. The message gives the reason the system call failed.

Cause: Unknown

User Response: Attempt to correct the cause identified in the message. If that is not possible, follow local site procedures for reporting software problems.

0033-3136 Write of *number* **bytes from trace buffer to temporary file, "***string***", failed. Error is** *string***.**

Explanation: VT trace generation could not write the internal memory buffer to the temporary trace file. The reason the system gave for the failure is given.

Cause: Failure of system write call

User Response: Attempt to correct the cause identified in the message. If that is not possible, follow local site procedures for reporting software problems.

0033-3137 The preceding message refers to file: "*string***".**

Explanation: This message identifies the file to which the preceding error message applies.

Cause: An error occurred while reading the indicated file.

User Response: Use the file name provided as part of this message in the problem resolution procedure for the previous message.

0033-3138 Internal error during trace initialization or generation, malloc failed for size *number***, Error is** *string*

Explanation: Memory was being requested to allocate a larger array to temporarily hold the request field for one of the MPI WAIT or TEST message passing calls. This can happen during initialization (VT_trc_init()) or during generation of the trace event record. The program could not allocate sufficient memory.

Cause: The malloc() failed to allocate the indicated number of bytes for the indicated reason.

User Response: Increase the amount of memory available on the system.

0033-4100 *string* **Internal program error. The meter height of** *number* **is less than the minimum meter height of** *number***.**

Explanation: During visualization, the program attempted to reallocate the pixmaps used to display the processor label numbers.

Cause: The meter height received was not initialized correctly.

User Response: The processing operation will be terminated and VT will exit. Report the problem to local support.

0033-4101 *string* **Internal program error. The proc label width of** *number* **is less than or equal to zero.**

Explanation: During visualization, the program attempted to reallocate the pixmaps used to display the processor label numbers.

Cause: The proc label width received was not initialized correctly.

User Response: The processing operation will be terminated and VT will exit. Report the problem to local support.

0033-4102 *string* **Internal program error. The virt_mouse_proc or** *number* **is less than or equal to zero.**

Explanation: During visualization, the user clicked the mouse in one of the submeters and VT was unable to handle the redisplay.

Cause: Virtual Mouse Proc obtained a value less than zero or was greater than the number of processors.

User Response: The processing operation will be terminated and VT will exit. Report the problem to local support.

0033-4150 *string* **Internal program error. VT received** *number* **for the number of processors. The number of processors must be greater than zero.**

Explanation: During visualization, VT received a bad value for the number of processors.

Cause: Either AIX kernel statistics was in error or VT produced an invalid value for the number of processors.

User Response: The processing operation will be terminated and VT will exit. Report the problem to local support.

0033-4350 Pixmap not created for compressed rectangles. Internal Error in StripGraph::SetXhatchGC().

Explanation: During visualization, an internal error occurred in the StripGraph display.

Cause: Internal Program Error when calling XCreatePixmap.

User Response: The StripGraph display may not display hatched pattern as intended. Visualization will continue but the results may be suspect. The information presented in the message should be reported to local support.

0033-4351 Pixmap not created for compressed rectangles. Internal Error in StripGraph::SetXhatchGC().

Explanation: During visualization, an internal error occurred in the StripGraph display.

Cause: Internal Program Error when calling XCreateGC.

User Response: The StripGraph display may not display hatched pattern as intended. Visualization will continue but the results may be suspect. The information presented in the message should be reported to local support.

0033-4352 Meter height incorrect. Internal Error in StripGraph:ReallocProcLabels(). meter_height is less than min_meter_height. meter_height = *number*, **min_meter_height =** *number*

Explanation: During visualization, an internal error occurred in the StripGraph display.

Cause: Internal Program Error when checking internal variables.

User Response: The StripGraph display cannot draw the process labels. Visualization cannot continue. The information presented in the message should be reported to local support.

0033-4353 Procces Label width incorrect. Internal Error in StripGraph:ReallocProcLabels(). proc_label_width is less than or equal to 0. proc_label_width = *number*

Explanation: During visualization, an internal error occurred in the StripGraph display.

Cause: Internal Program Error when checking internal variables.

User Response: The StripGraph display cannot draw the process labels. Visualization cannot continue. The information presented in the message should be reported to local support.

0033-4354 Drawing area size incorrectly computed. Internal Error in StripGraph::compute_ideal_sizes(). Space left over should not be less than 0. i_space_left_over = *number***. total_meter_height =** *number***. da_max_height =** *number***.**

Explanation: During visualization, an internal error occurred in the StripGraph display.

Cause: Internal Program Error when checking internal variables.

User Response: The StripGraph display cannot draw to current calculated drawing area. Visualization cannot continue. The information presented in the message should be reported to local support.

0033-4355 Time index value incorrect. Internal Error in StripGraph::back_in_time_start_x_pos(). stripgraph->back_time_indx has a bad value. stripgraph->back_time_indx = *number***.**

Explanation: During visualization, an internal error occurred in the StripGraph display.

Cause: Internal Program Error when checking internal variables.

User Response: The StripGraph display cannot locate time in history buffer to start drawing. Visualization cannot continue. The information presented in the message should be reported to local support.

0033-4356 Time index value incorrect. Internal Error in StripGraph::back_in_time_start_x_pos(). stripgraph->back_time_indx is greater than or equal to HIST_BUFF_LEN. HIST_BUFF_LEN = *number***.**

Explanation: During visualization, an internal error occurred in the StripGraph display.

Cause: Internal Program Error when checking internal variables.

User Response: The StripGraph display cannot locate time in history buffer to start drawing. Visualization cannot continue. The information presented in the message should be reported to local support.

0033-4575 Insufficient Paging space available to bring up *string* **display. VT is terminating.**

Explanation: This is an error message that indicates that the Initialization of a widget fails because paging space is low. During initialization of widgets lots of memory is consumed for the history buffer storage, and visualization cannot continue unless all parts of its displays are successfully initialized. VT terminates.

Cause: Low paging space.

User Response: Check AIX manual.

Chapter 7. Xprofiler Messages

2537-0002 No file was specified in Binary Executable File dialog.

Explanation: When you are trying to load one or more **gmon.out** files, you are required to also specify the name of the binary executable file that was executed to produce the **gmon.out** file(s).

User Response: Specify a valid binary executable file in the Binary Executable File dialog by either selecting one from the Files list, or by entering the file in the Selection field, along with its path.

2537-0003 No file was specified in Gmon.out Profile File(s) dialog.

Explanation: At least one **gmon.out** file must be specified in the Gmon.out Profile File(s) dialog.

User Response: Specify valid **gmon.out** file(s) in the Gmon.out Profile File(s) dialog by either selecting them from the Files list, or by entering the file(s) in the Selection field, along with their path.

2537-0004 Space allocation by XtRealloc() failed.

Explanation: A memory allocation function failed because there is not enough memory available. Xprofiler continues processing, but it is likely you will have subsequent problems.

User Response: Exit Xprofiler and re-start it. You may want to contact your System Administrator to increase system resources, if possible.

If you continue to receive this error message, gather information about the problem and follow local site procedures for reporting hardware and software problems.

2537-0005 The total number of objects (nodes + arcs) in the Function Call Tree for the specified application is greater than what Xprofiler allows to be displayed at one time. Only *number* of these objects will be displayed.

Explanation: Xprofiler limits the number of objects that can be displayed in the main window to a combined total of 5,000 function boxes and their corresponding arcs. If the Function Call Tree for the specified application exceeds this total number of objects, Xprofiler will give priority to functions that consumed most of the CPU time. Then functions with smaller amount of CPU usage and arcs are added in, until the upper limit is reached.

User Response: When analyzing a large application, it is a good practice to limit the number of functions that are initially displayed each time you load **gmon.out** file(s). The option **-disp_max** is used to limit the number of function boxes that are initially displayed when **gmon.out** file(s) are loaded. From this point, additional function boxes can be displayed through filtering options in the Xprofiler main display. The **-disp_max** option can be specified on the command line when starting Xprofiler, or through a field in the Load Files dialog.

2537-0006 The value of runtime option "-disp_max " (=*number*) exceeds the number of objects that can be displayed at one time. The value for "-disp_max " has been reset to *number*.

Explanation: The value that you specified for the **-disp_max** option is greater than the maximum number of objects that Xprofiler allows to be displayed at one time, which is 5,000. The value for **-disp_max** has been set to this limit.

User Response: When specifying the **-disp_max** value, make sure it does not exceed Xprofiler's upper limit.

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2537-0007 You must first select a function from the list.

Explanation: Before using the **Utility->Locate in Graph** option in either the Flat Profile or Function Index report window, a function in the report must be selected first. This same rule also applies to the Code Display menu options in Flat Profile report.

User Response: Before using these options, you must first select a function from the report window. To select a function, you can either click on an entry in the window, or use the Search Engine at the bottom of the report window to locate the entry for the specified function. If the entry is found using the Search Engine, it is automatically selected for you.

2537-0008 The selected function is not currently in the display.

Explanation: The function box for the function you specified is not currently displayed in the Function Call Tree. The reason for this could be due to some previous filtering by you, or because the program being analyzed calls more functions than Xprofiler allows to be represented in the Function Call Tree at one time. Another possibility is that you specified the name of a function in the Search By Function Name Dialog which is not called in the program.

User Response: If you are using the Search By Function Name Dialog to locate the function box in the Function Call Tree, first check that you have specified the name of a function that is called by your program. If you have specified a valid function name, or if you are trying to locate the function box from a different window, check to be sure that the function box wasn't removed due to a previous filtering operation. If this is the case, the Filter by Function Names Dialog can be used to add this function to the Function Call Tree. You should then be able to use any of the methods for locating the associated function box in the main display.

2537-0009 You must first select a call entry from the list.

Explanation: Before using the Utility->Locate in Graph option in the Function Call Summary report window, a function caller-callee entry in the report must be selected first.

User Response: Before using these options, you must first select a function caller-callee entry from the report window. To select an entry in this report window, you can either click on it, or use the Search Engine at the bottom of the report window to locate the entry for the specified caller-callee pair. If the entry is found using the Search Engine, it is automatically selected for you.

2537-0010 The selected arc is not currently displayed in the Function Call Tree.

Explanation: You tried to locate the arc that corresponds to the selected entry in the Function Call Summary report window, but this arc is not currently displayed in the Function Call Tree. One reason for this could be due to some previous filtering by you, which resulted in the removal of one or both of the corresponding function boxes in the Function Call Tree. The other reason is that the two functions in the entry belong to different libraries, and both libraries are currently displayed in the Function Call Tree within cluster boxes.

User Response: If both functions for the selected entry of the Function Call Summary report belong to different libraries, and both libraries are currently displayed within cluster boxes, then either select the Remove Cluster Box option from the Cluster Node Menu, or choose the Expand Library Arcs option from the Filter menu. If one or both functions for the selected entry are not currently represented in the Function Call Tree, use either the Filter by Function Names... or Show Entire Call Tree options from the Filter menu to add the function boxes to the Tree.

2537-0011 The selected function's source file name is not available.

Explanation: Internal error. There is no source file name associated with the selected function, so no file can be opened.

User Response: If you continue to get this error message, gather information about the problem and follow local site procedures for reporting hardware and software problems.

2537-0012 shmat() failed to attach a shared memory segment or a mapped file.

Explanation: An attempt to attach a shared memory segment or a mapped file failed. This may be caused by a shortage of shared memory segments.

User Response: Use **ipcs -a** to check system's shared memory segment usage. If possible, remove any unused segments that belong to you by issuing the command **ipcrm -m**.

If you continue to get this error message, gather information about the problem and follow local site procedures for reporting hardware and software problems.

2537-0013 Can't begin search because no search string was specified.

Explanation: You are using either the Search By Function Name Dialog or the Filter By Function Names Dialog, and you clicked on the OK or Apply button without first entering a search string in the Enter function name: field.

User Response: Enter a text string in the Enter function name: field before clicking either the OK or Apply button to begin the search.

2537-0014 The specified function was not found in your program.

Explanation: The function that you specified wasn't found for your program, so the filtering operation that you attempted was not performed.

User Response: Enter the name of a function used in the application that you are analyzing.

2537-0015 This function is not in a cycle.

Explanation: The selected function is not in a function cycle, so the attempt to use Function Menu's All Functions on the Cycle option will not generate any result. A function cycle consists of at least two functions that call each other (e.g., Function_A calls Function_B, and vice versa). Keep in mind that recursive function calls are not considered to be a call cycle.

User Response: Make sure that the function you select is in a function cycle.

2537-0016 Cannot find the function name "*string* " in the application. The option specified for this function is ignored.

Explanation: The function name specified with either the **-e**, **-E**, **-f**, or **-F** load option doesn't match any of the functions called in the application that you are trying to analyze. The option used with this function name was ignored, and has no effect on the display of the Function Call Tree.

User Response: Make sure the function name specified with any of these load options is for a function called in the application.

2537-0017 There must be at least one space separating the runtime option " *string*" and its corresponding value.

Explanation: At least one space must be typed between an Xprofiler command-line option and its associated value. For example, **-e foo** or **-e foo** are acceptable formats, but **-efoo** is not. Any command-line options that were specified incorrectly are ignored.

User Response: Insert a space between any Xprofiler command-line option and its associated value.

2537-0018 Only one instance of the "-L" runtime option is allowed. All but the first instance of this option are ignored.

Explanation: The **-L** command-line option is allowed to be specified only once. If this option is specified multiple times, only the first instance is used.

User Response: Make sure that this option is specified only once when starting Xprofiler.

2537-0019 Error in the format of search string "*string*".

Explanation: The text string specified in search string field did not follow the syntax definition for extended regular expressions.

User Response: Make sure the search string follows the syntax rules for extended regular expressions. To get syntax details for extended regular expressions, refer to information on the **ed** editor, as well the AIX functions **regcmp** and **regcomp**.

2537-0020 Cannot open file "*string*" for writing. Check the file's specified path and access permissions.

Explanation: An attempt to write data to the file in the directory that you specified failed, due to the fact that the file cannot be opened for writing. This is because the path that you specified for the file contains an invalid directory name, or because the file doesn't have write permission.

User Response: Verify that the path you have specified is correct, and make sure you have write permission to the file.

2537-0021 Error in the verifyFlag field of the SearchEngine class.

Explanation: Internal error. This occurred in the SearchEngine class while verifying the input search string.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

2537-0022 The specified file "*string*" is not listed in the Included Function Files Dialog.

Explanation: You typed the name of a file in the Selection field of the Included Functions Dialog which does not match any of the names listed in this dialog.

User Response: Make sure the file name that you specify is one of the names listed in the dialog. Instead of typing the name in the Selection field, you can simply click on a file name in the list above it to select it.

2537-0023 You must first select or enter a file name.

Explanation: You clicked on the OK or Apply button in the Included Functions Dialog before specifying the name of the file whose contents you wish to display.

User Response: Before clicking on the OK or Apply button, first specify the name of the file that you want displayed. To do this, you can either click on one of the files listed in this dialog, or type the name of one of these files in the Selection field.

2537-0024 Cannot open file "*string*" for reading. Check for valid path and file specification and permissions.

Explanation: An attempt to read data from the file in the directory that you specified failed, due to the fact that the file cannot be opened for reading. This is because either the file name or a directory in the specified path is invalid, or the file is missing read permission, or a directory in the path is missing execute permission.

User Response: Verify that both the file name and path are correct, and that all directories in the path have execute permission, and make sure you have read permission for the file.

2537-0025 Either there is no included function file associated with this function, or this function was not compiled with -g flag so no information is available.

Explanation: An attempt to view a selected function's included function information failed. Either the selected function has no included function at all, or the function was not compiled with the **-g** compile-time flag so that no information regarding included function is available.

User Response: Make sure the selected function has included function information and the function was compiled with the **-g** flag. Otherwise, no included function information will be available.

2537-0026 An error occurred in locating a selected list item.

Explanation: An internal error occurred while trying to locate a selected item in a listing.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

2537-0027 Line table information is not available in the object file.

Explanation: A file's line table information is not available, and therefore no address can be mapped back to source statement.

User Response: Compile your application with the **-g** compile-time flag if you would like to see source statement profiling.

2537-0029 Bad gmon.out file "*string*". This file will be ignored.

Explanation: An error was detected while processing a **gmon.out** file that you asked to be loaded. This error was either bad **gmon.out** header information, or a discrepancy between the file size listed in the header data and the actual size of the file. In either case, the file is not loaded. If there was more than one **gmon.out** file specified, all valid files will be loaded. If this was the only **gmon.out** file chosen for loading, nothing is loaded, and the main display appears empty.

User Response: Make sure that all files specified as **gmon.out** files are of that file format.

2537-0030 No valid gmon.out files have been specified. Give at least one gmon.out file as input.

Explanation: All of the files that you specified as **gmon.out** files were invalid. Therefore, no files were loaded, and nothing is displayed in the Xprofiler main window.

User Response: When loading files in Xprofiler, give the name of at least one valid **gmon.out** file. If there are additional error messages below this one, try addressing the errors called out in those messages first, and then try to reload your **gmon.out** files.

2537-0031 A severe error was detected, and file processing has stopped. Refer to the message window below this window for more details.

Explanation: A function involving the symbol tables for your application failed to perform correctly while Xprofiler was trying to process your input files. Xprofiler will not proceed any further, and its main display will be empty. More details regarding the exact nature of the problem appears in a message window below the window for this message.

User Response: Check the second error message window for more details on the problem, and follow the User Response documented for that message.

2537-0032 shmget() failed to allocate a shared memory segment.

Explanation: An attempt to allocate a shared memory segment failed, possibly due to a shortage of shared memory segments.

User Response: Use **ipcs -a** to check system's shared memory segment usage. If possible, remove any unused segments that belong to you by issuing the command **ipcrm -m**.

If you continue to get this error message, gather information about the problem and follow local site procedures for reporting hardware and software problems.

2537-0033 shmdt() failed to detach a shared memory segment.

Explanation: An attempt to detach a shared memory segment that was no longer needed failed.

User Response: Exit and re-start Xprofiler. If you continue to get this error message, gather information about the problem and follow local site procedures for reporting hardware and software problems.

2537-0034 shmctl() failed to remove a shared memory segment identifier.

Explanation: An attempt to remove a shared memory segment identifier that was no longer needed failed.

User Response: Exit and re-start Xprofiler. If you continue to get this error message, gather information about the problem and follow local site procedures for reporting hardware and software problems.

2537-0035 Failed to generate the selected function's corresponding binary code.

Explanation: Xprofiler failed to generate a selected function's corresponding binary code in Disassembler Code display. A preceding message may provide additional information that pinpoints the actual cause of the failure.

User Response: Use the information provided in the preceding message to reveal the real cause of the problem. Correct the problem and then try again.

2537-0036 Cannot open this report window because there is no function call count information available.

Explanation: There is no function call count information available for the application you are analyzing. This is because none of the associated source files for this application have been compiled with the **-pg** flag. Therefore, the Function Call Summary window will not appear.

User Response: If you wish to view function call count information, you need to compile the source files containing the functions that you're interested in with the **-pg** flag.

2537-0037 The gmon.out file count data in the Xprofiler internal table is incorrect.

Explanation: Internal error. Xprofiler has an internal table that contains an entry for each **gmon.out** file that you specified to be loaded for the application you are analyzing. In addition, there is a record for this table that contains the number of **gmon.out** file entries. This record value does not match the number of actual table entries, and because of this, the Function Call Tree will not be displayed.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

2537-0038 The gmon.out file "*string*" contains more load unit sections than expected, and therefore will not be loaded.

Explanation: You specified a **gmon.out** file to be loaded that contains more sections for load unit descriptions than there should be, according to the value in the header of this file. Your executable, and the libraries that contain the functions called in the program are considered to be load units. The format of the file that you specified is not considered by Xprofiler to be in the valid **gmon.out** format, and because of this the file was not loaded.

User Response: Check to be sure that this is a valid **gmon.out** file. If it is not, execute your program again to generate a valid **gmon.out** file.

2537-0039 The number of load unit sections in the gmon.out file "*string*" is different from those of the previous files specified for loading at this time.

Explanation: You specified multiple **gmon.out** files to be loaded. The file identified in the message contains a different number of sections for load unit descriptions than the other valid **gmon.out** file(s) specified before it on the command line or in the Selection field of the Load window. This file is considered to have been created from a different executable file, and therefore was not loaded.

User Response: When trying to load multiple **gmon.out** files, make sure that they all were created from the same executable.

2537-0040 The library "*string*", which was available when loading other gmon.out files, can no longer be found.

Explanation: You specified multiple **gmon.out** files for loading, either on the command line when starting Xprofiler, or in the Selection field in the Load Files window. Every **gmon.out** file contains an entry for each of the libraries having a function that was called by the program you are analyzing. By the time one of the **gmon.out** files was being loaded by Xprofiler, one of these libraries could no longer be found. Perhaps some software was being updated on your system around the time you were loading, and the updates included a change to this library file.

User Response: Make sure the library file hasn't been removed, renamed, or moved to a different location. Then try to load your executable and **gmon.out** files again.

If you continue to get this error message, gather information about the problem and follow local site procedures for reporting hardware and software problems.

2537-0041 A load unit address listed in the gmon.out file "*string*" doesn't match the address for the same load unit in those files that have already been loaded.

Explanation: You specified multiple **gmon.out** files to be loaded. The address information contained in the file identified in the message for one of the load units is different from the address for the same load unit in the gmon.out files that have already been loaded. Because of this mismatch, the identified **gmon.out** file was considered to have been created from a different executable file, and therefore was not loaded.

User Response: When trying to load multiple **gmon.out** files, make sure that they all were created from the same executable.

2537-0042 Number of CPU sampling data records in the gmon.out file is greater than the value in the associated header.

Explanation: AIX error. The **gmon.out** file contains more records of CPU sampling data for one of the functions in your program than indicated by the value in the header data. Header data immediately precedes each set of CPU sampling records.

User Response: Execute your program again to generate a new **gmon.out** file, and try to load this new file with Xprofiler.

If you continue to get this error message, gather information about the problem and follow local site procedures for reporting hardware and software problems.

2537-0044 Cannot read the header in the executable file "*string*".

Explanation: Internal error. Xprofiler was unable to read the header data located at the beginning of the specified executable file.

User Response: Gather information about the problem and follow local site procedures for reporting hardware and software problems.

2537-0045 The file "*string*" does not contain a valid magic number, and therefore is not considered to be an executable file.

Explanation: The file that you attempted to load as an executable is not considered by Xprofiler to be a valid AIX executable file. This is because the magic number in the header at the beginning of this file is not the correct value for an AIX executable.

User Response: Specify the name of a valid AIX executable file in the Selection field in the Binary Executable File section of the Load Files window, or just before the **gmon.out** file name(s) on the command line.

2537-0046 Missing the corresponding value for the "*string*" runtime option.

Explanation: You specified a valid Xprofiler runtime option, but didn't include a corresponding value that is required to accompany it.

User Response: Either specify a value in the corresponding field in the Command Line Options section of the Load Files window, or immediately after the runtime option on the command line.

2537-0047 Invalid Xprofiler runtime option "-*character*".

Explanation: The specified runtime option is not supported by Xprofiler, and therefore is ignored.

User Response: Refer to the accompanying message for valid Xprofiler options and correct syntax. If you want to reload the executable and gmon.out files using other valid options, you can either re-start Xprofiler with all desired options specified on the command line, or use the Load Files window for option specification.

2537-0048 Usage: xprofiler [-b][-h] [-s][-z] [-L pathname] [-e name][-E name] [-f name] [-F name][-disp_max number_of_functions] [program][gmon.out ...]

Explanation: A listing of the supported Xprofiler runtime options and the proper command syntax.

User Response: None. This is an informational message.

2537-0049 Failed to obtain file information about "*string*".

Explanation: Failed to obtain information about the specified directory. This is because either the specified path contains a non-existent directory, or one of the parent directories in the path does not have execute permission.

User Response: Verify that all directory names in the specified path are valid. If they are, then check to be sure that all directories in the path have execute permission.

2537-0050 Failed to access current working directory.

Explanation: Either the current working directory, or one of its parent directories does not have execute permission, or one of the parent directories is missing read permission. Xprofiler uses the current working directory to fill the Filter and Selection fields of the Load Files window with a default path when they are empty. If one of the directories in this path is missing execute permission, you will not be able to load any files from the current working directory, or any of its subdirectories.

User Response: Make sure you have proper access permissions to the current working directory and all parent directories, if you wish to load files that are located here. You may load files from other directories by using the Filter or Selection fields in the Load Files window, providing you specify a path in which all directories have both execute and read permission.

2537-0051 You are missing either read or execute permission for the lowest directory in the path "*string*".

Explanation: You attempted to load a file from a directory that is missing either read or execute permission. If the directory is missing execute permission, you will be unable to load any files from the directory, even though you can see them listed in the dialog. If read permission is missing from the directory, you will be able to load files located there, but once you move out of that directory in the dialog, you won't be able to go back in.

User Response: Verify that you have both read and execute permission on the lowest directory in the specified path.

2537-0052 Could not find head of cycle during function cycle analysis phase.

Explanation: Internal error. While loading your executable and **gmon.out** files, Xprofiler analyzes these files to determine whether there are any function cycles. During this process, Xprofiler was unable to re-locate the first function listed for a particular cycle.

User Response: Try reloading your files again. If you continue to get this error message, gather information about the problem and follow local site procedures for reporting hardware and software problems.

2537-0053 An error occurred during the final stage of function cycle analysis.

Explanation: Internal error. After first determining all function cycles during a phase in the load process, Xprofiler is now unable to re-locate the first function in one of these cycles during the final stage of this phase.

User Response: Try reloading your files again. If you continue to get this error message, gather information about the problem and follow local site procedures for reporting hardware and software problems.

2537-0054 NarcCorrelate() had a negative return value.

Explanation: Internal error. The Function Call Tree was unable to be reconstructed by the NARC library, because the node and arc data that this library uses has either been overwritten, or placed in the wrong shared memory location, by Xprofiler.

User Response: Exit and re-start Xprofiler, and try to display the Function Call Tree again. If you continue to get this error message, gather information about the problem and follow local site procedures for reporting hardware and software problems.

2537-0057 Spaces are not allowed in the function name search string.

Explanation: The Search By Function Name Dialog does not permit embedded spaces within the function name search string. Any spaces at the beginning or end of the string are ignored.

User Response: Remove any spaces that are imbedded within the search string, and then click on either the OK or Apply button to start the search.

2537-0058 A function address listed in the gmon.out file " *string*" doesn't map to the corresponding function for the specified executable file. This gmon.out file will not be loaded.

Explanation: Xprofiler was unable to map a function back to the appropriate library file using the address listed for this function in the **gmon.out** file. Therefore, this **gmon.out** file will not be loaded. One possible reason for this problem is that the **gmon.out** file was not created by the executable file that you specified. Another possibility is that the library file associated with the function has changed since the **gmon.out** file was generated.

User Response: First, verify that this **gmon.out** file was generated by the specified executable, and if not, load it with the correct executable file. If the associated library has changed since this **gmon.out** file was created, re-compile your program, and then execute it to generate a valid **gmon.out** file.

2537-0059 An attempt was made to access an invalid address.

Explanation: Internal error. While reading a **gmon.out** file, Xprofiler either reached the end of the file and tried to read past it, or the gmon.out file contains a record with a pointer that points to to NULL. In either case, the problem should have been detected during an earlier stage of file processing, instead of being encountered at this time.

User Response: Try reloading your files again. If you continue to get this error message, gather information about the problem and follow local site procedures for reporting hardware and software problems.

2537-0060 The name of the a.out file ("*string*") does not match the name of the executable ("*string*") recorded in gmon.out file(s). The name "*string*" will be used.

Explanation: The a.out file name specified on the command line or in the Load File Dialog does not match the executable name recorded in the **gmon.out** file(s) that you are loading with this file. One possible explanation is that the executable file was renamed after being executed to generate the **gmon.out** file(s) that you specified. The name of the executable that you used for loading will appear in the main display and in all appropriate report windows during the current Xprofiler session.

User Response: Make sure the two executable names both refer to the same binary executable file. If not, the results may be unpredictable.

2537-0061 An attempt to access call count information in the gmon.out file, " *string*", failed.

Explanation: Internal error. Xprofiler was unable to access the call count data in this **gmon.out** file. This problem should have been detected during an earlier stage of file processing, instead of being encountered at this time. All CPU sampling data in this file will be included in the information in the main display and all report windows, but the call count data will not. If this is the only **gmon.out** file being loaded, the exclusion of this call count data will also affect the placement of function boxes in the Function Call Tree, and cause the arcs between these boxes NOT to be drawn.

User Response: Try reloading your files again. If you continue to get this error message, gather information about the problem and follow local site procedures for reporting hardware and software problems.

2537-0062 A function address listed in the gmon.out file *string* doesn't map to the corresponding function for the specified executable file.

Explanation: While processing function call count information, Xprofiler was unable to map a function back to the appropriate library file using the address listed for this function in the **gmon.out** file. Therefore, some of the call count information was lost, and the information displayed in the main window and some of the report windows will be incomplete. One possible reason for this problem is that the **gmon.out** file was not created by the executable file that you specified. Another possibility is that the library file associated with the function has changed since the **gmon.out file** was generated.

User Response: First, verify that this **gmon.out** file was generated by the specified executable, and if not, load it with the correct executable file. If the associated library has changed since this **gmon.out** file was created, re-compile your pgoram, and then execute it to generate a valid **gmon.out** file.

Glossary of Terms and Abbreviations

This glossary includes terms and definitions from:

- The *Dictionary of Computing*, New York: McGraw-Hill, 1994.
- The *American National Standard Dictionary for Information Systems*, ANSI X3.172-1990, copyright 1990 by the American National Standards Institute (ANSI). Copies can be purchased from the American National Standards Institute, 1430 Broadway, New York, New York 10018. Definitions are identified by the symbol (A) after the definition.
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- 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 the participating National Bodies of SC1.

This section contains some of the terms that are commonly used in the Parallel Environment books and in this book in particular.

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Other definitions in this glossary are taken from *IBM Vocabulary for Data Processing, Telecommunications, and Office Systems* (GC20-1699).

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A

address. A value, possibly a character or group of characters that identifies a register, a device, a particular part of storage, or some other data source or destination.

AIX. Abbreviation for Advanced Interactive Executive, IBM's licensed version of the UNIX operating system. AIX is particularly suited to support technical computing applications, including high function graphics and floating point computations.

AIXwindows Environment/6000. A graphical user interface (GUI) for the IBM RS/6000. It has the following components:

- A graphical user interface and toolkit based on OSF/Motif
- Enhanced X-Windows, an enhanced version of the MIT X Window System
- Graphics Library (GL), a graphical interface library for the applications programmer which is compatible with Silicon Graphics' GL interface.

API. Application Programming Interface.

application. The use to which a data processing system is put; for example, topayroll application, an airline reservation application.

argument. A parameter passed between a calling program and a called program or subprogram.

attribute. A named property of an entity.

B

bandwidth. The total available bit rate of a digital channel.

blocking operation. An operation which does not complete until the operation either succeeds or fails. For example, a blocking receive will not return until a message is received or until the channel is closed and no further messages can be received.

breakpoint. A place in a program, specified by a command or a condition, where the system halts execution and gives control to the workstation user or to a specified program.

broadcast operation. A communication operation in which one processor sends (or broadcasts) a message to all other processors.

buffer. A portion of storage used to hold input or output data temporarily.

C

C. A general purpose programming language. It was formalized by ANSI standards committee for the C language in 1984 and by Uniforum in 1983.

C++. A general purpose programming language, based on C, which includes extensions that support an object-oriented programming paradigm. Extensions include:

- strong typing
- data abstraction and encapsulation
- polymorphism through function overloading and templates
- class inheritance.

call arc. The representation of a call between two functions within the Xprofiler function call tree. It appears as a solid line between the two functions. The arrowhead indicates the direction of the call; the function it points to is the one that receives the call. The function making the call is known as the *caller*, while the function receiving the call is known as the *callee*.

chaotic relaxation. An iterative relaxation method which uses a combination of the Gauss-Seidel and Jacobi-Seidel methods. The array of discrete values is divided into sub-regions which can be operated on in parallel. The sub-region boundaries are calculated using Jacobi-Seidel, whereas the sub-region interiors are calculated using Gauss-Seidel. See also *Gauss-Seidel*.

client. A function that requests services from a server, and makes them available to the user.

cluster. A group of processors interconnected through a high speed network that can be used for high performance computing. It typically provides excellent price/performance.

collective communication. A communication operation which involves more than two processes or tasks. Broadcasts, reductions, and the MPI_Allreduce subroutine are all examples of collective communication operations. All tasks in a communicator must participate.

command alias. When using the PE command line debugger, pdbx, you can create abbreviations for existing commands using the **pdbx alias** command. These abbreviations are know as *command aliases*.

Communication Subsystem (CSS). A component of the Parallel System Support Programs that provides software support for the High Performance Switch. It provides two protocols; IP (Internet Protocol) for LAN based communication and US (user space) as a message passing interface that is optimized for

performance over the switch. See also *Internet Protocol* and *User Space*.

communicator. An MPI object that describes the communication context and an associated group of processes.

compile. To translate a source program into an executable program.

condition. One of a set of specified values that a data item can assume.

control workstation. A workstation attached to the IBM RS/6000 SP SP that serves as a single point of control allowing the administrator or operator to monitor and manage the system using Parallel System Support Programs.

core dump. A process by which the current state of a program is preserved in a file. Core dumps are usually associated with programs that have encountered an unexpected, system-detected fault, such as a Segmentation Fault, or severe user error. The current program state is needed for the programmer to diagnose and correct the problem.

core file. A file which preserves the state of a program, usually just before a program is terminated for an unexpected error. See also *core dump*.

current context. When using either of the PE parallel debuggers, control of the parallel program and the display of its data can be limited to a subset of the tasks that belong to that program. This subset of tasks is called the *current context*. You can set the current context to be a single task, multiple tasks, or all the tasks in the program.

D

data decomposition. A method of breaking up (or decomposing) a program into smaller parts to exploit parallelism. One divides the program by dividing the data (usually arrays) into smaller parts and operating on each part independently.

data parallelism. Refers to situations where parallel tasks perform the same computation on different sets of data.

dbx. A symbolic command line debugger that is often provided with UNIX systems. The PE command line debugger, **pdbx**, is based on the **dbx** debugger.

debugger. A debugger provides an environment in which you can manually control the execution of a program. It also provides the ability to display the program's data and operation.

distributed shell (dsh). An Parallel System Support Programs command that lets you issue commands to a group of hosts in parallel. See the *IBM RS/6000 SP: Command and Technical Reference* (GC23-3900) for details.

domain name. The hierarchical identification of a host system (in a network), consisting of human-readable labels, separated by decimals.

E

environment variable. 1. A variable that describes the operating environment of the process. Common environment variables describe the home directory, command search path, and the current time zone. 2. A variable that is included in the current software environment and is therefore available to any called program that requests it.

event. An occurrence of significance to a task; for example, the completion of an asynchronous operation such as an input/output operation.

Ethernet. Ethernet is the standard hardware for TCP/IP LANs in the UNIX marketplace. It is a 10 megabit per second baseband type network that uses the contention based CSMA/CD (collision detect) media access method.

executable. A program that has been link-edited and therefore can be run in a processor.

execution. To perform the actions specified by a program or a portion of a program.

expression. In programming languages, a language construct for computing a value from one or more operands.

F

fairness. A policy in which tasks, threads, or processes must be allowed eventual access to a resource for which they are competing. For example, if multiple threads are simultaneously seeking a lock, then no set of circumstances can cause any thread to wait indefinitely for access to the lock.

FDDI. Fiber distributed data interface (100 Mbit/s fiber optic LAN).

file system. In the AIX operating system, the collection of files and file management structures on a physical or logical mass storage device, such as a diskette or minidisk.

fileset. 1) An individually installable option or update. Options provide specific function while updates correct

an error in, or enhance, a previously installed product. 2) One or more separately installable, logically grouped units in an installation package. See also *Licensed Program Product* and *package*

foreign host. See *remote host*.

Fortran. One of the oldest of the modern programming languages, and the most popular language for scientific and engineering computations. It's name is a contraction of *FORmula TRANslation*. The two most common Fortran versions are Fortran 77, originally standardized in 1978, and Fortran 90. Fortran 77 is a proper subset of Fortran 90.

function call tree. A graphical representation of all the functions and calls within an application, which appears in the Xprofiler main window. The functions are represented by green, solid-filled rectangles called function boxes. The size and shape of each function box indicates its CPU usage. Calls between functions are represented by blue arrows, called call arcs, drawn between the function boxes. See also *call arcs*.

function cycle. A chain of calls in which the first caller is also the last to be called. A function that calls itself recursively is not considered a function cycle.

functional decomposition. A method of dividing the work in a program to exploit parallelism. One divides the program into independent pieces of functionality which are distributed to independent processors. This is in contrast to data decomposition which distributes the same work over different data to independent processors.

functional parallelism. Refers to situations where parallel tasks specialize in particular work.

G

Gauss-Seidel. An iterative relaxation method for solving Laplace's equation. It calculates the general solution by finding particular solutions to a set of discrete points distributed throughout the area in question. The values of the individual points are obtained by averaging the values of nearby points. Gauss-Seidel differs from Jacobi-Seidel in that for the i+1st iteration Jacobi-Seidel uses only values calculated in the ith iteration. Gauss-Seidel uses a mixture of values calculated in the ith and i+1st iterations.

global max. The maximum value across all processors for a given variable. It is global in the sense that it is global to the available processors.

global variable. A variable defined in one portion of a computer program and used in at least one other portion of the computer program.

gprof. A UNIX command that produces an execution profile of C, Pascal, Fortran, or COBOL programs. The execution profile is in a textual and tabular format. It is useful for identifying which routines use the most CPU time. See the man page on **gprof**.

GUI (Graphical User Interface). A type of computer interface consisting of a visual metaphor of a real-world scene, often of a desktop. Within that scene are icons, representing actual objects, that the user can access and manipulate with a pointing device.

H

High Performance Switch. The high-performance message passing network, of the IBM RS/6000 SP(SP) machine, that connects all processor nodes.

HIPPI. High performance parallel interface.

hook. **hook** is a **pdbx** command that allows you to re-establish control over all task(s) in the current context that were previously unhooked with this command.

home node. The node from which an application developer compiles and runs his program. The home node can be any workstation on the LAN.

host. A computer connected to a network, and providing an access method to that network. A host provides end-user services.

host list file. A file that contains a list of host names, and possibly other information, that was defined by the application which reads it.

host name. The name used to uniquely identify any computer on a network.

hot spot. A memory location or synchronization resource for which multiple processors compete excessively. This competition can cause a disproportionately large performance degradation when one processor that seeks the resource blocks, preventing many other processors from having it, thereby forcing them to become idle.

I

IBM Parallel Environment for AIX. A program product that provides an execution and development environment for parallel FORTRAN, C, or C++ programs. It also includes tools for debugging, profiling, and tuning parallel programs.

InfoExplorer. A program that displays hypertext and allows navigation within it.

installation image. A file or collection of files that are required in order to install a software product on a IBM RS/6000 workstation or on SP system nodes. These files are in a form that allows them to be installed or removed with the AIX **installp** command. See also *fileset*, *Licensed Program Product*, and *package*.

Internet. The collection of worldwide networks and gateways which function as a single, cooperative virtual network.

Internet Protocol (IP). 1) The TCP/IP protocol that provides packet delivery between the hardware and user processes. 2) The High Performance Switch library, provided with the Parallel System Support Programs, that follows the IP protocol of TCP/IP.

IP. See *Internet Protocol*.

J

Jacobi-Seidel. See *Gauss-Seidel*.

K

Kerberos. A publicly available security and authentication product that works with the Parallel System Support Programs software to authenticate the execution of remote commands.

kernel. The core portion of the UNIX operating system which controls the resources of the CPU and allocates them to the users. The kernel is memory-resident, is said to run in *kernel mode* (in other words, at higher execution priority level than *user mode*) and is protected from user tampering by the hardware.

L

Laplace's equation. A homogeneous partial differential equation used to describe heat transfer, electric fields, and many other applications.

latency. The time interval between the instant at which an instruction control unit initiates a call for data transmission, and the instant at which the actual transfer of data (or receipt of data at the remote end) begins. Latency is related to the hardware characteristics of the system and to the different layers of software that are involved in initiating the task of packing and transmitting the data.

Licensed Program Product (LPP). A collection of software packages, sold as a product, that customers pay for to license. It can consist of packages and filesets a customer would install. These packages and filesets bear a copyright and are offered under the terms and conditions of a licensing agreement. See also *fileset* and *package*.

LoadLeveler. A job management system that allows users to run jobs and match processing needs with system resources, to better utilize the system.

local variable. A variable that is defined and used only in one specified portion of a computer program.

loop unrolling. A program transformation which makes multiple copies of the body of a loop, placing the copies also within the body of the loop. The loop trip count and index are adjusted appropriately so the new loop computes the same values as the original. This transformation makes it possible for a compiler to take additional advantage of instruction pipelining, data cache effects, and software pipelining.

See also *optimization*.

M

menu. A list of options displayed to the user by a data processing system, from which the user can select an action to be initiated.

message catalog. A file created using the AIX Message Facility from a message source file that contains application error and other messages, which can later be translated into other languages without having to recompile the application source code.

message passing. Refers to the process by which parallel tasks explicitly exchange program data.

MIMD (Multiple Instruction Multiple Data). A parallel programming model in which different processors perform different instructions on different sets of data.

MPMD (Multiple Program Multiple Data). A parallel programming model in which different, but related, programs are run on different sets of data.

MPI. Message Passing Interface; a standardized API for implementing the message passing model.

N

network. An interconnected group of nodes, lines, and terminals. A network provides the ability to transmit data to and receive data from other systems and users.

node. (1) In a network, the point where one or more functional units interconnect transmission lines. A computer location defined in a network. (2) In terms of the IBM RS/6000 SP, a single location or workstation in a network. An SP node is a physical entity (a processor).

node ID. A string of unique characters that identifies the node on a network.

nonblocking operation. An operation, such as sending or receiving a message, which returns immediately whether or not the operation was completed. For example, a nonblocking receive will not wait until a message is sent, but a blocking receive will wait. A nonblocking receive will return a status value that indicates whether or not a message was received.

O

object code.. The result of translating a computer program to a relocatable, low-level form. Object code contains machine instructions, but symbol names (such as array, scalar, and procedure names), are not yet given a location in memory.

optimization. A not strictly accurate but widely used term for program performance improvement, especially for performance improvement done by a compiler or other program translation software. An optimizing compiler is one that performs extensive code transformations in order to obtain an executable that runs faster but gives the same answer as the original. Such code transformations, however, can make code debugging and performance analysis very difficult because complex code transformations obscure the correspondence between compiled and original source code.

option flag. Arguments or any other additional information that a user specifies with a program name. Also referred to as *parameters* or *command line options*.

P

package. A number of filesets that have been collected into a single installable image of program products, or LPPs. Multiple filesets can be bundled together for installing groups of software together. See also *fileset* and *Licensed Program Product*.

parallelism. The degree to which parts of a program may be concurrently executed.

parallelize. To convert a serial program for parallel execution.

Parallel Operating Environment (POE). An execution environment that smooths the differences between serial and parallel execution. It lets you submit and manage parallel jobs. It is abbreviated and commonly known as POE.

parameter. * (1) In Fortran, a symbol that is given a constant value for a specified application. (2) An item in a menu for which the operator specifies a value or for which the system provides a value when the menu is interpreted. (3) A name in a procedure that is used to refer to an argument that is passed to the procedure. (4) A particular piece of information that a system or application program needs to process a request.

partition. (1) A fixed-size division of storage. (2) In terms of the IBM RS/6000 SP, a logical definition of nodes to be viewed as one system or domain. System partitioning is a method of organizing the SP into groups of nodes for testing or running different levels of software of product environments.

Partition Manager. The component of the Parallel Operating Environment (POE) that allocates nodes, sets up the execution environment for remote tasks, and manages distribution or collection of standard input (STDIN), standard output (STDOUT), and standard error (STDERR).

pdbx. **pdbx** is the parallel, symbolic command line debugging facility of PE. **pdbx** is based on the **dbx** debugger and has a similar interface.

PE. The IBM Parallel Environment for AIX program product.

performance monitor. A utility which displays how effectively a system is being used by programs.

POE. See Parallel Operating Environment.

pool. Groups of nodes on an SP that are known to the Resource Manager, and are identified by a number.

point-to-point communication. A communication operation which involves exactly two processes or tasks. One process initiates the communication through a *send* operation. The partner process issues a *receive* operation to accept the data being sent.

procedure. (1) In a programming language, a block, with or without formal parameters, whose execution is invoked by means of a procedure call. (2) A set of related control statements that cause one or more programs to be performed.

process. A program or command that is actually running the computer. It consists of a loaded version of the executable file, its data, its stack, and its kernel data structures that represent the process's state within a multitasking environment. The executable file contains the machine instructions (and any calls to shared objects) that will be executed by the hardware. A process can contain multiple threads of execution.

The process is created via a **fork**() system call and ends using an **exit**() system call. Between **fork** and **exit**, the process is known to the system by a unique process identifier (pid).

Each process has its own virtual memory space and cannot access another process's memory directly. Communication methods across processes include pipes, sockets, shared memory, and message passing.

prof. A utility which produces an execution profile of an application or program. It is useful to identifying which routines use the most CPU time. See the man page for **prof**.

profiling. The act of determining how much CPU time is used by each function or subroutine in a program. The histogram or table produced is called the execution profile.

Program Marker Array. An X-Windows run time monitor tool provided with Parallel Operating Environment, used to provide immediate visual feedback on a program's execution.

pthread. A thread that conforms to the POSIX Threads Programming Model.

R

reduction operation. An operation, usually mathematical, which reduces a collection of data by one or more dimensions. For example, the arithmetic SUM operation is a reduction operation which reduces an array to a scalar value. Other reduction operations include MAXVAL and MINVAL.

remote host. Any host on a network except the one at which a particular operator is working.

remote shell (rsh). A command supplied with both AIX and the Parallel System Support Programs that lets you issue commands on a remote host.

Report. In Xprofiler, a tabular listing of performance data that is derived from the gmon.out files of an application. There are five types of reports that are generated by Xprofiler, and each one presents different statistical information for an application.

Resource Manager. A server that runs on one of the nodes of a IBM RS/6000 SP (SP) machine. It prevents parallel jobs from interfering with each other, and reports job-related node information. The Resource Manager allows POE applications to request dedicated or shared use of nodes, or the adapters on nodes.

RISC. Reduced Instruction Set Computing (RISC), the technology for today's high performance personal computers and workstations, was invented in 1975.

S

shell script. A sequence of commands that are to be executed by a shell interpreter such as C shell, korn shell, or Bourne shell. Script commands are stored in a file in the same form as if they were typed at a terminal.

segmentation fault. A system-detected error, usually caused by referencing an invalid memory address.

server. A functional unit that provides shared services to workstations over a network; for example, a file server, a print server, a mail server.

signal handling. A type of communication that is used by message passing libraries. Signal handling involves using AIX signals as an asynchronous way to move data in and out of message buffers.

source line. A line of source code.

source code. The input to a compiler or assembler, written in a source language. Contrast with object code.

SP. IBM RS/6000 SP; a scalable system from two to 128 processor nodes, arranged in various physical configurations, that provides a high powered computing environment.

SPMD (Single Program Multiple Data). A parallel programming model in which different processors execute the same program on different sets of data.

standard input (STDIN). In the AIX operating system, the primary source of data entered into a command. Standard input comes from the keyboard unless redirection or piping is used, in which case standard input can be from a file or the output from another command.

standard output (STDOUT). In the AIX operating system, the primary destination of data produced by a command. Standard output goes to the display unless redirection or piping is used, in which case standard output can go to a file or to another command.

stencil. A pattern of memory references used for averaging. A 4-point stencil in two dimensions for a given array cell, x(i,j), uses the four adjacent cells, x(i-1,j), x(i+1,j), x(i,j-1), and x(i,j+1).

subroutine. (1) A sequence of instructions whose execution is invoked by a call. (2) A sequenced set of instructions or statements that may be used in one or more computer programs and at one or more points in a computer program. (3) A group of instructions that can be part of another routine or can be called by another program or routine.

synchronization. The action of forcing certain points in the execution sequences of two or more asynchronous procedures to coincide in time.

system administrator. (1) The person at a computer installation who designs, controls, and manages the use of the computer system. (2) The person who is responsible for setting up, modifying, and maintaining the Parallel Environment.

System Data Repository. A component of the Parallel System Support Programs software that provides configuration management for the SP system. It manages the storage and retrieval of system data across the control workstation, file servers, and nodes.

System Status Array. An X-Windows run time monitor tool, provided with the Parallel Operating Environment, that lets you quickly survey the utilization of processor nodes.

T

task. A unit of computation analogous to an AIX process.

thread. A single, separately dispatchable, unit of execution. There may be one or more threads in a process, and each thread is executed by the operating system concurrently.

tracing. In PE, the collection of data for the Visualization Tool (VT). The program is *traced* by collecting information about the execution of the program in trace records. These records are then accumulated into a trace file which a user visualizes with VT.

tracepoint. Tracepoints are places in the program that, when reached during execution, cause the debugger to print information about the state of the program.

trace record. In PE, a collection of information about a specific event that occurred during the execution of your program. For example, a trace record is created for each send and receive operation that occurs in your program (this is optional and may not be appropriate). These records are then accumulated into a trace file which allows the Visualization Tool to visually display the communications patterns from the program.

U

unrolling loops. See *loop unrolling*.

US. See *user space*.

user. (1) A person who requires the services of a computing system. (2) Any person or any thing that may issue or receive commands and message to or from the information processing system.

user space (US). A version of the message passing library that is optimized for direct access to the SP High Performance Switch, that maximizes the performance capabilities of the SP hardware.

utility program. A computer program in general support of computer processes; for example, a diagnostic program, a trace program, a sort program.

utility routine. A routine in general support of the processes of a computer; for example, an input routine.

V

variable. (1) In programming languages, a named object that may take different values, one at a time. The values of a variable are usually restricted to one data type. (2) A quantity that can assume any of a given set of values. (3) A name used to represent a data item whose value can be changed while the program is running. (4) A name used to represent data whose value can be changed, while the program is running, by referring to the name of the variable.

view. (1) In an information resource directory, the combination of a variation name and revision number that is used as a component of an access name or of a descriptive name.

Visualization Tool. The PE Visualization Tool. This tool uses information that is captured as your parallel program executes, and presents a graphical display of the program execution. For more information, *see IBM Parallel Environment for AIX: Operation and Use, Volume 2*.

VT. See *Visualization Tool*.

X

X Window System. The UNIX industry's graphics windowing standard that provides simultaneous views of several executing programs or processes on high resolution graphics displays.

xpdbx. This is the former name of the PE graphical interface debugging facility, which is now called **pedb**.

| **Xprofiler**. An AIX tool that is used to analyze the performance of both serial and parallel applications, via a graphical user interface. Xprofiler provides quick access to the profiled data, so that the functions that are the most CPU-intensive can be easily identified.