

IBM Parallel Environment for AIX 5L



Messages

Version 4 Release 3.0

IBM Parallel Environment for AIX 5L



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Note

Before using this information and the product it supports, read the information in "Notices" on page 113.

Sixth Edition (October 2006)

This edition applies to version 4, release 3, modification 0 of IBM Parallel Environment for AIX 5L (product number 5765-F83) and to all subsequent releases and modifications until otherwise indicated in new editions. This edition replaces SA22-7944-04. Significant changes or additions to the text and illustrations are indicated by a vertical line (|) to the left of the change.

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Contents

	About this book	v
	Who should read this book	v
	How this book is organized	v
	Conventions and terminology used in this book	v
	Abbreviated names	vi
	Prerequisite and related information	vii
	Using LookAt to look up message explanations	vii
	How to send your comments.	viii
	National language support (NLS)	viii
	Summary of changes for Parallel Environment 4.3.	viii
	Chapter 1. Understanding the diagnostic message format	1
	Chapter 2. Parallel debugger (pdbx) messages	3
	Chapter 3. Parallel operating environment (POE) messages	19
	Chapter 4. POE Error Report Log Entries	67
	Chapter 5. Message Passing Interface (MPI) messages	69
	Chapter 6. PE Benchmark messages	97
	Chapter 7. Unified Trace Environment (UTE) messages	109
	Appendix. Accessibility features for PE	111
	Accessibility features	111
	Keyboard navigation	111
	IBM and accessibility	111
	Notices	113
	Trademarks.	115
	Acknowledgments	116
	Index	117

About this book

This book is designed to help any user of IBM® Parallel Environment for AIX 5L™ (5765-F83) who needs to know what a message means and what should be done in response to that message. This book lists all of the error messages generated by the PE software and components and describes a likely solution. References to RS/6000® SP™ or SP include currently supported IBM eServer™ Cluster 1600 hardware. To make this book a little easier to read, the name *IBM Parallel Environment* has been abbreviated to *PE* throughout.

This book assumes that AIX 5L Version 5.3 Technology Level 5300-05 or higher, and the X-Windows system are already installed, if required. For information on installing AIX 5L Version 5.3 and X-Windows, consult the *IBM AIX® for RS/6000 Installation Guide*.

Note: PE was originally created for the AIX operating system, but was recently ported to Linux®. As a result, some of the messages in this book refer to functionality that is not supported in this release of PE on the AIX platform.

Who should read 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 this book is organized

This book contains information about:

- Chapter 1, “Understanding the diagnostic message format,” on page 1
- Chapter 2, “Parallel debugger (pdbx) messages,” on page 3.
- Chapter 3, “Parallel operating environment (POE) messages,” on page 19.
- Chapter 4, “POE Error Report Log Entries,” on page 67.
- Chapter 5, “Message Passing Interface (MPI) messages,” on page 69.
- Chapter 6, “PE Benchmark messages,” on page 97.
- Chapter 7, “Unified Trace Environment (UTE) messages,” on page 109.

Conventions and terminology used in this book

Note that in this document, LoadLeveler® is also referred to as *Tivoli® Workload Scheduler LoadLeveler* and *TWS LoadLeveler*.

This book uses the following typographic conventions:

Table 1. Typographic conventions

Convention	Usage
bold	bold words or characters represent system elements that you must use literally, such as: command names, file names, flag names, path names, PE component names (poe , for example), and subroutines.

Table 1. Typographic conventions (continued)

Convention	Usage
constant width	Examples and information that the system displays appear in constant-width typeface.
<i>italic</i>	<i>Italicized</i> words or characters represent variable values that you must supply. <i>Italics</i> are also used for book titles, for the first use of a glossary term, and for general emphasis in text.
[item]	Used to indicate optional items.
<Key>	Used to indicate keys you press.
\	The continuation character is used in coding examples in this book for formatting purposes.

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 **tool** command, this manual presents the instruction as:

ENTER
tool

Abbreviated names

Some of the abbreviated names used in this book follow.

AIX	Advanced Interactive Executive
CSM	Clusters Systems Management
CSS	communication subsystem
CTSEC	cluster-based security
DPCL	dynamic probe class library
dsh	distributed shell
GUI	graphical user interface
HDF	Hierarchical Data Format
IP	Internet Protocol
LAPI	Low-level Application Programming Interface
MPI	Message Passing Interface
NetCDF	Network Common Data Format
PCT	Performance Collection Tool
PE	IBM® Parallel Environment for AIX®
PE MPI	IBM's implementation of the MPI standard for PE
PE MPI-IO	IBM's implementation of MPI I/O for PE
POE	parallel operating environment
pSeries®	IBM eServer pSeries
PVT	Profile Visualization Tool

RISC	reduced instruction set computer
RSCT	Reliable Scalable Cluster Technology
rsh	remote shell
STDERR	standard error
STDIN	standard input
STDOUT	standard output
UTE	Unified Trace Environment
System x	IBM System x

Prerequisite and related information

The Parallel Environment for AIX library consists of:

- IBM Parallel Environment: Introduction, SA22-7947
- IBM Parallel Environment: Installation, GA22-7943
- IBM Parallel Environment: Operation and Use, Volume 1, SA22-7948
- IBM Parallel Environment: Operation and Use, Volume 2, SA22-7949
- IBM Parallel Environment: MPI Programming Guide, SA22-7945
- IBM Parallel Environment: MPI Subroutine Reference, SA22-7946
- IBM Parallel Environment: Messages, GA22-7944

To access the most recent Parallel Environment documentation in PDF and HTML format, refer to the IBM eServer Cluster Information Center on the Web at:

<http://publib.boulder.ibm.com/infocenter/clresctr/vrx/index.jsp>

Both the current Parallel Environment books and earlier versions of the library are also available in PDF format from the IBM Publications Center Web site located at:

<http://www.ibm.com/shop/publications/order/>

It is easiest to locate a book in the IBM Publications Center by supplying the book's publication number. The publication number for each of the Parallel Environment books is listed after the book title in the preceding list.

Using LookAt to look up message explanations

LookAt is an online facility that lets you look up explanations for most of the IBM messages you encounter, as well as for some system abends and codes. You can use LookAt from the following locations to find IBM message explanations for Clusters for AIX:

- The Internet. You can access IBM message explanations directly from the LookAt Web site:
<http://www.ibm.com/eserver/zseries/zos/bkserv/lookat/>
- Your wireless handheld device. You can use the LookAt Mobile Edition with a handheld device that has wireless access and an Internet browser (for example, Internet Explorer for Pocket PCs, Blazer, or Eudora for Palm OS, or Opera for Linux handheld devices). Link to the LookAt Mobile Edition from the LookAt Web site.

How to send your comments

Your feedback is important in helping to provide the most accurate and high-quality information. If you have comments about this book or other PE documentation:

- Send your comments by e-mail to: mhvrcfs@us.ibm.com
Be sure to include the name of the book, the part number of the book, the version of PE, and, if applicable, the specific location of the text you are commenting on (for example, a page number or table number).
- Fill out one of the forms at the back of this book and return it by mail, by fax, or by giving it to an IBM representative.

National language support (NLS)

For national language support (NLS), all PE components and tools display messages that are located in externalized message catalogs. English versions of the message catalogs are shipped with the PE licensed program, but your site may be using its own translated message catalogs. The PE components use the AIX environment variable **NLSPATH** 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 you 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 more information on NLS and message catalogs, see *AIX: General Programming Concepts: Writing and Debugging Programs*.

Summary of changes for Parallel Environment 4.3

This release of IBM Parallel Environment for AIX contains a number of functional enhancements, including:

- PE 4.3 supports only AIX 5L Version 5.3 Technology Level 5300-05, or later versions.
AIX 5L Version 5.3 Technology Level 5300-05 is referred to as AIX 5L V5.3 TL 5300-05 or AIX 5.3.
- Support for Parallel Systems Support Programs for AIX (PSSP), the SP Switch2, POWER3™ servers, DCE, and DFS™ has been removed. PE 4.2 is the **last** release that supported these products.
- PE Benchmark support for IBM System p5™ model 575 has been added.

- A new environment variable, **MP_TLP_REQUIRED** is available to detect the situation where a parallel job that should be using large memory pages is attempting to run with small pages.
- A new command, **rset_query**, for verifying that memory affinity assignments have been performed.
- Performance of MPI one-sided communication has been substantially improved.
- Performance improvements to some MPI collective communication subroutines.
- The default value for the **MP_BUFFER_MEM** environment variable, which specifies the size of the Early Arrival (EA) buffer, is now 64 MB for both IP and User Space. In some cases, 32 bit IP applications may need to be recompiled with more heap or run with **MP_BUFFER_MEM** of less than 64 MB. For more details, see the migration information in Chapter 1 of *IBM Parallel Environment: Operation and Use, Volume 1* and Appendix E of *IBM Parallel Environment: MPI Programming Guide*.

Chapter 1. Understanding the diagnostic message format

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

0029-<i>nnnn</i>	Parallel debugger (pdbx)
0031-<i>nnn</i>	Parallel operating environment (POE)
0032-<i>nnn</i>	Message Passing Interface (MPI)
2554-<i>nnn</i>	PE Benchmark
2554-9<i>nn</i>	Unified Trace Environment (UTE)

where:

- The first four, five, or six digits (0029, 0031, 0032, 2537, 2554, or 2554-9) identify the PE component that issued the message.
- The last two, three, or four digits identify the sequence of the message in the group.

Chapter 4, “POE Error Report Log Entries,” on page 67 provides information about error log entries produced by PE.

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

Chapter 2. Parallel debugger (pdbx) messages

0029-0101 Your program has been loaded.

Explanation: This message appears 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 appears, 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 **pdbx** will exit.

User response: The error message from the remote debugger appears. 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 which it attaches. 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** file system, or if you have specified a directory with the TMPDIR environment variable, check the file system 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.

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 to which you have read access 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, the only allowable commands at the initial prompt 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 reattach 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 tasks 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 instances 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 to task: *number* failed.**

Explanation: An error was encountered when **pdbx** attempted to read or write using a socket connection to the task. **pdbx** no longer has 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.

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 reattach 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 reattach to this POE job after detaching.

User response: You can continue debugging with limited function. Please note that the debugger probably cannot reattach 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 *IBM Parallel Environment: Operation and Use, Volume 2*.

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 reenter 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.

0029-2023 **Missing or invalid argument following the -E flag. For information on the correct syntax to use when invoking pdbx, type: pdbx -h**

Explanation: The **-E** flag requires the specification of an environment variable for the remote tasks. This argument was missing or invalid.

User response: There was nothing specified after the **-E** flag. Specify an environment variable to be set for the remote task after the **-E** flag. For example: **pdbx -E LIBPATH=/u/guest/lib myprog** In this case, the LIBPATH environment variable will be passed to each remote **dbx** debugger.

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: Incorrect 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. Reissue the command using the correct syntax.

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

Explanation: Unexpected EOF (user pressed <Ctrl-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 tasks under debugger control or issue **hook** to an unhooked task and reissue **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: Incorrect 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 reissue 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 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.

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 tasks 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.

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

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

User response: None.

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

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

User response: Reissue 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: **pdbx** could not find the group name you specified to be renamed on the **group change** command.

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: Reissue 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: Reissue 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.

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: Reissue 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 incorrect syntax.

User response: Check the syntax and reissue 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: Reissue 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.

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 reissue 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 reissue **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: Reissue 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: Reissue **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 events in this task or group to reduce the number of events, then reissue 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: Reissue 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 reissue 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.

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: Incorrect 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 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** file system, or if you have specified a directory with the TMPDIR environment variable, check the file system 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.

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

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

User response: See *IBM Parallel Environment: Operation and Use, Volume 2* 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: See *IBM Parallel Environment: Operation and Use, Volume 2* 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: Reissue the command using the correct syntax.

0029-2084 Missing argument to the `-dbxpromptmod` flag. For information on the correct syntax to use when invoking `pdbx`, type: `pdbx -h`

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*. For information on the correct syntax to use when invoking `pdbx`, type: `pdbx -h`

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. Reissue 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`.

0029-2090 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: Reissue 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** command subset prompt. Some of the tasks in the current context are RUNNING. A **pdbx** prompt will appear when the RUNNING tasks reach a breakpoint or complete processing.

User response: Either wait for the **pdbx** prompt or issue a <Ctrl-c> to get a **pdbx** command 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** command 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 tasks that are RUNNING. This is an informational message to let you know that a **pdbx** prompt will not appear 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** command subset prompt. You can list the state of tasks using the **tasks** or **group list** command. The **on** command is available at the **pdbx** command 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 tasks listed were in RUNNING state. The **halt** command attempted to interrupt them so that a **pdbx** command subset prompt will be issued for the current context.

User response: After the **pdbx** command subset 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.

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 command 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.

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 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.

0029-2117 Group *string* has been deleted.

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

User response: None.

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 tasks that are unhooked.

User response: The **hook** command can be used to regain debugger control 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 characters 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 that does not

exceed 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: Reissue 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: Reissue 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: None.

0029-9036

Problem determination:

Syntax:

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

pdbx -a *poes_process_id*
[-c *command_file*]
[-d *nesting_depth*]
[-I *directory* [-I *directory*]...]
[-F] [-x] [*poes 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 *command_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 directory 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 reenter `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 reattach 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 appears 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` is not 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 - *string*. Please check for valid flags and retry.

Explanation: The user attempted to start **pedb** in attach mode with a command line flag 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. Parallel operating environment (POE) messages

0031-000 Dynamic memory allocation failed in module *string line number*.

Explanation: An internal request for dynamic memory allocation failed.

User response: System resources may be exceeded temporarily. If redirected stdin is not being used, retry the job, and if this fails, contact the System Administrator to determine if there is a general setup problem. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems. If a large amount of redirected stdin is being used and the parallel tasks may be leaving a lot of stdin unread, refer to the section on *Using redirected STDIN in IBM Parallel Environment: Operation and Use Volume 1*.

0031-001 No man page available for poe

Explanation: You requested that the **poe** man page be displayed (by specifying the **-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 **ppe.man** fileset may need to be installed if the file does not exist.

0031-002 IBM PE license agreement file is missing

Explanation: PE license file is not found.

User response: Install the PE licensing RPM on all nodes and accept the license agreement. Refer to *IBM Parallel Environment: Installation* for more information.

0031-004 MPCl and LAPI Statistical information not available

Explanation: MP_STATISTICS not enabled and LAPI initialization not complete.

User response: Export MP_STATISTICS=1 to enable MPCl statistics. Wait for MPI_Init to finish to get LAPI statistics.

0031-005 MPCl statistical information not available

Explanation: MP_STATISTICS not enabled.

User response: Export MP_STATISTICS=1 to enable MPCl statistics.

0031-006 Incorrect *string* has been specified for this MPI job

Explanation: To run an interactive MPI job under POE, the environment variable MP_MSG_API must be set to one of these three possible values: mpi(default), 'mpi,lapi' or mpi_lapi.

To run a batch MPI job under LoadL, one of these two network statements must be defined in the LoadL command file: network.mpi or network.mpi_lapi.

User response: Correctly set the MP_MSG_API environment variable or correct the LoadL command file then rerun the job.

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 high performance switch is being used, make sure that the system software is operational.

0031-008 Bandwidth statistics function failed, return code *string*.

Explanation: The mpc_bandwidth MPI/LAPI statistics function failed, with the specified return code value.

User response: Refer to the return codes in **/usr/include/lapi.h** for an indication of the type of error encountered. Possible errors include an invalid or missing LAPI handle, if not properly initialized or defined.

0031-009 Couldn't integrate parallel traces

Explanation: The system continues, but the parallel trace files were not integrated.

User response: Check that sufficient space is available for the parallel trace files on each remote node.

0031-010 Symbol lookup for *symbol* in liblapi.so failed

Explanation: The indicated symbol was not found by the dlsym subroutine. POE cannot proceed without this symbol, so the job is terminated.

User response: Probable internal error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-012 pm_contact: socket

Explanation: The Partition Manager terminates, as it could not create a socket.

User response: This 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.

This is probably a PE error.

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

0031-014 pm_contact: getsockopt

Explanation: The Partition Manager continues, but some socket options may not be obtained correctly.

This is probably a PE error.

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

0031-015 Couldn't create *string*, job may not be checkpointable...

Explanation: POE was unable to create the indicated file in the directory from which POE was run. If the user attempts to use the **poeckpt** command to checkpoint the POE job, the checkpoint will fail and a message will be issued stating that POE is not in a checkpointable state.

User response: If no attempt to checkpoint the POE job will be made, the message can be ignored. Otherwise, check the permissions of the indicated file.

0031-016 Unable to create thread for checkpoint handler

Explanation: POE was unable to create a thread on which the advanced checkpoint handler could be run.

User response: Probable internal error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-017 Unable to register checkpoint handler, rc=*number*.

Explanation: POE was unable to register the checkpoint handler with the kernel.

User response: Probable internal 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, using `gethostbyname()`. 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. Additionally, if the adapter host name is being used, ensure the name and address has been properly configured. Also, check if there was a domain name server problem.

0031-019 MP_COREFILE_FORMAT / -corefile_format is not supported on Linux

Explanation: The **MP_COREFILE_FORMAT** environment variable or **-corefile_format** POE command line flag was specified for Linux, but it is not supported. The setting is invalid. POE terminates.

User response: Do not specify **MP_COREFILE_FORMAT** or **-corefile_format**, and resubmit the job.

0031-021 Couldn't create *string* to inform TPD to reattach, errno=*number*

Explanation: POE was unable to create the indicated file for the reason

User response: None.

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.

0031-023 Debugger refused user-initiated checkpoint

Explanation: A user-initiated checkpoint occurred while the parallel job was under the control of a third party debugger. The third party debugger refused to allow the checkpoint operation to proceed.

User response: None.

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 an error message from that

node. The return codes are: -1, EOF on connection; 1, I/O error; 2, allocation error.

Check to see if **pmd** (possibly specified by MP_PMDSUFFIX) is available and executable.

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.

0031-028 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.

0031-030 Debugger refused LoadLeveler-initiated checkpoint

Explanation: A LoadLeveler-initiated checkpoint occurred while the parallel job was under the control of a third party debugger. The third party debugger refused to allow the checkpoint operation to proceed.

User response: None.

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. The operating system 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.

0031-035 task signal *number: string*

Explanation: An internal error occurred that prevented POE from sending the indicated SSM to the PMDs.

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

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 tasks to be run.

0031-072 POE job will not be checkpointable

Explanation: Information message indicating that the **CHECKPOINT** environment variable was not set to "yes". The kernel will not checkpoint a process that does not have this variable set when the process is executed.

User response: Restart the POE job with the environment variable set if a checkpoint of the job is possible.

0031-073 Unable to create pipes for communication with checkpoint handler

Explanation: The `pipe()` call failed in POE.

User response: Probable internal error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-074 POE not in checkpointable state — all tasks have exited

Explanation: An attempt was made to checkpoint a POE job for which exit processing had begun for all tasks.

User response: None required.

0031-075 Checkpoint handler communication failure

Explanation: A communication error occurred between the POE main thread and the checkpoint handler thread.

User response: Probable internal error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-076 invalid infolevel

Explanation: The `-infolevel` 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.

0031-082 command line flag *string* requires a value.

Explanation: This command line flag should be followed by a value.

User response: Correct the flag.

0031-090 invalid `io_buffer_size` value

Explanation: The `-io_buffer_size` option specifies too large a buffer (or an incorrect number).

User response: Correct the flag.

0031-091 invalid `io_buffer_size` unit

Explanation: The `-io_buffer_size` option is not of the form `numberM` or `numberG`.

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.

0031-095 `MP_RETRY` not set correctly

Explanation: The `MP_RETRY` environment variable is neither 0 or a positive number less than 32768, or the character string `wait`.

User response: Correct the variable.

0031-101 Invalid *string*

Explanation: The indicated environment variable specifies too large a buffer size (or an incorrect number).

User response: Reduce or correct the size.

0031-102 incorrect *number* unit

Explanation: The indicated environment variable is not of the form `numberM` or `numberG`.

User response: Correct the value.

0031-107 Batch job may not be restarted using the `poerestart` command

Explanation: The `poerestart` command was issued on a checkpoint file which was created from a batch POE job, which is not supported.

User response: Refer to *Tivoli® Workload Scheduler LoadLeveler: Using and Administering* for instructions on restarting a batch POE job.

0031-108 Non-batch job cannot be restarted as a batch job

Explanation: The user submitted a command file to LoadLeveler that specified to restart from a checkpoint file that was created from a job that was not being run as a batch job, which is not supported.

User response: Use the **poerestart** command to restart this job.

0031-109 MP_LLFILE may not be used to restart a non-llfile job

Explanation: The **MP_LLFILE** environment variable was set when using the **poerestart** command to restart a job that had not specified the **-llfile** command line option or the **MP_LLFILE** environment variable.

User response: Unset **MP_LLFILE** in the environment before issuing the **poerestart** command.

0031-110 pm: exit handler could not be installed.

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.

0031-111 MP_LLFILE must be specified to restart an llfile job

Explanation: The user supplied a checkpoint file to **poerestart** that came from a POE job that had used the **-llfile** command line option or the **MP_LLFILE** environment variable, but did not set **MP_LLFILE** in the environment before issuing the **poerestart** command, which is not supported.

User response: Set the **MP_LLFILE** environment variable to the name of a LoadLeveler command file from which to restart the POE job.

0031-112 MP_RMPOOL may not be specified when restarting a non-LoadLeveler job

Explanation: The **MP_RMPOOL** environment variable was set when using the **poerestart** command to restart a job that had not been started under LoadLeveler, which is not supported.

User response: Unset **MP_RMPOOL** in the environment before issuing the **poerestart** command. Use the **-s** flag, the **MP_HOSTFILE** environment, or a *host.list* file as specified in the **poerestart** man page in *IBM Parallel Environment: Operation and Use, Volume 1*.

0031-113 Stopping the job. Wait 5 seconds for remotes.

Explanation: The Partition Manager has received a **SIGTSTP** signal from the LoadLeveler program 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. 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.

0031-114 Remote checkpoint handler registration is complete

Explanation: All of the remote tasks have successfully registered their checkpoint handlers with the kernel.

User response: Any program that:

1. is compiled with one of the threaded compile scripts provided by Parallel Environment and
2. may be checkpointed prior to its **main()** function being invoked,

must wait for this message to appear in POE's **stderr** before issuing the checkpoint of the parallel job. Otherwise, a subsequent restart of the job may fail.

Note: The **MP_INFOLEVEL** environment variable, or the **-infolevel** command line option, must be set to a value of at least 2 for this message to appear.

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 Remote restart handlers have completed

Explanation: All of the remote tasks have successfully completed their restart handlers.

User response: Any program that:

1. is compiled with one of the threaded compile scripts provided by Parallel Environment and
2. may be checkpointed immediately after the parallel job is restarted,

must wait for this message to appear in POE's **stderr** before issuing the checkpoint of the restarted job. Otherwise, the checkpoint of the restarted job may fail.

Note: The **MP_INFOLEVEL** environment variable, or the **-infolevel** command line option, must be set to a value of at least 2 for this message to appear.

0031-118 *string string requested for task number*

Explanation: The named host or pool was requested from LoadLeveler 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 LoadLeveler for the indicated task number. This informational message is issued when the implicit node allocation is used.

0031-120 *Host address string allocated for task number*

Explanation: The named host address was allocated by LoadLeveler for the indicated task number. This informational message is issued when the implicit node allocation is used.

0031-121 *Invalid combination of settings for MP_EUILIB, MP_HOSTFILE, and MP_RESD*

Explanation: The execution environment could not be established based on these settings.

User response: See *IBM Parallel Environment: Operation and Use, Volume 1* for valid combinations of these settings.

0031-122 *Failover is not possible, single point of failure detected, processing continues.*

Explanation: When examining the adapter configuration, more than one adapter/window instance was discovered with the same adapter address, meaning that a single point of failure exists in the network, and failover with adapter recovery may not be possible. The job continues to run, but is at risk if a network error occurs which cannot be recovered. If debug level information was enabled, a list of node names on which that adapter was found will be displayed.

User response: Contact the system administrator, and evaluate the network configuration for future job submissions, such that it can be ensured that all instances of allocated adapter windows allow for failover and recovery, if necessary.

0031-123 *Retrying allocation press control-C to terminate*

Explanation: The requested nodes were not available from LoadLeveler. However, because 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 *Invalid Network ID string returned from LoadLeveler, for device number*

Explanation: An invalid network identifier was returned to POE from LoadLeveler, for the device name specified.

Possible configuration error.

User response: Check with the system administrator on the LoadLeveler network and adapter configuration specifications, and reconfigure if necessary. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-125 *Fewer nodes (number) specified in host list than tasks (number).*

Explanation: There was a larger number of nodes specified than what is defined in the host list file.

User response: Check that you have not specified a number of nodes greater than the number of physical compute nodes in your network cluster. Ensure there are as many tasks as entries in the host list file. 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. If the current working directory is in a shared or mounted file system, it is possible the file system is busy or inaccessible. An alternative to **pwd** can be specified by using the **MP_REMOTEDIR** environment variable.

User response: Determine if the file system the current working directory exists in is accessible and not experiencing problems. You may also want to explore using the **MP_REMOTEDIR** environment variable to specify an alternative command to find the current directory. Otherwise, if a system error is suspected, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-127 *Executing with develop mode string*

Explanation: A develop mode of **value** is currently active, which could significantly impact the performance of your program.

User response: If you do not want or need the develop mode turned on, use the **MP_EUIDEVELOP** environment variable or the **-euidesvelop** flag to set a value of **no**, **normal**, or **minimum**.

0031-128 Invalid euilib selected

Explanation: An **euilib** other than **ip** or **us** was entered.

User response: Respecify the **euilib** as either **ip** or **us**.

0031-129 Invalid euidevelop option

Explanation: The **euidevelop** option was not valid.

User response: Respecify **euidevelop** with one of the following options (upper or lower case): MIN, MINIMUM, NO, NOR, NORMAL, DEB, DEBUG, DEV, DEVELOP, YES.

0031-130 Invalid newjob option, should be YES or NO

Explanation: A **newjob** other than YES or NO was entered.

User response: Respecify **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: Respecify **pmdlog** with either YES or NO.

0031-132 Invalid io_errlog option, should be YES or NO

Explanation: An **io_errlog** other than YES or NO was entered.

User response: Respecify **io_errlog** 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: Respecify **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: Respecify **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: Respecify **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 *string* data

Explanation: An error occurred when POE was trying to acknowledge receipt of connect or finalize 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 the 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 switch, contact the System Administrator to determine if that node is up on the switch. For non-switch jobs, verify that the node can be contacted by other means. Also, refer to the node-specific error message related to message passing initialization or connection for more information on what could be causing the problem (e.g. unauthorized user). If the 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.

0031-144 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 reason specified in the message.

User response: Fix the problem and rerun the 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 Network IDs must be the same on all remote nodes

Explanation: The network table information sent from the Partition Manager Daemons contained different network IDs for one or more nodes, so the parallel job terminated.

User response: The system administrator should

reconfigure the remote nodes to use the same network IDs.

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 "Managing Standard Input" in *IBM Parallel Environment: 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 that LoadLeveler has not been installed, or the files created during installation have been deleted, moved, or had their permissions changed.

One of the following files cannot be accessed:
| /usr/lpp/LoadL/full/lib/llapi_shr.o
| /usr/lpp/LoadL/full/lib/libllapi.a

User response: Contact the system administrator to determine if LoadLeveler has been properly installed, and 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.

0031-151 Pool specified in hostfile for task number not same as previous

Explanation: Pool entries in a host file must be the same for all tasks.

User response: Modify the host file as described, or use the **MP_RMPOOL** environment variable or the **-rmpool** command line option.

0031-152 Ignoring adapter and/or CPU usage specification in hostfile.

Explanation: Adapter and CPU usage specifications are ignored in the host file.

User response: Remove the usage specifications from the host file to eliminate the warning messages, if desired. Usages are described in *IBM Parallel Environment: Operation and Use, Volume 1*. The **MP_ADAPTER_USE** environment variable or the **MP_CPU_USE** environment variable or both, or the associated command line options, can be used to override the defaults.

0031-153 **Unexpected return code** *number* from **ll_init_job**

Explanation: An internal error has occurred.

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

0031-154 **Unexpected return code** *number* from **string**

Explanation: An internal error has occurred.

User response: In most cases for which this error occurs, there is no explicit user response that will correct the problem. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

One cause of this message may be correctable. If the indicated return code is -1 from **ll_parse_string**, there may be LoadLeveler messages preceding this message that indicate the inability to manipulate files in **/tmp**. If so, verify that the **/tmp** directory is not full.

0031-155 **Unexpected return code** *number* from **ll_set_data (number)**

Explanation: An internal error has occurred.

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

0031-156 **Unexpected return code** *number* from **ll_get_data (number)**

Explanation: An internal error has occurred.

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

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.

0031-159 **LoadLeveler account number** *string* is not valid

Explanation: The account validation program determined that the user is not permitted to use the account number specified by the **LOADL_ACCOUNT_NO** environment variable. If this is not the case, the environment variable was not set, and

is required if LoadLeveler account validation is turned on.

User response: If the default account validation program is being used, either use an account number assigned to the user or have the LoadLeveler administrator add the account number to the user stanza in the administration file. If an installation-specific account validation program is being used, contact the LoadLeveler administrator.

0031-160 **I/O error on socket connection with** *node string*

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 node** *string*

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.

0031-162 **Invalid corefile_sigterm option, should be YES or NO**

Explanation: A **corefile_sigterm** other than YES or NO was entered.

User response: Respecify **corefile_sigterm** with either YES or NO.

0031-163 **poe: Could not send** *string* **data to node** *string*, **errno:** *number*

Explanation: An error occurred when poe was trying to send MPI or LAPI global task data to a node. Either that remote node 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.

0031-164 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.

0031-165 Job has been cancelled, killed, or schedd is unavailable.

Explanation: POE did not receive job status from LoadLeveler because the job has been cancelled, killed, or the LoadLeveler schedd is unavailable.

User response: Resubmit the job if desired, after ensuring proper LoadLeveler resources are available.

0031-166 Cluster query failed in LoadLeveler

Explanation: An internal error has occurred.

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

0031-167 Unable to request cluster from LoadLeveler, rc=number

Explanation: An internal error has occurred.

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

0031-168 Unable to get objects from LoadLeveler cluster

Explanation: An internal error has occurred.

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

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.

0031-173 Pools not allowed in hostfile when restarting non-LoadLeveler job

Explanation: The host file used by the **poerestart** command (obtained either by the setting of the **MP_HOSTFILE** environment variable or by the presence of a file named *host.list* in the directory from which **poerestart** was run) contained pool entries, but the checkpoint file specified was created from a POE job that had not been started under LoadLeveler.

User response: Use a host file that contains host names, rather than pool entries.

0031-174 Number of tasks (number) may not be changed when restarting

Explanation: The user attempted to restart a POE job with a different number of tasks than the job had when it was originally started. This could occur for batch POE jobs, or for interactive POE jobs that do not use a host file and do use the **-llfile** command line option or the **MP_LLFILE** environment variable.

User response: Modify the LoadLeveler keywords in the command file so that the number of tasks for the restarted job is the same as it was when the job was originally run.

0031-175 Number of protocol instances may not be changed when restarting. Initially : class=string, maximum instances=number. Restarting: class=string, maximum instances=number

Explanation: The user attempted to restart a POE job with a different number of protocol instances than the job had when it was originally started. This could occur in one of the following ways:

1. A batch POE job, or an interactive POE job that used the **-llfile** command line option or the **MP_LLFILE** environment variable, used a LoadLeveler command file that contained a network statement at restart time for which the number of instances was different than the original job, or the command file specified a value of "max" for the number of instances, and either the administrator changed the maximum number of instances for the class specified in the command file, or a different

class was specified which had a different number of maximum instances configured.

2. The maximum number of instances for the default interactive class was changed for an interactive POE job that did not use the `-llfile` command line option or the `MP_LLFILE` environment variable, and which specified "max" for instances when the job was originally run, or the default interactive class was changed to a class that had a different number of maximum instances configured.

User response: Modify the LoadLeveler command file or contact the administrator so that the number of instances for the restarted job is the same as it was when the job was originally run. For cases where "max" was used, the classes and the maximum number of instances for those classes are shown in the error message for diagnostic purposes.

0031-176 Message passing API may not be changed when restarting

Explanation: The user attempted to restart a POE job with a different message passing API than the job had when it was originally started. This could occur for batch POE jobs, or for interactive POE jobs that use the `-llfile` command line option or the `MP_LLFILE` environment variable.

User response: Modify the LoadLeveler keywords in the command file so that the message passing API for the restarted job is the same as it was when the job was originally run.

0031-177 Message passing subsystem may not be changed when restarting

Explanation: The user attempted to restart a POE job with a different message passing subsystem than the job had when it was originally started. This could occur for batch POE jobs, or for interactive POE jobs that use the `-llfile` command line option or the `MP_LLFILE` environment variable.

User response: Modify the LoadLeveler keywords in the command file so that the message passing subsystem for the restarted job is the same as it was when the job was originally run.

0031-178 Unable to create thread for checkpointing, rc=*number*

Explanation: POE was unable to create a thread on which the checkpoint of the POE process could be performed.

User response: Probable internal error. 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.

0031-181 Unable to send checkpoint complete message

Explanation: An internal error occurred when POE tried to inform the parallel tasks of the checkpoint results.

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

0031-182 Unable to send data saved during checkpoint

Explanation: An internal error occurred when POE tried to send data to the parallel tasks that had been saved during a checkpoint operation.

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

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.

0031-184 Restart failed for task *number* on node *string*, errno=*number*, Sy_errno=*number*, errdata=*string*

Explanation: The restart of the indicated task on the indicated node failed. The cause of the failure is shown in the `errno`, `Sy_errno`, and `errdata` fields. The

Sy_errno codes (up to the '/') are documented in `/usr/include/sys/chkerror.h`.

User response: Attempt to correct the problem as reported in the error fields indicated above. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-185 Unable to deliver checkpoint to handler, rc=*number*

Explanation: An internal error occurred preventing POE from invoking its checkpoint handler once the remote checkpoints had completed.

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

0031-186 Task geometry must be same when restarting

Explanation: During the restart of a POE job, the user has specified a host file, a pool, or LoadLeveler command file keywords that caused the task geometry of the restarted job to be different from when the job was originally run (and checkpointed).

User response: Correct the host file, pool, or LoadLeveler command file keywords so that the task geometry is the same for the restart.

0031-187 Conflicting specification for checkpointability — job will not be checkpointable

Explanation: A discrepancy exists between the setting of the **CHECKPOINT** environment variable and the setting of the **#@checkpoint** keyword in the LoadLeveler command file.

User response: If the job was intended to be checkpointable, ensure that these settings do not conflict with on another.

0031-188 Unable to broadcast SSM_CHKPT_COMMIT to PMDs

Explanation: An internal error occurred that prevented POE from sending the indicated SSM to the PMDs.

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

0031-189 Processes using piped stdin cannot be checkpointed

Explanation: A POE process that has **stdin** piped into it has been attempted to be checkpointed, which is not supported.

User response: Rerun the POE process without piped **stdin**, if possible.

0031-190 Processes using piped stdout cannot be checkpointed

Explanation: A POE process that has **stdout** piped out of it has been attempted to be checkpointed, which is not supported.

User response: Rerun the POE process without piped **stdout**, if possible.

0031-191 LoadLeveler-initiated checkpoint request received

Explanation: Informational message to inform the user that LoadLeveler has issued a request to checkpoint the parallel job.

User response: None required, other than to be aware that task output may cease until the checkpoint operation has completed.

0031-192 Partial user-initiated checkpoint request received from task *number*

Explanation: Informational message to inform the user that a remote task has requested a partial user-initiated checkpoint.

User response: None required, other than to be aware that task output may cease until the checkpoint operation has completed.

0031-193 Complete user-initiated checkpoint request received from all tasks

Explanation: Informational message to inform the user that all remote tasks have issued a complete user-initiated checkpoint request.

User response: None required, other than to be aware that task output may cease until the checkpoint operation has completed.

0031-194 Checkpoint operations in progress on remote nodes

Explanation: Informational message indicating that POE is informing the PMDs to begin checkpoint operations on each of its tasks.

User response: None.

0031-195 Unable to broadcast checkpoint interrupt message

Explanation: An internal error has occurred that prevented POE from informing the PMDs to cancel their current checkpoint operations.

User response: Gather information about the problem

and follow local site procedures for reporting hardware and software problems.

0031-196 Checkpoint operation was cancelled

Explanation: A checkpoint operation that was in progress did not complete because it was cancelled by the user, for example, by issuing a **Ctrl-c** in **poeckpt**.

User response: None.

0031-197 Unable to broadcast SSM_CHKPT_DO to PMDs

Explanation: An internal error occurred that prevented POE from sending the indicated SSM to the PMDs.

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

0031-198 Checkpoint failed for the following tasks:

Explanation: The checkpoint of the indicated tasks on the indicated nodes failed. The cause of the failure is shown in the *errno*, *Sy_errno*, and *errdata* fields. The *Sy_errno* codes (up to the *l*) are documented in **/usr/include/sys/chkerror.h**. An *errno* value of **3** may indicate that the CHECKPOINT environment variable was not set to **yes** when POE was invoked.

User response: Try to correct the problem as reported in the error fields indicated above. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-199 Checkpoint failed: errno=number, Sy_errno=prefix/suffix, errdata=string

Explanation: A user-initiated checkpoint failed in POE before the remote checkpoint operations were begun. The cause of the failure is shown in the *errno*, *Sy_errno*, and *errdata* fields. The *Sy_errno* codes (up to the *l*) are documented in **/usr/include/sys/chkerror.h**. An *errno* value of **3** may indicate that the CHECKPOINT environment variable was not set to **yes** when POE was invoked.

User response: Try to correct the problem as reported in the error fields indicated above. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-200 pmd: getpeername <string>

Explanation: The daemon is unable to identify the partition manager.

User response: This is probably a system or communication subsystem failure. Gather information

about the problem and follow local site procedures for reporting hardware and software problems.

0031-201 pmd: setsockopt(SO_KEEPAIVE): <string>

Explanation: The daemon is unable to set the indicated socket option. An explanatory sentence is provided.

User response: This is probably a system or communication subsystem failure. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-202 pmd: setsockopt(SO_LINGER): <string>

Explanation: The daemon is unable to set the indicated socket option. An explanatory sentence is provided.

User response: This is probably a system or communication subsystem failure. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-203 malformed from address: <string>

Explanation: The socket address family is incorrect.

User response: This is probably a system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-204 pmd: setsockopt:

Explanation: The daemon is unable to set a socket option. An explanatory sentence is provided.

User response: This is probably a system or communication subsystem failure. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-205 pmd: getsockopt:

Explanation: The daemon is unable to get a socket option. An explanatory sentence is provided.

User response: This is probably a system or communication subsystem failure. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-206 No message passing address defined.

Explanation: LoadLeveler did not return a message passing address for this node. When an adapter stanza is specified, the adapter address is required. POE terminates.

User response: Specify a valid address for the node

on the LoadLeveler adapter stanza and rerun the POE job.

0031-207 **pmd: sigaction** <string>

Explanation: Error when setting up to handle a signal.

User response: This is probably a 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: This is probably a system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-209 **User Rcxrt block specification is not used for MPI. It is only valid for LAPI.**

Explanation: **MP_MSG_API** or **-msg_api** was set (or defaulted) to **MPI** or "**MPI,LAPI**", while at the same time a request was made for **RDMA** user rCxt blocks, with either the **MP_RDMA_COUNT** environment variable or **-rdma_count** flag, or with LoadLeveler job control file (JCF) keywords. User rCxt blocks are only meaningful for LAPI applications.

User response: This is an attention level message and processing continues. The user may wish to examine their POE and LoadLeveler execution options, and consult the section on *Using RDMA* in the *IBM Parallel Environment: Operation and Use, Volume 1* for further information.

0031-210 **List of MCMs is not supported with LoadLeveler scheduling affinity. The list is ignored.**

Explanation: A list of logical MCMs was specified for the **MP_TASK_AFFINITY** environment variable or **-task_affinity** flag was, while LoadLeveler scheduling affinity is being used. In this case, a list of MCMs is not supported and will be ignored. POE will continue to run and the job will be submitted without any LoadLeveler scheduling affinity preferences defined.

User response: If the job is intended to run with resource scheduling affinity preferences, resubmit the job by either specifying **MP_TASK_AFFINITY/-task_affinity** with a value of "MCM" or "SNI", or specify the affinity options as part of the LoadLeveler job control file (JCF).

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 DCE credentials may not have been properly established.

0031-215 **Can't run parallel tasks as root**

Explanation: The user ID of the user running the application cannot be 0.

User response: Rerun the application under a user ID other than root.

0031-218 **Partition manager daemon not started by LoadLeveler on node string.**

Explanation: The daemon on the indicated node was not started by LoadLeveler, and an entry in the **/etc/poe.limits** file on that node specified that LoadLeveler must be used to start the daemon.

User response: Set up the execution environment (see *IBM Parallel Environment: Operation and Use, Volume 1*) so that LoadLeveler will be used, or contact the system administrator to determine if use of the

MP_USE_LL keyword in the `/etc/poe.limits` file was intended.

0031-219 **Failure in *string()* routine in PMD, rc=number.**

Explanation: The Partition Manager Daemon encountered an error in the indicated routine during preparation for, or loading of, the network table.

User response: Probable internal error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-220 **PMD unable to read information for network table from POE.**

Explanation: An internal error occurred when a Partition Manager Daemon attempted to read network table information from the home node. The parallel job is terminated.

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

0031-221 **Symbol lookup for *string* in `libpnsd.so` failed.**

Explanation: The indicated symbol was not found by the `dlsym` subroutine. PMD cannot proceed without this symbol, so the job is terminated.

User response: Probable internal error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-222 **Unable to load PNSD library in PMD.**

Explanation: A job was submitted that required the Partition Manager Daemon to load the network tables, but the required PNSD library could not be loaded. This error usually indicates that files created at install time have been deleted, moved, or had their permissions changed.

The following file could not be accessed:

`/opt/ibmhpc/lapi/pnsd/lib/pnsd32/libpnsd.so.`

User response: Contact the system administrator to determine if the `/opt/ibmhpc/lapi/pnsd/lib/pnsd32/libpnsd.so` file is accessible, and correct the problem, if possible. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-223 **Unable to load PNSD library symbols in PMD.**

Explanation: An internal error occurred when a Partition Manager Daemon attempted to dynamically load the PNSD library API symbols. The parallel job is terminated.

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

0031-235 **invalid userid received**

Explanation: The userid is not valid on this node.

User response: Run under a valid user ID.

0031-237 **invalid group id received**

Explanation: The group ID received by the `pm` daemon is either negative or nonnumeric, and therefore not valid.

User response: This is probably a 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: This is probably a 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: This is probably a 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: None.

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: None.

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: This is probably a 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: This is probably a 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 user ID is not found on the specified host.

User response: Add the user ID to the host.

0031-255 **Group string does not exist on host** *string*

Explanation: The group ID is not found in **/etc/group**.

User response: Add the group ID to the host.

0031-256 **Priority adjustment process has been invoked**

Explanation: The user has elected to adjust the priority of the **poe** job.

User response: None.

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 user space library is not being used.

User response: None.

0031-258 **User string not authorized for group** *string on host string*.

Explanation: The user ID is not permitted to access the specified group ID on the specified host.

User response: Add the user ID 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. For more information on file formats, see *IBM Parallel Environment: Installation*.

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. For more information on file formats, see *IBM Parallel Environment: Installation*.

0031-300 **Forcing all remote tasks to exit due to exit code 1 in task number**

Explanation: POE has been informed that the indicated task has exited with an exit code of 1, which causes POE to force all remote tasks to exit.

User response: If the user program is expected to issue an exit(1) as a means of aborting a job which had encountered an error, then no response is required. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems, as an internal error may have occurred.

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 a value (The default 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 that 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.

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.

0031-315 Invalid value for mp_chkpt flags.

Explanation: A non-valid value was set for the flags of the **mp_chkpt** function. **MP_CUSER** is the only valid value.

User response: Set the flag value in the **mp_chkpt** function call to **MP_CUSER**.

0031-326 Error occurred saving the MPCl data during checkpointing. Return code is *number*.

Explanation: An error occurred saving the MPCl data while checkpointing the program.

User response: Probable system error. 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.

0031-331 Error occurred disconnecting from MPCl during checkpointing. Return code is *number*.

Explanation: An error occurred disconnecting from MPCl while checkpointing the program.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-332 Error reading message type *number*, return code *number*.

Explanation: System error occurred reading the specified internal message type. 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.

0031-338 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.

This is probably a PE error.

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

0031-339 Parallel trace initialization failed.

Explanation: Parallel trace initialization failed on a remote node. The remote node continues, but no trace file will be created for that node.

This is probably a PE error.

User response: Check for other messages from POE. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-340 Error occurred getting time during checkpointing. Return code is *number*.

Explanation: An error occurred getting time while checkpointing the program.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-341 Error occurred reconnecting MPCl during checkpointing. Return code is *number*.

Explanation: An error occurred reestablishing the connections to MPCl while checkpointing the program.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-342 Error occurred initializing time during checkpointing. Return code is *number*.

Explanation: An error occurred initializing time while checkpointing the program.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-352 Error occurred reestablishing MPI/MPCl connection during restore processing. Return code is *number*.

Explanation: An error occurred reconnecting to MPI/MPCl while restoring a checkpointed program. Restore operation has failed.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-354 Error occurred obtaining global variables during restore processing. Return code is *number*.

Explanation: An error occurred obtaining the global variables from the environment while restoring a previously checkpointed program. Restore operation has failed.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-356 Error occurred reinitializing the clock during restore processing. Return code is *number*.

Explanation: An error occurred obtaining the switch clock address and reinitializing the clock for a previously checkpointed program. Restore operation has failed.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-357 Error occurred opening the checkpoint directory during restore.

Explanation: An error occurred during opening the checkpoint file directory while restoring the program.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-358 **Error reading internal messages while synchronizing POE tasks. Return code is *number*.**

Explanation: An internal error in pm_SSM_read occurred while trying to read the messages during the synchronization of POE tasks, while restoring a previously checkpointed file. Restore processing is terminated.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-361 **Unexpected return code *number* from ll_get_job.**

Explanation: An internal error has occurred.

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

0031-362 **Unexpected return code *number* from ll_request.**

Explanation: An internal error has occurred.

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

0031-363 **Unexpected return code *number* from ll_event.**

Explanation: An internal error has occurred.

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

0031-364 **Contacting LoadLeveler to *string* information for *string* job.**

Explanation: LoadLeveler is being used for the interactive or batch job.

User response: None.

0031-365 **LoadLeveler unable to run job, reason: *string***

Explanation: LoadLeveler either could not run the interactive job for the reason indicated, or, LoadLeveler terminated the interactive job for the reason indicated.

User response: Refer to *Tivoli Workload Scheduler LoadLeveler: Using and Administering* for information on the specific reason indicated in the LoadLeveler message that follows this message.

0031-366 **Invalid combination: nodes=*number*, tasks_per_node=*number*, procs=*number*.**

Explanation: The combination specified did not result in a mathematical equality -- nodes times tasks_per_node must equal procs, when all three are specified.

User response: Correct one or more of the specifications to ensure they are mathematically consistent.

0031-367 **Invalid combination: tasks_per_node=*number*, procs=*number*.**

Explanation: User specified the options indicated, and tasks_per_node did not divide evenly into procs, which is required as described in *IBM Parallel Environment: Operation and Use, Volume 1*.

User response: Correct the specifications as described above.

0031-368 **Number of nodes specified (*number*) may not exceed total number of tasks (*number*).**

Explanation: User has specified more nodes (using MP_NODES or -nodes) than tasks (using MP_PROCS or -procs), which is an error.

User response: Correct the specifications so that there are the same or fewer nodes than tasks.

0031-369 **Number of tasks or nodes must also be specified when using tasks_per_node.**

Explanation: User has specified tasks per node (using MP_TASKS_PER_NODE or -tasks_per_node), but has not specified either the number of nodes (using MP_NODES or -nodes) or the number of tasks (using MP_PROCS or -procs), which is required as described in *IBM Parallel Environment: Operation and Use, Volume 1*.

User response: Provide either of the omitted specifications.

0031-370 **Internal error: invalid taskid (*number*) received from LoadLeveler.**

Explanation: An internal error has occurred.

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

0031-371 Conflicting specification for -msg_api, using *string*.

Explanation: A batch job, or an interactive job that used the MP_LLFILE environment variable or the -llfile command line option, was submitted to LoadLeveler with a network statement in the Job Command File that contained a specification for messaging API that was different from the specification provided to POE via the MP_MSG_API environment variable or the -msg_api command line option. The specification used in this case will be that which appeared in the network statement.

User response: Verify that the specification in the network statement was intended. If it was, modify the POE specification to eliminate the warning, if desired.

0031-372 Cannot run MPI/LAPI job as specified in submit file.

Explanation: A batch job, or an interactive job that used the MP_LLFILE environment variable or the -llfile command line option was submitted to LoadLeveler with a Job Command File that did not contain any network statements, and the specification provided to POE (using the MP_MSG_API environment variable or the -msg_api command line flag) indicated that both MPI and LAPI were being used. For these types of jobs using both messaging APIs, the network statements must be used.

User response: Ensure that use of both messaging APIs was intended. If so, add the required network statements. If not, modify the POE specification to indicate the correct messaging API.

0031-373 Using *string* for messaging API.

Explanation: Informational message to indicate the messaging API being used for the batch job, or the interactive job that used the MP_LLFILE environment variable or the -llfile command line option that was submitted to LoadLeveler.

User response: None.

0031-374 Conflicting specification for *string* -euilib, using *string*

Explanation: A batch job, or an interactive job that used the MP_LLFILE environment variable or the -llfile command line option, was submitted to LoadLeveler with a network statement in the Job Command File that contained a specification for the messaging passing library that was different from the specification provided to POE via the MP_EUILIB environment variable or the -euilib command line option. The specification used in this case will be that which appeared in the network statement.

User response: Verify that the specification in the network statement was intended. If it was, modify the

POE specification to eliminate the warning, if desired.

0031-375 Using *string* for *string* euilib

Explanation: Informational message to indicate the message passing library being used for the batch job, or the interactive job that used the MP_LLFILE environment variable or the -llfile command line option, that was submitted to LoadLeveler.

User response: None.

0031-377 Using *string* for *string* euidevice for task number

Explanation: Informational message to indicate the message passing device being used for the batch job, or the interactive job that used the MP_LLFILE environment variable or the -llfile command line option, that was submitted to LoadLeveler.

User response: None.

0031-379 Pool setting ignored when hostfile used

Explanation: User has set the MP_RMPOOL environment variable or the -rmpool command line option but a host file was found.

User response: Ensure that use of the host file was intended.

0031-380 LoadLeveler step ID is *string*

Explanation: The indicated step ID was assigned by LoadLeveler to the current interactive job. It may be useful when using the llq command to determine the job status.

User response: None.

0031-381 Switch clock source requested, but not all tasks on SP

Explanation: The user set MP_CLOCK_SOURCE=SWITCH, but not all tasks were on SP nodes that have access to the switch. The job is terminated.

User response: If mixed-node execution is acceptable, unset the MP_CLOCK_SOURCE environment variable. Otherwise, check that the nodes allocated were all on an SP.

0031-382 Error obtaining authentication methods in use on local host, errno: *number*.

Explanation: An internal error occurred when calling spspec_get_ts_authent to determine the authentication method in use on the home node. POE terminates.

User response: Gather information about the problem

and follow local site procedures for reporting hardware and software problems.

0031-384 *string*

Explanation: This message contains additional DCE error message text, which should have been preceded by other messages.

User response: Handle according to the earlier message's response.

0031-385 **Error initializing DCE on home node.**

Explanation: An internal error occurred when calling `spsec_start` to initialize the DCE environment. This message should be followed by an additional message containing the DCE error text. POE terminates.

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

0031-386 **MP_INSTANCES setting ignored when LoadLeveler is not being used.**

Explanation: The execution environment specified by the user did not specify the use of LoadLeveler, and the `MP_INSTANCES` environment variable or the `-instances` POE option flag was specified.

User response: Ensure that the job was intended to run without LoadLeveler. Refer to the *IBM Parallel Environment: Operation and Use, Volume 1* for additional information on the use of LoadLeveler with these options. To eliminate the occurrence of this message, do not specify `MP_INSTANCES` or `-instances` when LoadLeveler is not being used.

0031-390 **Error determining whether compatibility authentication was in use.**

Explanation: An internal error occurred when calling `spsec_using_auth_method` to determine if compatibility authentication is in use on the home node. This message should be followed by an additional message containing the DCE error text. POE terminates.

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

0031-392 **Error occurred restoring MPI/MPCI data during restore processing. Return code is number.**

Explanation: An error occurred restoring MPI/MPCI data while restoring a checkpointed program. The restore operation has failed.

User response: Probable system error. Gather information about the problem and follow local site

procedures for reporting hardware and software problems.

0031-393 **Ignoring *string* specified for batch job.**

Explanation: The user is running a batch job and has specified the use of `-llfile` (or `MP_LLFILE`), or `-save_llfile` (or `MP_SAVE_LLFILE`). These settings are ignored for batch jobs and the user receives a warning message.

User response: Unset the appropriate flags or environment variables to eliminate the warning messages.

0031-394 **The save_llfile specification is ignored when llfile is used**

Explanation: The user has specified a LoadLeveler Job Command File (JCF) to be used and has also specified that the JCF be saved. This is redundant and causes a warning message to be issued.

User response: Ensure that the use of JCF was intended, and if so, unset `-save_llfile` or `MP_SAVE_LLFILE` to eliminate the warning message.

0031-395 **Hostfile may not contain pools when llfile is specified**

Explanation: The user has specified a LoadLeveler Job Command File (JCF) to be used and the host file (either `host.list` the directory from which `poe` was invoked, or the file specified with `-hostfile` or `MP_HOSTFILE`) contained a pool entry. An error message is printed and the job is terminated.

User response: If the use of the JCF was intended, either rename or remove the host file or modify the host file to contain node names. Otherwise, **unset `-llfile` or `MP_LLFILE`.**

0031-396 **Unable to open save_llfile *string***

Explanation: Specified `save_llfile` could not be opened. The job continues to run without saving the JCF.

User response: Check the path name and permissions.

0031-397 **Ignoring save_llfile specified for non-LoadLeveler job**

Explanation: The execution environment (see *IBM Parallel Environment: Operation and Use, Volume 1*) did not specify use of LoadLeveler, but the `-save_llfile` command line option or the `MP_SAVE_LLFILE` environment variable was specified.

User response: If LoadLeveler use was intended, check environment variables or command line options

or both. Otherwise, remove the save_llfile setting to eliminate the warning.

0031-398 Unexpected return code *number* from ll_parse_verify.

Explanation: When the file specified using the MP_LLFILE environment variable or the -llfile command line option was processed by the LoadLeveler parsing verification routine, an error occurred.

User response: Examine the LoadLeveler messages preceding this message and correct the problem indicated. This message is usually the result of using a restricted keyword or assigning a non-valid value to an allowed keyword.

0031-399 Unexpected return code *number* from ll_parse_file.

Explanation: An error occurred when LoadLeveler parsed the file specified with the MP_LLFILE environment variable or the -llfile command line option.

User response: Examine the LoadLeveler messages preceding this message and correct the problem indicated. This message is usually the result of one of the following:

- The specified file could not be opened.
- The file contained syntax errors.
- The file contained restricted keywords.

0031-400 Invalid value *number* for stdoutmode

Explanation: You (or another user) entered a non-negative value with **-stdoutmode** or **MP_STDOUTMODE** that 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: Rerun with a valid value.

0031-401 Invalid value *number* for stdinmode

Explanation: You (or another user) entered a non-negative value with **-stdinmode** or **MP_STDINMODE** that 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: Rerun with a valid value.

0031-403 Unexpected instance number *number* in SSM_CSS_INIT, expecting *number*

Explanation: An internal error has occurred during message passing subsystem initialization.

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

0031-404 Ignoring checkpoint request received from debugger

Explanation: An attached debugger sent a SIGSOUND or SIGRETRACT to the POE process to request a checkpoint, but the CHECKPOINT environment variable was not set to **yes** in POE's environment. The request is ignored, because the operating system will fail the checkpoint anyway.

User response: Invoke POE with the CHECKPOINT environment variable set to "yes" if the ability to checkpoint the parallel job is desired.

0031-405 Hostfile entries for *string* usage for task *number* conflict, using *string*

Explanation: You (or another user) has a host file entry that, for the same node, specifies shared AND dedicated, or multiple AND unique, adapter or CPU usage, respectively.

User response: Correct the conflicting entries and rerun.

0031-406 Error opening file *string*

Explanation: An error occurred attempting to open the debugger attach configuration file. If not running under the debugger (such as **pdbx**), processing continues. If running under **pdbx**, processing will be terminated. The most likely cause of this error is that the file already exists for a previously running task, or a task that had been prematurely killed by a terminating signal.

User response: Remove the file specified in the message to prevent the message from occurring again. Also, in the future, exercise care if a user initiated signal (such as **SIGKILL**) is used to cancel a running task.

0031-408 *number* tasks 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 the System Administrator to determine node availability.

0031-409 Unable to start Partition Manager daemon (*string*) on node *string*, rc = *number*

Explanation: An error (possibly internal) occurred when LoadLeveler attempted to start **/etc/pmdv4** 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 host name
- 4 Name server could not resolve host
- 5 Socket error
- 6 Could not connect to host
- 7 Could not send command to remote startd

User response: Check the path name and permissions for `/etc/pmdv4` and retry. If the 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 job

Explanation: POE has determined that an incompatible version of LoadLeveler is installed on the node where this job was attempted to be run.

User response: Follow local site procedures to request installation of a supported version of LoadLeveler on the node.

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 the 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.

0031-418 No schedd host configured to receive submissions from this node.

Explanation: LoadLeveler configuration files do not indicate a schedd host to receive submissions from this node, or the `/tmp` directory is full on the submitting node. For either case, LoadLeveler is unable to allocate nodes, so POE terminates the job.

User response: For the first case, modify the LoadLeveler configuration files to indicate a schedd host to receive submissions from this node. For the second case, which only occurs when the `MP_LLFIL` environment variable or the `-llfile` command line option are not used, either increase the size of `/tmp` or remove unused files to allow a file of 1024 bytes maximum size to be created.

0031-419 Unable to submit job due to LoadLeveler communication or configuration error.

Explanation: A communication or configuration error

occurred within LoadLeveler causing the job to be unsubmitable. Possible causes for this error are:

1. The schedd hosts configured to receive submit from this node are down or drained.
2. The LoadLeveler configuration file is missing or contains an error.

User response: For 1), use the `llstatus` command to examine the status of schedds configured for submission from this node an restart or resume at least one of them.

For 2), verify that the configuration file exists and does not contain any obvious errors. There may be LoadLeveler messages preceding this message that indicate configuration errors needing correction.

Otherwise, gather information about the problem and follow local site procedures for reporting hardware software problems.

0031-420 All configured schedds for this node are unavailable

Explanation: The schedd hosts configured to receive submissions from this node are drained or down, causing LoadLeveler to be unable to submit the job.

User response: Use the `llstatus` command to examine the status of schedds configured for submission from this node and restart or resume at least one of them.

0031-421 No valid DCE login found during LoadLeveler initialization.

Explanation: DCE is enabled for LoadLeveler, however LoadLeveler was unable to determine your DCE identity. The DCE credentials may have expired.

User response: Verify that the user's DCE credentials have not expired.

0031-422 DCE credentials have expired during LoadLeveler initialization.

Explanation: DCE is enabled for LoadLeveler, however LoadLeveler has determined that the DCE credentials have expired.

User response: Perform a `dce_login` again to get new credentials then reissue the command.

0031-423 DCE credentials were about to expire during LoadLeveler initialization.

Explanation: The requested operation did not complete since the remaining lifetimes of your DCE credentials were less than 5 minutes. The request is terminated.

User response: Perform a `dce_login` again to get new credentials then reissue the command.

0031-424 Checkpoint succeeded, file *string* has been created

Explanation: Informational message indicating to the user where the checkpoint file from a successful user-initiated checkpoint was saved.

User response: None.

0031-425 MPI initialization has completed

Explanation: Informational message indicating to the user that POE has received MPI initialization messages from all tasks.

User response: None.

0031-426 POE not in checkpointable state per LoadLeveler

Explanation: LoadLeveler has informed one or more of the PMDs in the parallel job not to perform a checkpoint. This could occur if an interactive job used `MP_LFILE` or `-llfile`, where the LoadLeveler job command file specified `#@checkpoint=no`, the environment variable `CHECKPOINT` was set to **yes** when POE was invoked, and a user-initiated checkpoint request is issued by the task. Otherwise, an internal error has likely occurred in LoadLeveler.

User response: Remove the `#@checkpoint=no` from the LoadLeveler job command file, or do not use the LoadLeveler job command file. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-427 POE not in checkpointable state—MPI initialization began during checkpoint

Explanation: MPI initialization began after POE detected that a checkpoint was in progress, which is not supported. The checkpoint operations will be cancelled on the remote nodes.

User response: Reissue the checkpoint request after the 0031-425 message indicates that MPI initialization is complete.

0031-428 The `ckptnt_commit` call in POE failed

Explanation: Either the checkpoint operation was cancelled prior to POE calling `ckptnt_commit` in its checkpoint handler, or an internal error has occurred.

User response: If the checkpoint was cancelled, this message is expected and no action is required. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-429 User-initiated checkpoint cannot be performed on job being run under pdbx or DPCL

Explanation: A program being run under **pdbx** or DPCL issued a call to one of the user-initiated checkpoint routines, which is not supported.

User response: Ignore the error message, or remove the call from the program.

0031-430 LoadLeveler-initiated checkpoint cannot be performed on job being run under pdbx or DPCL

Explanation: A program being run under **pdbx** or DPCL was attempted to be checkpointed through LoadLeveler, which is not supported.

User response: Ignore the error message, or do not attempt a checkpoint when the programs are being run under **pdbx** or DPCL.

0031-431 Checkpoint cancelled by POE due to termination condition

Explanation: A task exited abnormally or a STOPALL order was received while a checkpoint operation was in progress. POE cancels the checkpoint operation and the job is terminated.

User response: None.

0031-432 Unexpected checkpoint by debugger

Explanation: A checkpoint was issued on the POE process while it was under the control of a debugger, but the debugger had not received permission to perform the checkpoint prior to issuing the checkpoint.

User response: None, the checkpoint of the parallel job will fail.

0031-433 Checkpoint was not issued by debugger

Explanation: A checkpoint was issued on the POE process while it was under the control of a debugger, and POE had granted permission to the debugger to issue a checkpoint, but POE detected that the checkpoint was not issued by the debugger, which is not supported.

User response: None, the checkpoint of the parallel job will fail.

0031-434 Debugger refused batch checkpoint

Explanation: LoadLeveler issued a checkpoint of a batch POE job that was under debugger control, but the debugger denied permission for the checkpoint to proceed. This would occur when the debugger asked

the user if they wanted their job checkpointed, and the user said no.

User response: None, the LoadLeveler checkpoint will fail.

0031-435 Interactive POE jobs under debugger control may only be checkpointed by debugger

Explanation: A checkpoint was issued on the POE process while it was under control of the debugger, but the checkpoint was not issued by the debugger, which is not supported.

User response: None, the checkpoint of the parallel job will fail.

0031-436 Unable to broadcast SSM_DBG_CKPT_PIPECHECK to PMDs

Explanation: An internal error occurred that prevented POE from sending the indicated SSM to the PMDs.

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

0031-437 Unexpected adapter count (*number*) returned by LoadLeveler

Explanation: An internal error has occurred.

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

0031-438 Unexpected count (*number*) for *string* instances returned by LoadLeveler

Explanation: An internal error has occurred.

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

0031-439 Invalid security configuration entry found on node *string*

Explanation: The security configuration file (/etc/poe.security) contained an invalid entry on the specified node. POE terminates.

User response: Contact the system administrator to ensure the proper authentication methods are defined and enabled.

0031-440 CTSec security was defined but not enabled on node *string*

Explanation: The CTsec security mechanism was configured on the specified node, but the rsct.core.sec

fileset libraries were not installed on that node. POE terminates.

User response: Contact the system administrator to ensure the proper authentication methods are defined and enabled, and that rsct.core.sec is properly installed.

0031-441 PSSP security was defined but not enabled on node *string*.

Explanation: The PSSP security mechanism was configured on the specified node, but this is no longer supported. POE terminates.

User response: Contact the system administrator to ensure the proper authentication methods are defined and enabled.

0031-442 More than one security entry was made on node *string*.

Explanation: There was more than one security mechanism defined on the specified node, when only one method can be configured.

User response: Contact the system administrator to ensure the proper authentication methods are defined and enabled.

0031-443 Error initializing cluster security services on *string*: *string*, return code *number*.

Explanation: An internal error occurred when calling sec_start to initialize the cluster security services. POE terminates.

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

0031-444 Error setting up socket security information for node *string*, task *string*, return code: *number*

Explanation: An internal error occurred when calling sec_setup_socket to initialize set up the security information for the socket on the specified task and node. POE terminates.

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

0031-445 Error returning the trusted security mechanisms in use on home node, return code: *number*

Explanation: An internal error occurred when calling sec_get_auth_methods to determine the trusted security mechanisms in use on the POE home node. POE terminates.

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

0031-446 Error getting client security context on home node for host *string*, return code: *number*

Explanation: An internal error occurred when calling sec_start_sec_context to obtain the security context and credentials for the specified remote node host name. POE terminates.

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

0031-447 Error logging in as PMD service on node *string*, return code: *number*

Explanation: An internal error occurred when calling sec_login_as_service to login as the PMD service principal while attempting to authenticate. This message may be followed by an additional message containing the CTSec error text. POE terminates.

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

0031-448 *string*

Explanation: This message contains additional CTSec error message text, which should have been preceded by other messages.

User response: Handle according to the earlier message's response.

0031-449 Error creating security context on node *string*, return code: *number*

Explanation: An internal error occurred when calling sec_receive_sec_context to create a security context while attempting to authenticate. containing the CTSec error text. POE terminates.

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

0031-450 Error creating identity context on node *string*, return code: *number*

Explanation: An internal error occurred when calling sec_create_id_context to create an identity context from the security context while attempting to authenticate. This message may be followed by an additional message containing the CTSec error text. POE terminates.

User response: Gather information about the problem

and follow local site procedures for reporting hardware and software problems.

0031-451 Error authenticating user *string* on node *string*, return code: *number*

Explanation: The user could not be authenticated by the `sec_user_valid` routine. If the return code was 36, the user does not have the proper security authorization. Any other return code values indicate possible administrative or internal errors. This message may be followed by an additional message containing the CTSec error text. POE terminates.

User response: Note the return code and consult with the system administrator to ensure the proper security methods are defined and that the user is properly authorized to use that method. Otherwise, if the return code indicates an internal type of error, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-452 POE security configuration file not found on node *string*.

Explanation: The security configuration file (`/etc/poe.security`) was not found on the specified node. POE terminates.

User response: Contact the system administrator to ensure the proper authentication methods are defined and enabled.

0031-453 Unexpected protocol (*string*) returned by LoadLeveler

Explanation: An internal error has occurred.

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

0031-454 Security mechanism on node *string* does not match mechanism on home node.

Explanation: The security mechanism configured on the remote node does not match the mechanism configured on the POE home node. The mechanisms must match in order for POE to determine the proper security method to use. POE terminates.

User response: Contact the system administrator to ensure the proper authentication methods are defined and enabled properly.

0031-455 Environment print request return code = *number*

Explanation: An internal error occurred processing the

MP_PRINTENV environment variable. The job is terminated.

User response: Probable PE system error. Gather information about the problem and follow local site procedures for reporting software problems.

0031-456 Environment print request ignored

Explanation: The MP_PRINTENV environment variable was set for this task, but not for all tasks in the job. The request is ignored.

User response: Rerun with MP_PRINTENV set on all tasks.

0031-457 An internal error occurred attempting to execute the named script as a value for the MP_PRINTENV environment variable. The job is terminated.

Explanation: An internal error occurred processing the MP_PRINTENV environment variable. The job is terminated.

User response: Probable PE system error. Gather information about the problem and follow local site procedures for reporting software problems.

0031-458 Shared segment not initialized to zero for restart of checkpointed job

Explanation: The operating system has not returned a zero filled shared memory segment. This may result in a race condition among the restarted tasks. Job is terminated.

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

0031-459 POE not in checkpointable state -- checkpoint handler registration began during checkpoint

Explanation: Checkpoint handler registration began after POE detected that a checkpoint was in progress, which is not supported. The checkpoint operations will be cancelled on the remote nodes.

User response: Reissue the checkpoint request after the **0031-114** message indicates that checkpoint handler registration is complete.

0031-460 Internal error occurred at *string*

Explanation: An internal error has occurred.

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

0031-461 The bulkxfer specification may not be changed when restarting.

Explanation: The user attempted to restart a POE job with a different bulkxfer specification than the job had when it was originally started. This could occur for batch POE jobs, or for interactive POE jobs that use the **-llfile** command line option or the **MP_LLFILE** environment variable.

User response: Modify the LoadLeveler keywords in the command file so that the bulkxfer specification for the restarted job is the same as it was when the job was originally run.

0031-462 Inconsistent adapter count returned by string.

Explanation: LoadLeveler returned an adapter count for one of the parallel tasks which was not consistent with the adapter count that was returned for the other parallel tasks. This is not a supported configuration in the communication protocol stack, so the job is terminated.

User response: Verify that LoadLeveler is not configured in a manner which could cause a parallel job to be run on a set of nodes with a different number of networks configured for one or more of the nodes. If LoadLeveler is not configured in this manner, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-463 Unable to establish connection with Partition Manager daemon (string) on node string, rc = number.

Explanation: An error (possibly internal) occurred when LoadLeveler attempted to establish a socket connection for **/etc/pmdv4** on the indicated node. Reason codes for internal LoadLeveler errors are as follows:

- 1 Internal job management object error.
- 3 Could not connect to the LoadLeveler daemon.
- 5 System error.
- 6 Internal error - invalid PMD executable name.
- 7 Parallel task manager for this job step is already running on the targeted node.
- 8 Incompatible nodes - all nodes targeted to run the parallel job are not at the same level.
- 9 Internal invalid machine object error.
- 10 Internal invalid step object error.
- 11 Internal error - connection attempted more than once for same node.

User response: Check pathname and permissions for **/etc/pmdv4**. Retry; if problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-464 The LAPI user Rcxt blocks specification may not be changed when restarting

Explanation: The user attempted to restart a POE job with a different LAPI user Rcxt block specification than the job had when it was originally started. This could occur for batch POE jobs, or for interactive POE jobs that use the **-llfile** command line option or the **MP_LLFILE** environment variable.

User response: Modify the LoadLeveler keywords in the command file so that the LAPI user Rcxt block specification for the restarted job is the same as it was when the job was originally run.

0031-465 The MPI user Rcxt blocks specification may not be changed when restarting

Explanation: The user attempted to restart a POE job with a different MPI user Rcxt block specification than the job had when it was originally started. This could occur for batch POE jobs, or for interactive POE jobs that use the **-llfile** command line option or the **MP_LLFILE** environment variable.

User response: Modify the LoadLeveler keywords in the command file so that the MPI user Rcxt block specification for the restarted job is the same as it was when the job was originally run.

0031-466 Using device driver string for task number.

Explanation: Informational message to indicate the message passing device driver name being used for the batch job, or the interactive job that used the **MP_LLFILE** environment variable or the **-llfile** command line option, that was submitted to LoadLeveler.

User response: None.

0031-467 Using device type number for task number.

Explanation: Informational message to indicate the message passing device type being used for the batch job, or the interactive job that used the **MP_LLFILE** environment variable or the **-llfile** command line option, that was submitted to LoadLeveler.

User response: None.

0031-468 Using port number number for task number.

Explanation: Informational message to indicate the message passing port number being used for the batch job, or the interactive job that used the **MP_LLFILE** environment variable or the **-llfile** command line option, that was submitted to LoadLeveler.

User response: None.

0031-470 **epoll error: *string* (*errno* = *number*).**

Explanation: Internal error.

User response: Contact IBM service.

0031-501 **Open of lightweight corefile *string* failed.**

Explanation: An error occurred when POE opened the file specified with the MP_COREFILE_FORMAT environment variable or the **-corefile_format** command line option.

User response: Check permissions. Check the file name, which could contain a restricted keyword.

0031-502 **Checkpoint commit call failed: *rc=number***

Explanation: An error occurred when the task checkpoint handler called the **checkpoint_commit** system call.

User response: Probable system error.

0031-503 **Enter program name and flags for each node**

Explanation: The system waits for each entry and initiates the given program on the specified node.

User response: Enter the name and any command line flags or file names to be used.

0031-504 **Partition loaded ...**

Explanation: Execution continues.

User response: This is an informational message stating that all requested programs have been loaded on the remote nodes.

0031-508 **poerestart: getcruid error**

Explanation: The **poerestart** is unable to obtain the cruid of the process issuing the restart_wait function.

User response: Probable system error.

0031-509 **Cannot checkpoint a signal-based program**

Explanation: The user inadvertently attempts to checkpoint a signal-based program. Checkpoint/Restart function supports the threaded MPI library only.

User response: Check the MPI library.

0031-510 **Open of file *string* failed.**

Explanation: The specified io node file could not be opened.

User response: Check the path name, permissions, and io node file.

0031-511 **Couldn't get info for hostname *string*.**

Explanation: The host name in the io node file was not found.

User response: The name mentioned cannot be identified. Check that the host name is spelled correctly.

0031-512 **Couldn't find any node name in file *string*.**

Explanation: The specified io node file did not contain a node name.

User response: Check the path name and io node file.

0031-513 **Couldn't find a matching node in the POE host list for file *string*.**

Explanation: No matching node that was found in the POE host node list for this io node file.

User response: Check the path name and io node file.

0031-514 **Couldn't find a matching node in the host list for node name *string*.**

Explanation: No matching node was found in the POE host node list for this node.

User response: Check the path name and io node file.

0031-515 **Duplicate node name *string* in ionodefile.**

Explanation: A duplicate node was found in the io node file.

User response: Check the path name and io node file.

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 host file could not be opened.
User response: Check path name and permissions.

0031-603 **Remote node socket connection failed.
Return code *number*.**
Explanation: POE failed while attempting to set up the remote node sockets. POE terminates. Possible return codes and reasons are:
-1 Socket connection timeout.
 errno value Another error, as indicated by an **errno** value.

User response: If a timeout occurred, check that the network interfaces are working properly, and if necessary increase the value of the MP_TIMEOUT or **-timeout** option. For other errors, if the problem persists gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-604 **Unexpected non-numeric entry in hostfile**
Explanation: A non-numeric pool number exists in hostfile.
User response: Correct the host file entry.

0031-606 **Unrecognized environment variable,
string.**
Explanation: An environment variable was specified that was not recognized. It is possible that it was misspelled or incorrectly specified.
User response: Check the spelling of the indicated variable and correct if necessary.

0031-607 **Pool requests and host entries may not be intermixed in hostfile**
Explanation: Pool requests and host entries coexisted in host file.
User response: Modify host file to contain only pool requests or only host names.

0031-608 **Unrecognized option for task *number*: <
string>**
Explanation: An option other than **shared**, **dedicated**, **multiple**, or **unique** was found in the host file.
User response: Correct host file entry.

0031-609 **Unable to open save_hostfile *string***
Explanation: Specified save host file 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/epoll 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 cannot 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 does not 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.

0031-622 **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 **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 **MP_TIMEOUT** environment variable. The default is 150 seconds.

If the SP security method is DCE compatibility, you may need to increase the **MP_TIMEOUT** value to allow POE to wait for the DCE servers to respond (or time out if the servers are down).

If the problem persists, gather information about the

problem and follow local site procedures for reporting hardware and software problems.

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.

0031-636 **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.

0031-639 **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 messages. Otherwise, no action is required.

0031-640 **Error resending message type *number* to node *string*, return code *number*.**

Explanation: An internal error has occurred attempting to resend an internal message to the specified node.

User response: Verify that the remote nodes are accessible and rerun POE or the application. If the failure continues, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-641 **Command string length limit exceeded, length is *number*.**

Explanation: The limit on the length of the POE command line string was exceeded, most likely because the number of arguments and the length of the command line string specified was greater than 24K (24,526) bytes.

User response: Reduce the amount of length of arguments passed to POE, such that they are less than 24K bytes.

0031-642 **Large pages are not enabled or none are free, and the current process requires them.**

Explanation: Warning message output to user because the current process requires large pages, and large pages are not enabled. Since the **tlp_required** flag or **MP_TLP_REQUIRED** environment variable is set to **warn**, process execution will continue.

User response: User needs to enable or increase the number of free large pages on the system using the **vmo** command.

0031-643 **Large pages are not enabled or none are free and the current process requires it, exiting.**

Explanation: Warning message output to user because current process requires large pages and large pages are not enabled, **-tlp_required** flag or **MP_TLP_REQUIRED** environment variable was set to **kill** so the process is terminated.

User response: User needs to enable or increase the number of free large pages on the system using the **vmo** command.

0031-644 *routine()* failed with **errno = *number*.**

Explanation: The system call failed, the error code was returned as indicated. Please refer to the operating system documentation for more information.

User response: Probable POE internal error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-645 **Invalid string *string* for -tlp_required or MP_TLP_REQUIRED.**

Explanation: The command line flag **-tlp_required** or the environment variable **MP_TLP_REQUIRED** was set with an invalid string.

User response: The valid strings for **-tlp_required** or **MP_TLP_REQUIRED** are **WARN**, **KILL** or **NONE**.

0031-646 **vmgetinfo() function failed (rc=*number*). Cannot continue.**

Explanation: The call to **vmgetinfo()** failed. Since the **-tlp_required** flag or **MP_TLP_REQUIRED** environment variable has been set, large page information cannot be ascertained without this function and the process is terminated.

User response: Probable POE internal error. Gather information about the problem and follow local site procedures for reporting hardware and software problems. Alternatively, the user can call **poe** without the **-tlp_required** flag to bypass this function call, if the option is not required.

0031-647 **There are no large pages available. numfrb = *number*.**

Explanation: Warning message to note that there are no free large pages.

User response: This is a warning message, just to inform the user.

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 STDINMODE 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, node string, length number

Explanation: An error occurred allocating storage for a message from a remote node. The partition is terminated and POE exits. The node name 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 it 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.

| **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** no large pages were found, vmi.lgpg_cnt = *number*.

| **Explanation:** Command line option **-tlp_required** or environment variable **MP_TLP_REQUIRED** was set to WARN or KILL, but large pages were not enabled or available.

| **User response:** The user needs to enable large pages using the **vmo** command. Example:

| vmo -o lgpg_regions=XXX -o lgpg_size=XXX

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 STUDIO 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 Unexpected return code *number* from getprocs() system call.

| **Explanation:** The system call **getprocs()** return code shows an error which requires program termination.

| **User response:** Probable POE internal error. 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 does not 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 pids do not match, program
terminating. (pinfo.pi_pid = *number*
, my_pid = *number***).**

Explanation: The pid returned by **getprocs()** and the current pid do not match, therefore the data we retrieved is invalid and the process is terminated.

User response: Probable POE internal error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

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 actions are indicated for those messages. If there are no other messages or if the 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 LoadLeveler

Explanation: The user explicitly requested not to use LoadLeveler (with the MP_RESD environment variable or the **-resd** command line flag), but the host file contained pool requests.

User response: Use host names in the host file or do not request that LoadLeveler 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 file system for the profiling file and rerun 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.

0031-681 Unexpected return code *string* **from**
select, errno=*number*

Explanation: Internal error has occurred.

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

0031-682 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.

0031-683 POE couldn't get process info for
process id *number*

Explanation: The Partition Manager is unable to get the time stamp in the procsinfo structure for creating the **/tmp/.ppe.xxx.attach.cfg** file.

User response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-684 Failure sending device initialization
information to nodes.

Explanation: An error occurred in broadcasting the device initialization data to the remote nodes. The partition is terminated and POE exits.

User response: The failing routine is `pm_info_request`. Look for other symptoms to determine the cause of failure.

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 actions are indicated for those messages. If there are no other messages or if the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-692 Invalid option *number* requested

Explanation: A user program has called function `MP_FLUSH` or `mpc_flush` with an incorrect 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.

0031-698 Error creating profiling directory, reason: *string*.

Explanation: A profiling directory could not be created for the given reason.

User response: Fix the problem and rerun the job.

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.

0031-707 **pmd: error sending *string* ack to home node.**

Explanation: The **pm** daemon was not able to send the indicated acknowledgment 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 task *number* child's STDIN**

Explanation: **pm** daemon parent was not able to write to the indicated child's STDIN.

User response: Probable system error.

0031-715 **pmd parent: error writing to task *number* child's cntl**

Explanation: **pm** daemon parent was not able to write to the indicated child's control pipe.

User response: Probable system error.

0031-716 **pmd parent: error reading STDOUT from task *number* child**

Explanation: **pm** daemon parent was not able to read STDOUT from the indicated child.

User response: Probable system error.

0031-717 **pmd parent: error writing to STDOUT for task *number***

Explanation: **pm** daemon parent was not able to write to STDOUT for the indicated child.

User response: Probable system error.

0031-718 **pmd parent: error reading control from task *number* child**

Explanation: **pm** daemon parent was not able to read the control pipe from the indicated 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: None.

0031-722 **Can't set priority to *number***
Explanation: `setpriority()` failed in `pmd` child.
User response: None.

0031-724 **Executing program: *<string>***
Explanation: The child is executing the given program.
User response: None.

0031-725 **Failed to exec program *string*; errno = *number***
Explanation: The child failed to execute the given program.
User response: Probable system error. 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.

0031-728 **Cannot set *string* limit to *number*, hard limit is *number*.**
Explanation: If the user's soft limit is greater than the `inetd` hard limit, the soft limit will only get changed to the hard limit value.
User response: If this causes a problem, ask the system administrator to increase the hard limit values for `inetd`.

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 and available.

0031-732 **Restarting program from file: *<string>***
Explanation: The child is executing the given program for restart.
User response: None.

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 administrator to make sure that the fileset `bos.adt.debug` is properly installed on the nodes where the job runs.

0031-735 **Free space threshold for message logging reached (node *string*).**
Explanation: You requested to log diagnostic messages (through `MP_PMDLOG` or `-pmdlog`), but there is less than 1 MB of space remaining in `/tmp`. Logging will be stopped if `/tmp` becomes full. Processing continues.

User response: Expand the file system or clean up files in `/tmp` in order to provide additional space.

0031-736 ***/tmp* filled for node *string*. Logging is stopped.**
Explanation: You requested to log diagnostic messages (through `MP_PMDLOG` or `-pmdlog`), but the `/tmp` directory on the indicated remote node was filled during execution. Processing continues, but the logging of diagnostic messages has been stopped for the indicated node.

User response: After the job has finished, increase the size of the `/tmp` directory on the indicated remote node before you execute POE again with `MP_PMDLOG=YES`.

0031-737 **Error obtaining authentication methods in use on remote host for node *string*, errno: *number*.**
Explanation: An internal error occurred when calling `spsec_get_ts_authent` to determine the authentication method in use on the remote node. POE terminates.

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

0031-748 Error reading security mechanism on node *string*.

Explanation: An internal error occurred reading the security mechanism data sent from the POE home node. POE terminates.

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

0031-752 Error reading token on task *number*.

Explanation: An internal error occurred reading the token sent from the POE home node. POE terminates.

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

0031-753 No token was passed from home node, when one was expected.

Explanation: The remote node was expecting a token from the home node, and none was sent. The remote node has the token-handling functions enabled, but the home node does not. The PMD terminates.

User response: Consult with your system administrator to make sure the key table functions are properly enabled on the home and remote nodes. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-754 spchkkey 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: Make sure the user is properly authorized to use POE, and make sure the **spchkkey** routine is properly installed and available.

0031-755 PMD unable to create a restarting thread, rc=*number*

Explanation: An error occurred when PMD attempted to create a restarting thread for a task.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-756 A restarting thread within PMD cannot be joined, rc=*number*

Explanation: An error occurred when PMD attempted to join with a restarting thread for a task.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-757 PMD unable to create a checkpointing thread, rc=*number*

Explanation: An error occurred when PMD attempted to create a checkpointing thread for a task.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-758 Error reconciling security mechanism on node *string*, return code: *number*.

Explanation: An error occurred when PMD attempted to call `sec_reconcile_auth_methods` to determine the security mechanisms that the POE home node and the remote node have in common. If the return code was 8, there is no security mechanism in common and authentication is not possible. For other error codes, some type of system error occurred. POE terminates.

User response: If there was no common security method found (return code of 8), consult your system administrator on the system security configuration. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-759 pmd parent: error writing to STDOUT for task *number*

Explanation: **pm** daemon parent was not able to write to STDOUT for the indicated task.

User response: Probable system error.

0031-760 pmd parent: error reading stdin for task *number*, count=*number*

Explanation: An error occurred when **pmd** parent read data from the stdin pipe for indicated task for checkpointing.

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

0031-761 pmd parent: error writing to STDOUT for task *number*

Explanation: **pm** daemon parent was not able to write to STDOUT for the indicated task.

User response: Probable system error.

0031-762 **pmd parent: error reading ctlin for task**
number, count=number

Explanation: An error occurred when **pmd** parent read data from the ctlin pipe for indicated task for checkpointing.

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

0031-763 **pmd parent: error writing to STDOUT**
for task *number*

Explanation: **pm** daemon parent was not able to write to STDOUT for the indicated task.

User response: Probable system error.

0031-764 **pmd parent: error writing to task**
number child's STDIN

Explanation: **pm** daemon parent was not able to write to the indicated child's STDIN.

User response: Probable system error.

0031-765 **pmd parent: error writing to task**
number child's cntl

Explanation: **pm** daemon parent was not able to write to the indicated child's control pipe.

User response: Probable system error.

0031-766 **pmd parent: error writing to STDOUT**
for task *number*

Explanation: **pm** daemon was not able to write to STDOUT for the indicated task.

User response: Probable system error.

0031-767 **signal** *string*

Explanation: The message is sent from the signal handler in response to the indicated signal, which is not handled explicitly by the Partition Manager Daemon.

User response: Verify that the signal was intended.

0031-768 **Error reading security context on node**
string.

Explanation: An internal error occurred reading the security context data sent from the POE home node. POE terminates.

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

0031-769 **Invalid task environment data received.**

Explanation: An internal error occurred receiving the task specific environment data sent from the home node. Most likely this occurred as a result of an internal error in LoadLeveler defining the adapter information. POE terminates.

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

0031-770 **NULL pointer passed for the reg,**
errno: *number*

Explanation: Null pointer passed for the parameter while call registered CSS checkpoint and restart api function.

User response: Check the reg passed to the registered CSS checkpoint and restart api function.

0031-771 **Error allocating data while calling**
registered CSS, errno: *number*

Explanation: An error occurred allocating storage during calling registered CSS checkpoint and restart api function.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-772 **Invalid value for the handle, errno:**
number

Explanation: Incorrect handle passed for the parameter while calling unregistered checkpoint and restart api function.

User response: Check the handle passed to the unregistered checkpoint and restart api function.

0031-773 **The handle is not currently active,**
errno: *number*

Explanation: A handle, which is a parameter, is not currently active while calling unregistered CSS checkpointing callback api function.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-774 **Checkpoint of POE process** *process-ID*
has failed *errno*

Explanation: The **poeckpt** command was unsuccessful. The system call **checkpnt()** failed. The indicated *errno* value describes the reason for the error. An *errno* value of **3** may indicate that the CHECKPOINT

environment variable was not set to **yes** when POE was invoked.

User response: Check that the process ID is valid.

0031-775 Error changing owner of *string*, errno is *number*

Explanation: An internal error occurred changing the owner of the checkpoint file. The indicated ERRNO value describes the reason for the error.

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

0031-776 Restart of POE job from file *string* has failed, errno is *number*

Explanation: The **poerestart** command was unsuccessful. The system call **restart()** was failure. The indicated ERRNO value describes the reason for the error.

User response: Check that the program name is valid, and that it was previously checkpointed. If the errno indicated is ESTALE (errno 52), make sure the checkpoint file supplied as an argument to the **poerestart** command is from a checkpoint of the POE executable and not from one of the parallel tasks.

0031-777 Unexpected return code *number* from *checkpnt_register*, errno=*number*

Explanation: Internal error has occurred.

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

0031-778 *mp_main* function is not available for checkpointing, errno: *number*

Explanation: User program cannot call **mpc_set_ckpt_callbacks** because the **mp_main** function is not available.

User response: Use **mpcc_r** to compile the user program.

0031-779 Can't call *mpc_set_ckpt_callbacks* or *mpc_unset_ckpt_callbacks*

Explanation: User program cannot call **mpc_set_ckpt_callbacks** or **mpc_unset_ckpt_callbacks** in checkpoint handler, resume handler, or restart handler because the **mp_ckpt_thread_handler** function is active.

User response: Check the user program.

0031-780 *poerestart: fork error* <*string*>

Explanation: The **poerestart** is unable to fork for **restart_wait** function.

User response: Probable system error.

0031-781 NULL pointer passed for the parameter, errno: *number*

Explanation: NULL pointer passed for the parameter while call checkpointing callback api function.

User response: Check the func passed to the checkpointing callback api function.

0031-782 Checkpointing is not enabled, errno: *number*

Explanation: Checkpointing of the program is not enabled, because the value of the **CHECKPOINT** environment variable was not set to **yes**.

User response: To enable checkpointing, set **CHECKPOINT** to **yes**.

0031-783 Error allocating data while calling *checkpoint callback api*, errno: *number*

Explanation: An error occurred allocating storage during calling checkpoint callback api function.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-784 Restart wait call failed: *rc=number*, *errno=number*

Explanation: An error occurred when the **restart** child process called the **restart_wait** system call.

User response: Probable system error.

0031-785 The host was not specified during execution of the *poerestart* command.

Explanation: The host that should be used for the restarted job was not specified. If the **-s** flag was not used and the **MP_LLFILE** environment variable was not set, the **MP_HOSTFILE** environment variable should be set, or a **host.list** file should exist in the directory from which the command was run, or the **MP_RMPOOL** environment variable should be set.

User response: Specify the host that should be used for the restarted job.

0031-786 **Invalid value for the handle, errno:**
number

Explanation: A negative number of handle passed for the parameter while calling unregistered checkpointing callback api function.

User response: Check the handle passed to the unregistered checkpointing callback api function.

0031-787 **The handle is not currently active,**
errno: *number*

Explanation: A handle, which is a parameter, is not currently active while calling unregistered checkpointing callback api function.

User response: Check the handle passed to the unregistered checkpointing callback api function.

0031-788 **pm_getcwd failed, rc=***number*

Explanation: The internal **pm_rst_getcwd** function failed. A return code of 1 implies either cannot open pipe to **ksh** or command failed. A return code or 2 means the working directory string is longer than **maxpath**. The system terminates.

User response: Probable PE error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-789 **Unable to read string for current**
directory

Explanation: The **poerestart** 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.

0031-790 **invalid envc received**

Explanation: The **restart_envc** received by the **pm** daemon is incorrect.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-791 **Unexpected message type from**
pm_SSM_read, expecting *string*,
received *string*

Explanation: Internal error has occurred.

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

0031-792 **Unexpected return code** *number* **from**
pm_SSM_read. errno=*number*

Explanation: Internal error has occurred.

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

0031-793 **sigaction(SIGINT) failed.**

Explanation: The return from **sigaction** for the indicated signal is negative.

User response: Probable system error.

0031-794 **sigaction(SIGQUIT) failed.**

Explanation: The return from **sigaction** for the indicated signal is negative.

User response: Probable system error.

0031-795 **sigaction(SIGTERM) failed.**

Explanation: The return from **sigaction** for the indicated signal is negative.

User response: Probable system error.

0031-796 **sigaction(SIGHUP) failed.**

Explanation: The return from **sigaction** for the indicated signal is negative.

User response: Probable system error.

0031-797 **sigaction(SIGXCPU) failed.**

Explanation: The return from **sigaction** for the indicated signal is negative.

User response: Probable system error.

0031-798 **The poeckpt command cannot be used**
to checkpoint a job being run under
string

Explanation: The **poeckpt** command cannot be used to checkpoint a parallel job being run under LoadLeveler.

User response: Verify that the parallel job does not run under LoadLeveler.

0031-799 **The checkpoint of a parallel POE job**
with pid *number* **failed.**

Explanation: The process id is not yet in checkpointable state.

User response: Check that the process id is in checkpointable state.

0031-800 **-procs** *string* ignored in remote child
Explanation: **-procs** interpreted only in parent code.
User response: None.

0031-801 **-hostfile** *string* ignored in remote child
Explanation: **-hostfile** interpreted only in parent code.
User response: None.

0031-802 **-newjob** *string* ignored in remote child
Explanation: **-newjob** interpreted only in parent code.
User response: None.

0031-803 **-pmdlog** *string* ignored in remote child
Explanation: **-pmdlog** interpreted only in parent code.
User response: None.

0031-804 **-pgmmodel** *string* ignored in remote child
Explanation: **-pgmmodel** interpreted only in parent code.
User response: None.

0031-805 **Invalid programming model specified:**
string
Explanation: **-pgmmodel** should be either SPMD or MPMD.
User response: Reenter **-pgmmodel** with either SPMD or MPMD.

0031-806 **Invalid retry count** *string*
Explanation: The retry count should be an integer.
User response: Reenter **-retry** followed by an integer.

0031-808 **Hostfile or pool must be used to request nodes.**
Explanation: When using LoadLeveler, the environment variable **MP_RMPOOL** or the command line option **-rmpool** must be used to specify the pool, because a host file did not exist.
User response: Ensure that the absence of a host file was intended, verify the command line or environment variable settings of **hostfile**, **resd**, and **rmpool**, and then retry. See *IBM Parallel Environment: Operation and Use, Volume 1* for more information.

0031-811 **System Checkpoint/Restart not supported**
Explanation: System Checkpoint/Restart is not supported by the MPI/MPCI libraries.
User response: Rerun with newer version of threaded MPI/MPCI libraries.

0031-812 **Parallel checkpoint callbacks registration failed**
Explanation: Registration of checkpoint callback functions failed. This is an internal error.
User response: Rerun program.

0031-816 **Invalid device type setting.**
Explanation: **-devtype** should be "kmux", "ib", or "hpce".
User response: Reenter **-devtype** with one of the valid values.

0031-817 **Invalid setting for MPI striping flags.**
Explanation: **-mpi_stripe_flags** should be "msg", "msg_failover", "failover", or "none".
User response: Reenter **-mpi_stripe_flags** with one of the valid values.

0031-818 **Error occurred resuming the interprocess communication during checkpointing**
Explanation: An error occurring calling the internal routine **mp_resume_handler()**, to resume the interprocess communication during checkpointing.
User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-819 **Could not open error file** *string*.
errno=number.
Explanation: An error occurred attempting to open the checkpoint error file.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-820 **Unexpected return code** *number* from **_mp_init_ckpt.**
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.

0031-821 Unexpected return code *number* from `_mp_set_ckpt_callbacks`.

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.

0031-822 Unexpected return code *number* from `_mp_unset_ckpt_callbacks`.

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.

0031-823 Error occurred checkpointing the interprocess communication

Explanation: An error occurring calling the internal routine `mp_ckpt_handler()`, to checkpoint the interprocess communication during checkpointing.

User response: Probable system error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

0031-824 Checkpointing failure returned from `checkpnt_commit`

Explanation: Internal error has occurred.

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

0031-825 Partial user-initiated checkpointing failed

Explanation: Internal error has occurred.

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

0031-826 Complete user-initiated checkpointing failed

Explanation: Internal error has occurred.

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

0031-827 The *string* error file is empty or does not exist

Explanation: The checkpoint error file is empty or does not exist.

User response: None.

0031-828 Unexpected environment variable *string* was set to *string*

Explanation: An unexpected environment variable was set during executing the `poerestart` command.

User response: Unset the unexpected environment variable.

0031-829 Unexpected `./host.list` file exists

Explanation: An unexpected `./host.list` file exists during executing the `poerestart` command.

User response: Remove the unexpected `./host.list` file.

0031-830 Invalid setting for LAPI striping flags.

Explanation: `-lapi_stripe_flags` should be `msg`, `msg_failover`, `failover`, or `none`.

User response: Reenter `-lapi_stripe_flags` with one of the valid values.

0031-831 LoadLeveler as configured requires an application to use the threaded MPI library.

Explanation: The application is built with the non-threaded MPI library.

User response: Rebuild the application using the threaded MPI library by using one of the threaded POE compiler scripts (`mpcc_r`, and so forth).

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.

0031-907 **Task on node *string* terminating due to pulse timeout**

Explanation: The 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 node *string*.**

Explanation: There was a failure in sending the acknowledgment message for the POE pulse function from POE to pmd for the indicated node.

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 node *string*.**

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.

Chapter 4. POE Error Report Log Entries

There are three **errpt** (AIX error log) entries that can be produced by PE:

PMD_0001_ER Could not authenticate user.

PMD_0002_ER Lost contact with user.

BADCODEPATH_DE PE subsystem entered a code path that is not valid.

In each case, these error log entries are terminating errors, which are accompanied by other PE error messages having an **0031** prefix. These messages provide more detail about the error, including an Explanation and User response.

Chapter 5. Message Passing Interface (MPI) messages

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

0032-069 Invalid info key.

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_INFO_KEY

0032-070 Invalid info value.

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_INFO_VALUE

0032-071 Info key not defined.

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_INFO_NOKEY

0032-072 Invalid info.

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_INFO

0032-073 Invalid file 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_FILE

0032-074 Collective arguments not identical or erroneous collective call order.

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_NOT_SAME

0032-075 Invalid access mode.

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_AMODE

0032-076 Unsupported data representation.

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_UNSUPPORTED_DATAREP

0032-077 Unsupported 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_UNSUPPORTED_OPERATION

0032-078 File does not exist.

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_NO_SUCH_FILE

0032-079 File exists.

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_FILE_EXISTS

0032-080 Invalid file name.

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_BAD_FILE

0032-081 Permission denied.

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_ACCESS

0032-082 Not enough space.

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_NO_SPACE

0032-083 Quota exceeded.

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_QUOTA

0032-084 Read-only file or file system.

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_READ_ONLY

0032-085 File currently in use.

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_FILE_IN_USE

0032-086 Data representation already defined.

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_DUP_DATAREP

0032-087 An error occurred in data conversion.

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_CONVERSION

0032-088 Known I/O 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_IO

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 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 incorrect.

User response: Make sure that the value of stride (ranges[?][2] in C, or ranges(3,?) in FORTRAN) is nonzero.

Error Class: MPI_ERR_ARG

0032-108 Invalid use of NULL request in *string*, task *number*

Explanation: A NULL request is not allowed as input to the function.

User response: Make sure that the request is valid.

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 data type 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 not valid to attempt to free a predefined data type.

User response: Call MPI_Type_free for user-defined data types only.

Error Class: MPI_ERR_TYPE

0032-111 Invalid blocklength (*number*) in type constructor *string*, task *number*

Explanation: The value specified for **blocklength** is incorrect.

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 nonblocking 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 MPI internal error: *string* in *string*, task *number*

Explanation: An internal software error occurred within MPI, 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 incorrect to try to commit a **datatype** that is already committed.

User response: Avoid calling MPI_Type_commit more than once per user defined data type.

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 incorrect.

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 data type only when it is known that it will not be needed again.

Error Class: MPI_ERR_TYPE

0032-124 Invalid 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, pair-wise between tasks.

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_NOT_SAME

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_NOT_SAME

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_NOT_SAME

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 invalid 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 Invalid send buffer update in *string*,
task number

Explanation: The contents of a buffer posted by a nonblocking 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 data type.

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 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 error handler handle is valid and has not been freed by `MPI_ERRHANDLER_FREE`. A valid error handler handle is one that is predefined or one that was created by a call to create an error handler for the same object type (a file error handler cannot be used as the error handler for a communicator, for example).

Error Class: `MPI_ERR_ARG`

**0032-142 Invalid task count (*number*) in *string*,
task *number***

Explanation: An incorrect number of tasks was specified (either explicitly, or implicitly).

User response: Make sure that the number of tasks is nonnegative, 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 incorrect.

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`, and so forth) are nonnegative.

Error Class: `MPI_ERR_ARG`

**0032-146 Invalid neighbor rank (*number*) in *string*,
task *number***

Explanation: An incorrect 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 *n* nodes.

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 tasks.

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 data types were used by different tasks in the collective communication operation.

User response: Make sure that all tasks use the same data type.

Error Class: MPI_ERR_NOT_SAME

0032-154 **Not a persistent request (*number*), *string*, task number**

Explanation: An attempt was made to start a nonpersistent 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: Use MPI_Op_free to free only user-defined operations.

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 nonzero 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 nonzero 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 inter-communicator 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 data type specified is not allowed.

User response: Check the MPI documentation to determine which data types 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 nonnegative.

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 Communication subsystem error:
reason in function_name, task task_id

Explanation: If the reason string includes a second message ID then the source of the error is from one of the communication subsystems, such as LAPI or device driver. If the error has a separate message ID, then look up the proper response for that message in the appropriate message book.

If the reason string does not include a second message ID, then the error is from an internal (MPCI) component of the MPI library. These errors are explained with the **MPCI_MSG**: messages appearing immediately after **0032-171**. If any reason string displays without a message ID number and is listed as an **MPCI_MSG**:, contact IBM service.

User response: **Error Class:** MPI_ERR_INTERN

| **Note:** Message **0032-171** can have any one of these imbedded MPCl messages. The MPCl component of the MPI library issues certain messages that are informational in nature. These are not part of the MPI error messages, but the information that they provide can be helpful for users to manage their MPI programs.

| **MPCl_MSG: Memory is corrupted**

Explanation: Either the message header or the send/receive descriptor of a message is corrupted.

User response: Contact IBM service.

| **MPCl_MSG: Memory is exhausted**

| **Explanation:** **MP_BUFFER_MEM** can specify a pre-allocated memory pool and an upper bound of memory beyond this preallocation, which MPI will obtain with malloc if it is needed. This message is seen when a malloc for this extra memory fails.

| **User response:** Make sure that there is no excessive storage usage on the node during the execution of the run. Otherwise, contact IBM service.

| **MPCl_MSG: Incorrect argument.**

Explanation: Internal (communication subsystem) error.

User response: If the application program has called the MPCl functions **mpci_env_get** and **mpci_env_set**, modify program. Otherwise Contact IBM service.

| **MPCl_MSG: Unknown error.**

Explanation: Unknown communication subsystem error.

User response: Contact IBM service.

| **MPCl_MSG: Too many outstanding messages.**

Explanation: Too many messages have been sent without any receive posting.

User response: Modify application program to post receives correctly to free up system memory.

| **MPCl_MSG: MPCl Internal error.**

Explanation: Error occurs in the MPCl internal component of the MPI library.

User response: Contact IBM service.

| **MPCl_MSG: No receive posted for a ready send.**

| **Explanation:** Receive has not been posted for a ready mode send.

| **User response:** Modify application program.

| **MPCl_MSG: Cannot call MPI_Init after MPI_Finalize.**

| **Explanation:** Calling **MPI_Init** after calling **MPI_Finalize** is not allowed.

| **User response:** Modify application program.

| **MPCl_MSG: Cannot attach buffer now.**

Explanation: Application attempts to attach new buffer via **MPI_BUFFER_ATTACH** before detaching a previous buffer.

User response: Modify application program.

| **MPCl_MSG: MPI library has already been initialized.**

| **Explanation:** Application has already called **MPI_Init** once.

| **User response:** Modify application program.

| **MPCl_MSG: MPI library is not in initializing state.**

Explanation: Internal (Communication subsystem) error.

User response: If the application program has called the MPCl functions **mpci_env_get** and **mpci_env_set**, modify program. Otherwise contact IBM services.

| **MPCl_MSG: MPI library is not in connected state.**

Explanation: Communication subsystem has not established connection.

User response: Check switch and network connectivity.

| **MPCl_MSG: Insufficient buffer space.**

Explanation: Not enough buffer attached via **MPI_BUFFER_ATTACH**.

User response: Modify application program by adding more buffer space via **MPI_BUFFER_ATTACH**.

| **MPCl_MSG: Send/Receive Handle is already being waited for.**

Explanation: **MPI_Wait** has been called for a handle which already has another **MPI_Wait** call waiting for that request to complete.

User response: Modify application program.

| **MPCl_MSG: Service thread did not terminate.**

Explanation: **MPI_Finalize** was unable to terminate the thread that handles SIGIO interrupts and to restore the user's specified signal handler.

User response: None.

MPCI_MSG: System callback thread did not terminate.

Explanation: MPI_Finalize was unable to terminate the system callback thread. The most probable cause is that a user-written reduction function is still running when the MPI library is finalizing.

User response: None.

MPCI_MSG: MPCI shared object was compiled on

Explanation: Compilation time of the MPCI internal component.

User response: This is an informational message. It is activated when **MP_INFOLEVEL** is greater than or equal to 2.

MPCI_MSG: Due to memory limitation eager limit is reduced to

Explanation: Eager_limit value has been automatically reduced due to memory limitation.

User response: This is an information message. Program continues to execute with reduced eager limit. This can be avoided by increasing the **MP_BUFFER_MEM** size.

MPCI_MSG: Restart job after increasing MP_BUFFER_MEM to minimum value equals 'amount'

Explanation: Insufficient memory allocated for MPI library internal use.

User response: Increase **MP_BUFFER_MEM** to suggested value and restart the job.

MPCI_MSG: ATTENTION: Due to internal memory requirement, buffer_mem is changed to

Explanation: **MP_BUFFER_MEM** value has been automatically increased due to internal memory requirement.

User response: This is an informational message. Program continues to execute with the increased buffer size. This can be avoided by increasing the **MP_BUFFER_MEM** size.

MPCI_MSG: MPI internal call to LAPI resulted in error condition.

Explanation: A MPI internal call to the LAPI communication subsystem has returned an error.

User response: Contact IBM service.

MPCI_MSG: ATTENTION: MP_COPY_SEND_BUF_SIZE has been reduced to

Explanation: The **MP_COPY_SEND_BUF_SIZE** has been automatically adjusted.

User response: This is an informational message. Program continues to execute with the reduced size. This can be avoided by specifying a **MP_COPY_SEND_BUF_SIZE** value equals to or less than the value of **MP_EAGER_LIMIT**.

MPCI_MSG: Message is corrupted.

Explanation: Either the message header or the send/receive handle of a message is corrupted.

User response: Contact IBM service.

USER_ERROR: Incorrect version of LAPI library.

Explanation: LAPI library installed is not a required version by MPI.

User response: Install a required level of LAPI library.

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 nonnegative 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 task. 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 the 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

0032-182 **The value given for high disagrees with rank zero *string, task number***

Explanation: All members of the inter-communicator 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

0032-184 **MPI was not finalized in *string, task number***

Explanation: An MPI program exited without calling MPI_Finalize. The parallel job is terminated with an error exit code.

User response: Correct the program or determine if the program terminated abnormally, perhaps with a

library routine calling exit (0) after encountering an error condition.

Error Class: MPI_ERR_OTHER

0032-185 **Locally detected error occurred on another task in *string*, task *number***

Explanation: Another task detected an input argument error on a collective operation. This error is flagged only when special checking is active. Setting MP_EUIDEVELOP to **yes** turns this checking on for collective communication. This checking is always active for MPI-IO collective calls, so deadlock can be avoided with the default MPI_ERRORS_RETURN error handler.

When an **errors_return** error handler is in effect, this return code appears for tasks that did not detect a local error. These tasks will not print any messages. Tasks that detect local errors can print a message identifying the local error. The return code alerts the user that the collective operation has failed because of errors elsewhere.

User response: Correct the program, ensuring that all tasks have correct input. Focus on the tasks that indicate a local error.

Error Class: MPI_ERR_OTHER

0032-186 **Consistency error occurred on another task in *string*, task *number***

Explanation: In a collective routine, two or more tasks detected that they were provided with inconsistent arguments. MPI requires that all callers have matching arguments. This error is flagged only when consistency checking is active. Setting MP_EUIDEVELOP to **yes** turns this checking on for collective communication and collective I/O.

When an **error_return** error handler is in effect, this return code appears for tasks that did not detect the inconsistency. These tasks will not print any messages. Tasks that detect an inconsistency can print a message identifying the inconsistency. The return code alerts the user that the collective operation has failed because of errors detected elsewhere. This error message cannot identify which values are correct and which are not.

User response: Correct the program, ensuring that all tasks have correct and consistent arguments to collective calls.

Error Class: MPI_ERR_OTHER

0032-187 **Datatype size cannot be expressed as an integer or MPI_Aint in *string*, task *number***

Explanation: A call to create a user-defined data type would create a type with a size whose magnitude is too great to be expressed by an integer or MPI_AINT.

User response: Restructure the program to use data types of smaller magnitude.

Error Class: MPI_ERR_OTHER

0032-188 **Datatype stride cannot be expressed as an integer or MPI_Aint in *string*, task *number***

Explanation: A call to create a user-defined data type would create a type with a stride whose magnitude is too great to be expressed by an integer or MPI_AINT.

User response: Restructure the program to use data types of smaller magnitude.

Error Class: MPI_ERR_OTHER

0032-189 **Datatype extent cannot be expressed as an integer or MPI_Aint in *string*, task *number***

Explanation: A call to create a user-defined data type would create a type with an extent or true extent set by MPI_LB or MPI_UB whose magnitude is too great to be expressed by an integer or MPI_AINT.

User response: Restructure the program to use data types of smaller magnitude.

Error Class: MPI_ERR_OTHER

0032-190 **Datatype upper or lower bound cannot be expressed as an integer or MPI_Aint in *string*, task *number***

Explanation: A call to create a user-defined data type would create a type with an upper bound, lower bound or other displacement within the data type whose magnitude is too great to be expressed by an integer or MPI_AINT. The bound or displacement that overflowed could be based on either range of bytes touched or on MPI_LB and MPI_UB positions.

User response: Restructure the program to use data types of smaller magnitude.

Error Class: MPI_ERR_OTHER

0032-191 **Invalid pointer *value***

Explanation: A pointer with unexpected value has been detected. For example a NULL pointer is encountered when a non-NULL pointer is expected. .

User response: Examine and correct pointer value used in MPI function call.

Error Class: MPI_ERR_OTHER

0032-201 **Must use a Grequest handle with function *string*, task *number***

Explanation: The only request type valid with this function is one created by a call to `MPI_Grequest_start`.

User response: Correct the program so it does not call this function with any request type other than a generalized request.

Error Class: `MPI_ERR_REQUEST`

0032-202 **A GRequest query function returned error (*code*) in *string*, task *number***

Explanation: An application provided query function for a generalized request has returned an error code. This is not an MPI library code, so this documentation cannot provide information about it.

User response: Any failure analysis must focus on the application or its documentation.

Error Class: `MPI_ERR_OTHER`

0032-203 **A GRequest free function returned error (*code*) in *string*, task *number***

Explanation: An application provided free function for a generalized request has returned an error code. This is not an MPI library code, so this documentation cannot provide information about it.

User response: Any failure analysis must focus on the application or its documentation.

Error Class: `MPI_ERR_OTHER`

0032-204 **A GRequest cancel function returned error (*code*) in *string*, task *number***

Explanation: An application provided cancel function for a generalized request has returned an error code. This is not an MPI library code, so this documentation cannot provide information about it.

User response: Any failure analysis must focus on the application or its documentation.

Error Class: `MPI_ERR_OTHER`

0032-250 **Non-blocking collective (MPE_I) operations attempted in single threaded environment, in *string*, task *number*.**

Explanation: Nonblocking collective (MPE_I) operations can only be performed if the MPI environment is multithreaded.

User response: Make sure that the `MP_SINGLE_THREAD` environment variable is not set, or is set to `NO`.

Error Class: `MPI_ERR_OTHER`

0032-251 **MPI-IO operations attempted in single threaded environment, in *string*, task *number*.**

Explanation: MPI-IO operations can only be performed if the MPI environment is multithreaded.

User response: Make sure that the `MP_SINGLE_THREAD` environment variable is not set, or is set to `NO`.

Error Class: `MPI_ERR_OTHER`

0032-252 **Attention: There are more outstanding nonblocking collective communication calls than threads (*number*) to support them, which may cause a deadlock condition. In *string*, task *number*.**

Explanation: In the threads library, each nonblocking collective communication call is carried out on a separate thread. There is a limited number of threads to service these requests. Extra requests are queued, which may lead to a deadlock condition depending on the starting order of the nonblocking collective communication requests. This condition can occur only with nonblocking collective communication, an IBM extension to standard MPI.

User response: There are two possible user responses: If you only need a few outstanding collective communication operations, make sure that other nonblocking requests have been waited on to keep the number of outstanding requests smaller than the available threads. If you need many outstanding nonblocking requests, you need to manage your own pool of threads and call the blocking collective routines on those threads.

0032-253 **Conflicting collective operations on communicator in *string*, task *number***

Explanation: Any program that creates two or more concurrent collective operations on a single communicator is erroneous. This error is due to a race condition that occurs when two or more threads issue collective calls using the same communicator without enforcing an order. Programs that contain this race condition may sometimes complete normally, sometimes receive this message, and sometimes exhibit unexpected failures in collective communication. This error is only detected by calls that create a new communicator or file handle.

User response: Add thread synchronization to the program to ensure that the same communicator is not used concurrently by two different collective communications calls in the same process.

Error Class: `MPI_ERR_OTHER`

0032-254 **MP_SINGLE_THREAD is set in a multi-threaded program, detected in string, task number**

Explanation: The MP_SINGLE_THREAD environment variable is set, but multiple threads are executing.

User response: Unset the MP_SINGLE_THREAD environment variable and rerun the program.

Error Class: MPI_ERR_OTHER

0032-255 **It is not valid to decode a named predefined datatype. In string, task number.**

Explanation: The data type given is a named predefined data type which cannot be decoded.

User response: When attempting to decode a data type be sure that it is a derived data type.

Error Class: MPI_ERR_TYPE

0032-256 **Maximum array size is not big enough. In string, task number.**

Explanation: The maximum size of an array, passed by an argument, is not big enough for the amount of information that needs to be returned.

User response: Check the function call to make sure the correct arguments have been used and that a big enough storage area has been allocated.

Error Class: MPI_ERR_ARG

0032-257 **Key is not defined in info (number) in string, task number**

Explanation: The key passed to MPI_INFO_DELETE does not exist in the info which was passed in.

User response: Check the function call to make sure the correct arguments have been used.

Error Class: MPI_ERR_INFO_NOKEY

0032-258 **Insufficient memory to satisfy request (number) in string, task number**

Explanation: MPI_Alloc_mem() was unable to obtain the requested memory.

User response: Reduce the size of user storage required per task.

Error Class: MPI_ERR_NO_MEM

0032-259 **Invalid key type (number) in string, task number**

Explanation: The value used for **key** does not match the object type. Keys created for one MPI object type

cannot be used to set attributes for a different object type.

User response: Make sure that the key was created by a call to a create **keyval** function for the same object type (communicator, type, or window).

Error Class: MPI_ERR_ARG

0032-260 **Wrong error handler handle type (number) in string, task number**

Explanation: The value used for **errhandle** does not match the object type. Error handler handles created for one MPI object type cannot be used to set an error handler for a different object type.

User response: Make sure that the key was created by a call to a create **errhandle** function for the same object type (communicator, file, or window).

Error Class: MPI_ERR_ARG

0032-270 **Cannot pass a STATUS_IGNORE in string, task number**

Explanation: Routines that extract data from an MPI_Status cannot be passed either STATUS_IGNORE form.

User response: Provide a real status or delete the call from the user program.

Error Class: MPI_ERR_ARG

0032-280 **Invalid info key string, task number.**

Explanation: The info key specified is too long.

User response: Make sure that the info key length is less than MPI_MAX_INFO_KEY.

Error Class: MPI_ERR_INFO_KEY

0032-281 **Invalid info value string, task number.**

Explanation: The info value specified is too long.

User response: Make sure that the info value length is less than MPI_MAX_INFO_VAL.

Error Class: MPI_ERR_INFO_VALUE

0032-282 **Invalid info key number (number) in string, task number.**

Explanation: The info key number specified must be between 0 and $N-1$, where N is the number of keys currently defined in the info argument.

User response: Correct the info key number argument.

Error Class: MPI_ERR_ARG

**0032-283 Invalid info argument (*number*) in *string*,
task *number***

Explanation: The info handle provided does not represent a valid MPI_Info object.

User response: Make sure the info argument has been created and has not been freed yet.

Error Class: MPI_ERR_INFO

**0032-290 Improper error message change *string*,
task *number***

Explanation: Users cannot change the error messages for error codes and classes defined by the implementation.

User response: Correct the *errorcode* argument.

Error Class: MPI_ERR_OTHER

**0032-291 Error String too long *string*, task
*number***

Explanation: The size of the string argument is larger than the limit.

User response: Make sure the string argument has a length less than MPI_MAX_ERROR_STRING.

Error Class: MPI_ERR_OTHER

0032-292 Invalid error code *string*, task *number*

Explanation: The error code specified is not valid.

User response: Correct the *errorcode* argument.

Error Class: MPI_ERR_OTHER

**0032-300 Invalid file handle (*number*) in *string*,
task *number*.**

Explanation: The file handle specified is not associated with an open file.

User response: Make sure the file has not already been closed.

Error Class: MPI_ERR_FILE

0032-301 Pathname too long *string*, task *number*.

Explanation: The path name specified is too long.

User response: Shorten the path name.

Error Class: MPI_ERR_BAD_FILE

**0032-302 Invalid access mode (*number*) in *string*,
task *number*.**

Explanation: The amode argument specified is incorrect.

User response: Correct the amode argument.

Error Class: MPI_ERR_AMODE

0032-303 File does not exist *string*, task *number*.

Explanation: The name specified does not correspond to an existing file or directory.

User response: Correct the file name argument.

Error Class: MPI_ERR_NO_SUCH_FILE

**0032-304 Unsupported operation on sequential
access file *string*, task *number*.**

Explanation: The operation attempted is not supported on a file opened in MPI_MODE_SEQUENTIAL amode.

User response: Close the file and reopen it with the appropriate amode.

Error Class: MPI_ERR_UNSUPPORTED_OPERATION

**0032-305 Pending I/O operations when closing a
file *string*, task *number*.**

Explanation: The file is being closed while there are still pending I/O operations on it. MPI_FILE_CLOSE does not provide an implicit MPI_WAIT on uncompleted nonblocking file operations.

User response: Modify the program so that all I/O operations are complete prior to closing the file.

Error Class: MPI_ERR_OTHER

**0032-306 Unclosed files when finalizing *string*,
task *number*.**

Explanation: There are still open files when MPI_FINALIZE is called.

User response: Make sure that all files are closed prior to calling MPI_FINALIZE.

Error Class: MPI_ERR_OTHER

0032-307 Invalid environment *string*, task *number*

Explanation: You did not specify a documented MP_ environment variable.

User response: Contact IBM service.

Error Class: MPI_ERR_OTHER

**0032-308 Invalid order (*number*) in *string*, task
*number***

Explanation: The value of the order argument in the type constructor call must be either MPI_ORDER_FORTRAN or MPI_ORDER_C.

User response: Correct the value of the order argument.

Error Class: MPI_ERR_ARG

0032-309 Invalid array element (*number*) in *string*, *task number*.

Explanation: One element of the array has an incorrect value (either negative or zero).

User response: Correct the value of the array element.

Error Class: MPI_ERR_ARG

0032-310 Invalid element in *array_of_distribs* (*number*) in *string*, *task number*.

Explanation: One element of the *array_of_distribs* argument to MPI_TYPE_CREATE_DARRAY() has an incorrect value (not one of MPI_DISTRIBUTE_BLOCK, MPI_DISTRIBUTE_CYCLIC, MPI_DISTRIBUTE_NONE).

User response: Correct the value of the *array_of_distribs* element.

Error Class: MPI_ERR_ARG

0032-311 Invalid element in *array_of_dargs* (*number*) in *string* *task number*.

Explanation: One element of the *array_of_dargs* argument to MPI_TYPE_CREATE_DARRAY() has an incorrect value (either negative or zero, and different from MPI_DISTRIBUTE_DFLT_DARG).

User response: Correct the value of the *array_of_dargs* element.

Error Class: MPI_ERR_ARG

0032-312 Invalid group size (*number*) in *string*, *task number*.

Explanation: The value of the size argument must be positive.

User response: Correct the value of the size argument.

Error Class: MPI_ERR_ARG

0032-313 Invalid grid size (*number*) in *string*, *task number*.

Explanation: The Cartesian grid of processes defined by arguments *ndims* and *array_of_psize*s to MPI_TYPE_CREATE_DARRAY() has a size different from argument size.

User response: Correct either the value of the size argument or the values of the *array_of_psize*s elements.

Error Class: MPI_ERR_ARG

0032-314 Invalid *psize* element (*number*) in *string*, *task number*.

Explanation: One element of the *array_of_psize*s argument to MPI_TYPE_CREATE_DARRAY() must have a value of 1 since distribution MPI_DISTRIBUTE_NONE has been set in that dimension.

User response: Correct the value of the *array_of_psize*s element.

Error Class: MPI_ERR_ARG

0032-315 Invalid block distribution (*number*) in *string*, *task number*.

Explanation: The values of the three arguments *array_of_psize*s, *array_of_dargs*, and *array_of_gsize*s do not satisfy the condition: $array_of_array_of_psizes[i] * array_of_dargs[i] \geq array_of_gsize[i]$, whereas distribution MPI_DISTRIBUTE_BLOCK has been set in dimension *i*.

User response: Set appropriate values to *array_of_psize*s, *array_of_dargs*, and *array_of_gsize*s elements.

Error Class: MPI_ERR_ARG

0032-316 Invalid subarray size (*number*) in *string*, *task number*.

Explanation: One element of the *array_of_subsize*s argument to MPI_TYPE_CREATE_SUBARRAY() has a value greater than the element of *array_of_size*s in the same dimension.

User response: Correct the value of the *array_of_subsize*s element.

Error Class: MPI_ERR_ARG

0032-317 Invalid start element (*number*) in *string*, *task number*.

Explanation: One element of the *array_of_start*s argument to MPI_TYPE_CREATE_SUBARRAY() has a value which is not compatible with the values of the elements of *array_of_size*s and *array_of_subsize*s in the same dimension.

User response: Set appropriate values to *array_of_start*s, *array_of_size*s, and *array_of_subsize*s elements.

Error Class: MPI_ERR_ARG

0032-318 Internal error in cyclic distribution (*number*) in *string*, *task number*.

Explanation: An internal error occurred while processing a cyclic distribution.

User response: Please note the return code and contact IBM.

Error Class: MPI_ERR_OTHER

0032-319 Internal error in block distribution (*number*) in *string*, *task number*.

Explanation: An internal error occurred while processing a block distribution.

User response: Please note the return code and contact IBM.

Error Class: MPI_ERR_OTHER

0032-320 Invalid displacement (*number*) in *string*, *task number*.

Explanation: A negative displacement has been specified.

User response: Modify the value of the **disp** argument.

Error Class: MPI_ERR_ARG

0032-321 Permission denied *string*, *task number*.

Explanation: The user does not have the required access permissions on the file.

User response: Modify file access permissions.

Error Class: MPI_ERR_ACCESS

0032-322 File already exists *string*, *task number*.

Explanation: The file already exists, and MPI_MODE_CREATE and MPI_MODE_EXCL have been specified.

User response: Modify access mode or make sure file does not exist at open.

Error Class: MPI_ERR_FILE_EXISTS

0032-323 Not enough space in file system *string*, *task number*.

Explanation: The file system does not have the required space to complete the requested operation.

User response: Increase file system size.

Error Class: MPI_ERR_NO_SPACE

0032-324 File is a directory *string*, *task number*.

Explanation: The file specified is a directory.

User response: Modify file path name.

Error Class: MPI_ERR_BAD_FILE

0032-326 Read-only file system *string*, *task number*.

Explanation: The requested operation cannot be performed on the file specified, which resides in a read-only file system.

User response: Modify file path name or change file system attributes.

Error Class: MPI_ERR_READ_ONLY

0032-327 Pending I/O operations when setting a view *string*, *task number*.

Explanation: A view is being set while there are still pending I/O operations on the file.

User response: Modify the program so that all I/O operations are complete prior to setting the new view on the file.

Error Class: MPI_ERR_OTHER

0032-328 Invalid or unsupported data representation *string*, *task number*.

Explanation: An invalid or unsupported data representation was specified.

User response: Assign to **datarep** to either a predefined data representation or a user-defined data representation that has been previously registered.

Note: For IBM implementations of MPI, the *internal* data representation is interpreted as one which allows a file generated on one IBM platform to be read on another without discarding precision. The intent of the internal data representation on IBM platforms is essentially *external64*, but because the MPI standard does not currently define *external64*, you cannot be certain that IBM *internal* will exactly match *external64* when, or if, it is defined.

For applications that do not require file portability, use the *native* data representation because *internal* adds data conversion overhead for certain MPI data types. The data types that incur overhead depends on the particular platform's native data representations.

Error Class: MPI_ERR_UNSUPPORTED_DATAREP

0032-329 Pending I/O operations when setting file size *string*, *task number*.

Explanation: The file size is being set while there are still pending I/O operations on the file.

User response: Modify the program so that all I/O operations are complete prior to setting the file size.

Error Class: MPI_ERR_OTHER

0032-330 **Invalid offset** (*number*) in *string*, **task number**.

Explanation: A negative offset has been specified.

User response: Modify the value of the offset argument.

Error Class: MPI_ERR_ARG

0032-332 **File too big** *string*, **task number**.

Explanation: An attempt was made to write a file that exceeds the maximum file size.

User response: Modify your program so that the file does not exceed the maximum size.

Error Class: MPI_ERR_OTHER

0032-333 **Pending I/O operations when synchronizing a file** *string*, **task number**.

Explanation: A sync operation is being attempted while there are still pending I/O operations on the file.

User response: Modify the program so that all I/O operations are complete prior to synchronizing the file.

Error Class: MPI_ERR_OTHER

0032-334 **Inconsistent file inodes** *string*, **task number**.

Explanation: An open operation is being attempted and the file name corresponds to an inode that is not consistent with the inode associated with the file names provided by other processes.

User response: Modify the file names and make sure they are all associated with the same file inode.

Error Class: MPI_ERR_NOT_SAME

0032-335 **Inconsistent access modes** *string*, **task number**.

Explanation: An open operation is being attempted and the access mode is not consistent with the access modes provided by other processes.

User response: Modify the values of the access modes and make sure they are identical on all processes.

Error Class: MPI_ERR_NOT_SAME

0032-336 **Inconsistent file sizes** *string*, **task number**.

Explanation: The file size is being set and values for the new size are not identical on all participating processes.

User response: Modify the values of the new size and make sure they are identical on all processes.

Error Class: MPI_ERR_NOT_SAME

0032-338 **Inconsistent elementary datatypes** *string*, **task number**.

Explanation: The file view is being set and the elementary data types specified by the participating processes do not have the same extent.

User response: Modify the elementary data types and make sure they have the same extent on all processes.

Error Class: MPI_ERR_NOT_SAME

0032-339 **Invalid file system type** *string*, **task number**.

Explanation: The file being opened does not reside in a file system of a supported type.

User response: Make sure the file name refers to a file residing in a file system of a supported type.

Error Class: MPI_ERR_OTHER

0032-340 **Invalid file size** (*number*) in *string*, **task number**.

Explanation: The size of a file must be greater than or equal to zero.

User response: Make sure that the file size is nonnegative.

Error Class: MPI_ERR_ARG

0032-341 **Invalid whence** (*number*) in *string*, **task number**.

Explanation: The whence argument has an incorrect value.

User response: Make sure that the whence argument is equal to MPI_SEEK_CUR, MPI_SEEK_END, or MPI_SEEK_SET.

Error Class: MPI_ERR_ARG

0032-342 **Invalid file position** *string*, **task number**.

Explanation: A seek operation led to a negative position in the current file view.

User response: Modify the whence and offset arguments in order to ensure that the new position in the current file view is positive or null.

Error Class: MPI_ERR_ARG

0032-343 **Inconsistent offsets** *string*, **task number**.

Explanation: A seek operation on a shared file pointer is not using the same offset on all participating processes.

User response: Modify the values of offset and make

sure they are identical on all processes.

Error Class: MPI_ERR_NOT_SAME

0032-344 Inconsistent whences *string, task number*

Explanation: A seek operation on a shared file pointer is not using the same whence on all participating processes.

User response: Modify the values of whence and make sure they are identical on all processes.

Error Class: MPI_ERR_NOT_SAME

0032-345 Pending split collective operation *string, task number*

Explanation: A collective data access operation is attempted while a split collective operation is pending on the same handle.

User response: Make sure all collective data access operations are executed in the same order on all processes. If required, implement inter-thread synchronization to ensure the same order.

Error Class: MPI_ERR_OTHER

0032-346 No pending split collective operation *string, task number*

Explanation: The end phase of a split collective data access operation is being attempted while there is no pending split collective operation currently associated with the file handle.

User response: Make sure a begin phase has been issued on the file handle prior to the call to the end phase.

Error Class: MPI_ERR_OTHER

0032-347 Pending I/O operations when preallocating file blocks *string, task number*

Explanation: A preallocate operation is being attempted while there are still pending I/O operations on the file.

User response: The user should modify the program so that all I/O operations are complete prior to preallocating file blocks.

Error Class: MPI_ERR_OTHER

0032-348 Duplicated data representation *string, task number*

Explanation: The data representation is already registered.

User response: The user is attempting to register the

same data representation a second time. Make sure the name of the data representation is correct.

Error Class: MPI_ERR_DUP_DATAREP

0032-349 Data representation name too long *string, task number*

Explanation: The name specified for the data representation to be registered is too long.

User response: Shorten the name.

Error Class: MPI_ERR_ARG

0032-350 Invalid filetype *string, task number*

Explanation: The user is attempting to define a file view for which filetype is not derived from etype.

User response: Modify the filetype or the etype arguments in order to ensure that filetype is derived from etype.

Error Class: MPI_ERR_ARG

0032-351 Read conversion error (number) in *string, task number*

Explanation: The conversion attempted during a read operation was unsuccessful.

User response: The error number reported by this message is the conversion function return code. For the internal and external32 data representations, 999 indicates overflow. For user-provided data representations, the meaning of a reported error number is determined by the author of the conversion routine.

Error Class: MPI_ERR_CONVERSION

0032-352 Write conversion error (number) in *string, task number*

Explanation: The conversion attempted during a write operation was unsuccessful.

User response: The error number reported by this message is the conversion function return code. For the internal and external32 data representations, 999 indicates overflow. For user-provided data representations, the meaning of a reported error number is determined by the author of the conversion routine.

Error Class: MPI_ERR_CONVERSION

0032-353 Inconsistent flags *string, task number*

Explanation: A set_atomicity operation is not using the same flag on all participating processes.

User response: Modify the values of flag and make sure they are identical on all processes.

Error Class: MPI_ERR_NOT_SAME

0032-354 Conversion of MPI_BYTE items is invalid *string*, task *number*

Explanation: The only valid data representation for MPI_BYTE items is "native".

User response: Change the data representation to "native" or change the elementary data type.

Error Class: MPI_ERR_ARG

0032-390 Invalid status ignore value *string*, task *number*

Explanation: The wrong status ignore value was used.

User response: Check that MPI_STATUS_IGNORE is used for single status parameters, and MPI_STATUSES_IGNORE is used for parameters that are arrays.

Error Class: MPI_ERR_ARG

0032-391 MPI_COMM_SELF attribute delete function returned error (*code*) in *string*, task *number*

Explanation: COMM_SELF was not freed in the finalize call.

User response: Check the delete callback function for problems.

Error Class: MPI_ERR_OTHER

0032-392 Pack conversion error *string*, task *number*

Explanation: The conversion attempted during packing failed.

User response: The error number reported by this message is the conversion function return code. For the external32 data representation, 999 indicates overflow.

Error Class: MPI_ERR_CONVERSION

0032-393 Unpack conversion error *string*, task *number*

Explanation: The conversion attempted during unpacking failed.

User response: The error number reported by this message is the conversion function return code. For the external32 data representation, 999 indicates overflow.

Error Class: MPI_ERR_CONVERSION

0032-394 Data rep type error

Explanation: The data representation type is not valid.

User response: Check that the data representation requested was external32.

Error Class: MPI_ERR_OTHER

0032-400 Internal stat failed (*number*) in *string*, task *number*.

Explanation: An internal call to **stat()** was unsuccessful.

User response: Check error number and take appropriate action.

Error Class: MPI_ERR_IO

0032-401 Internal unlink failed (*number*) in *string*, task *number*.

Explanation: An internal call to **unlink()** was unsuccessful.

User response: Check error number and take appropriate action.

Error Class: MPI_ERR_IO

0032-402 Internal ftruncate failed (*number*) in *string*, task *number*.

Explanation: An internal call to **ftruncate()** was unsuccessful.

User response: Check error number and take appropriate action.

Error Class: MPI_ERR_IO

0032-403 Internal open failed (*number*) in *string*, task *number*.

Explanation: An internal call to **open()** was unsuccessful.

User response: Check error number and take appropriate action.

Error Class: MPI_ERR_IO

0032-404 Internal close failed (*number*) in *string*, task *number*.

Explanation: An internal call to **close()** was unsuccessful.

User response: Check error number and take appropriate action.

Error Class: MPI_ERR_IO

0032-405 **Internal fsync failed** (*number*) in *string*,
task number.

Explanation: An internal call to fsync() was unsuccessful.

User response: Check error number and take appropriate action.

Error Class: MPI_ERR_IO

0032-406 **Internal lseek failed** (*number*) in *string*,
task number

Explanation: An internal call to lseek() was unsuccessful.

User response: Check the error number and take appropriate action.

Error Class: MPI_ERR_IO

0032-407 **Internal read failed** (*number*) in *string*,
task number

Explanation: An internal call to read() was unsuccessful.

User response: Check the error number and take appropriate action.

Error Class: MPI_ERR_IO

0032-408 **Internal write failed** (*number*) in *string*,
task number

Explanation: An internal call to write() was unsuccessful.

User response: Check the error number and take appropriate action.

Error Class: MPI_ERR_IO

0032-409 **Internal fstat failed** (*number*) in *string*,
task number

Explanation: An internal call to fstat() was unsuccessful.

User response: Check the error number and take appropriate action.

Error Class: MPI_ERR_IO

0032-410 **Internal fstatvfs failed** (*number*) in
string, *task number*

Explanation: An internal call to fstatvfs() was unsuccessful.

User response: Check the error number and take appropriate action.

Error Class: MPI_ERR_IO

0032-411 **Internal gpfs_prealloc() failed** (*number*)
in *string*, *task number*

Explanation: An internal call to gpfs_prealloc() was unsuccessful.

User response: Check the error number and take appropriate action.

Error Class: MPI_ERR_IO

0032-412 **Internal fstatfs failed** (*number*) in *string*,
task number

Explanation: An internal call to fstatfs failed.

User response: Check error number and take appropriate action.

Error Class: MPI_ERR_IO

0032-425 **Invalid window handle** (*number*) in
string, *task number*

Explanation: The window handle specified is not associated with an existing window.

User response: Make sure that the window has been created by MPI_Win_create.

Error Class: MPI_ERR_WIN

0032-426 **Invalid window size** (*number*) in *string*,
task number

Explanation: The value specified for the size of the window buffer is less than zero.

User response: Make sure that the window buffer size is non-negative.

Error Class: MPI_ERR_SIZE

0032-427 **Invalid window displacement unit**
(*number*) in *string*, *task number*

Explanation: The value specified for the local window displacement unit is less than one.

User response: Make sure that the local displacement unit is positive.

Error Class: MPI_ERR_DISP

0032-428 **Can't create RMA window in single
threaded environment** in *string*, *task
number*

Explanation: MPI one-sided windows can be created only if the MPI environment is multithreaded.

User response: Make sure the MP_SINGLE_THREAD environment variable is not set or is set to **no**.

Error Class: MPI_ERR_OTHER

**0032-429 Invalid origin count (*number*) in *string*,
task *number***

Explanation: The value specified for the origin element count is less than zero.

User response: Make sure that the count is nonnegative.

Error Class: MPI_ERR_COUNT

**0032-430 Invalid origin datatype (*number*) in
string, task *number***

Explanation: The origin data type handle is not valid.

User response: Make sure that the handle is associated with either a predefined data type (except MPI_LB, MPI_UB, and MPI_PACKED) or an existing derived data type that has been committed via MPI_Type_commit.

Error Class: MPI_ERR_TYPE

**0032-431 Invalid target rank (*number*) in *string*,
task *number***

Explanation: The value specified for the target rank is out of range.

User response: Make sure that the target rank is within the range 0 to $N-1$, where N is the number of tasks in the communicator group associated with the window.

Error Class: MPI_ERR_RANK

**0032-432 Invalid target displacement (*number*) in
string, task *number***

Explanation: The value specified for the displacement in the target window buffer is less than zero.

User response: Make sure that the displacement is nonnegative.

Error Class: MPI_ERR_ARG

**0032-433 Invalid target count (*number*) in *string*,
task *number***

Explanation: The value specified for the target element count is less than zero.

User response: Make sure that the count is nonnegative.

Error Class: MPI_ERR_COUNT

**0032-434 Invalid target datatype (*number*) in
string, task *number***

Explanation: The target data type handle is not valid.

User response: Make sure that the handle is associated with either a predefined data type (except

MPI_LB, MPI_UB, and MPI_PACKED) or an existing derived data type that has been committed via MPI_Type_commit.

Error Class: MPI_ERR_TYPE

**0032-435 Origin buffer too small (*number*) in
string, task *number***

Explanation: The total amount of data requested for sending from an MPI_Get target is larger than the amount of data specified for receiving at the origin.

User response: Make sure the total number of bytes sent from the target is less than or equal to the number of bytes received by the origin.

Error Class: MPI_ERR_TRUNCATE

**0032-436 Target buffer too small (*number*) in
string, task *number***

Explanation: The total amount of data requested for sending from an MPI_Put or MPI_Accumulate origin is larger than the amount of data specified for receiving by the target.

User response: Make sure the total number of bytes sent from the origin is less than or equal to the number of bytes received by the target.

Error Class: MPI_ERR_TRUNCATE

**0032-437 Target buffer starts outside target
window (*number*) in *string*, task *number***

Explanation: The leftmost byte of the data requested to be sent or received by a target of an RMA communication lands before the window buffer start in memory.

User response: Make sure all the data is positioned after the window buffer start.

Error Class: MPI_ERR_TRUNCATE

**0032-438 Target buffer ends outside target
window (*number*) in *string*, task *number***

Explanation: The rightmost byte of the data requested to be sent or received by a target of an RMA communication lands beyond the window buffer end in memory.

User response: Make sure all the data is positioned before the window buffer end.

Error Class: MPI_ERR_TRUNCATE

**0032-439 Target outside access group (*number*)
in *string*, task *number***

Explanation: The target specified for an RMA communication call either is not a member of the group specified by a previous call to MPI_Win_start, or is not

locked by a previous call to MPI_Win_lock.

User response: Make sure that the target is in the origin's access group.

Error Class: MPI_ERR_RANK

0032-440 **Origin datatype inappropriate for MPI_ACCUMULATE (*number*) in *string*, *task number***

Explanation: The specified origin data type is neither a predefined data type nor a derived data type whose basic components are all of the same predefined data type.

User response: Make sure that the data type is built of a single predefined data type.

Error Class: MPI_ERR_TYPE

0032-441 **Target datatype inappropriate for MPI_ACCUMULATE (*number*) in *string*, *task number***

Explanation: The specified target data type is neither a predefined data type nor a derived data type whose basic components are all of the same predefined data type.

User response: Make sure that the data type is built of a single predefined data type.

Error Class: MPI_ERR_TYPE

0032-442 **Incompatible origin and target datatypes in *string*, *task number***

Explanation: The origin and target data types specified for MPI_Accumulate are built of different predefined data types.

User response: Make sure that the origin and target data types' basic types are the same.

Error Class: MPI_ERR_TYPE

0032-443 **Invalid accumulate operation (*number*) in *string*, *task number***

Explanation: The value of the combine operation handle specified for MPI_Accumulate is not valid.

User response: Make sure that the operation handle is predefined.

Error Class: MPI_ERR_OP

0032-444 **Group is not a subset of window group (*number*) in *string*, *task number***

Explanation: The task group whose handle is passed to MPI_WIN_START or MPI_WIN_POST is not a subgroup of the task group associated with the RMA window.

User response: Make sure that all of the process ranks in the specified group are also in the window group.

Error Class: MPI_ERR_GROUP

0032-445 **Invalid synchronization assertion (*number*) in *string*, *task number***

Explanation: The assertion value specified for an RMA synchronization call is not valid.

User response: Make sure the assertion value is either zero or an OR-sum of the assertion values valid for this synchronization call.

Error Class: MPI_ERR_ASSERT

0032-446 **Invalid lock type (*number*) in *string*, *task number***

Explanation: The RMA lock type value specified for MPI_Win_lock is not valid.

User response: Make sure the lock type value is either MPI_LOCK_EXCLUSIVE or MPI_LOCK_SHARED.

Error Class: MPI_ERR_LOCKTYPE

0032-447 **Origin holds no lock on the target (*number*) in *string*, *task number***

Explanation: The target whose rank value has been specified for MPI_Win_unlock had not been previously locked by the origin task through an MPI_Win_lock call.

User response: Make sure the target has been locked by the origin task.

Error Class: MPI_ERR_RANK

0032-448 **RMA communication call outside access epoch in *string*, *task number***

Explanation: An RMA communication call is attempted at a point when no access epoch is in effect.

User response: Make sure the call is preceded by an RMA synchronization call starting an access epoch (either MPI_Win_fence, MPI_Win_start, or MPI_Win_lock).

Error Class: MPI_ERR_RMA_CONFLICT

0032-449 **Access epoch already in effect in *string*, *task number***

Explanation: An access epoch start at the origin task is attempted while another access epoch previously started at the same origin task (by MPI_Win_start, MPI_Win_lock, or MPI_Win_fence, followed by an RMA communication call) is still in effect.

User response: Make sure the previously started

access epoch is terminated by the appropriate synchronization call (MPI_Win_complete, MPI_Win_unlock, or another MPI_Win_fence, respectively) before starting the new access epoch.

Error Class: MPI_ERR_RMA_SYNC

0032-450 Exposure epoch already in effect in *string, task number*

Explanation: An exposure epoch start at the target task is attempted while another exposure epoch previously started at the same target task by MPI_Win_post or MPI_Win_fence, followed by a target processing of RMA communications, is still in effect.

User response: Make sure the previously started exposure epoch is terminated by, respectively, MPI_Win_wait (or MPI_Win_test returning TRUE), or another MPI_Win_fence, before starting the new exposure epoch.

Error Class: MPI_ERR_RMA_SYNC

0032-451 No access epoch to terminate in *string, task number*

Explanation: An MPI_Win_complete or MPI_Win_unlock called at a point where no access epoch started by, respectively, MPI_Win_start or MPI_Win_lock, is in effect.

User response: Make sure the call is preceded by the appropriate call starting an access epoch.

Error Class: MPI_ERR_RMA_SYNC

0032-452 No exposure epoch to terminate in *string, task number*

Explanation: An MPI_Win_wait or MPI_Win_test called at a point where no exposure epoch started by MPI_Win_post is in effect.

User response: Make sure the call is preceded by an MPI_Win_post call starting an exposure epoch.

Error Class: MPI_ERR_RMA_SYNC

0032-453 Unsolicited access of local window while exposed in *string, task number*

Explanation: The local target window has been accessed by an origin task that is not a member of the exposure group, during the epoch being terminated by MPI_Win_wait or MPI_Win_test on the target.

User response: Make sure RMA accesses of the target window throughout the exposure epoch are made only by the members of the group specified in the MPI_Win_post call starting the exposure epoch.

Error Class: MPI_ERR_RMA_CONFLICT

0032-454 Unsolicited access of target window while locked (*number*) in *string, task number*

Explanation: The locked target window has been accessed by an origin task that does not hold an RMA lock on that target, during the lock period being terminated by MPI_Win_unlock on the lock origin.

User response: Make sure RMA accesses of the target window throughout the lock period are made only by the origin tasks who have secured an RMA lock on the target via a call to MPI_Win_unlock.

Error Class: MPI_ERR_RMA_CONFLICT

0032-455 Can't lock an exposed window at the target (*number*) in *string, task number*

Explanation: An exposure epoch (started either by MPI_Win_fence followed by the target's RMA communication processing or by MPI_Win_post) is in effect on the target the origin task attempts to lock via MPI_Win_lock.

User response: Make sure the target window is not exposed to RMA accesses at the time of the lock attempt.

Error Class: MPI_ERR_RMA_SYNC

0032-456 Can't start exposure epoch on a locked window in *string, task number*

Explanation: An attempt is made to start an exposure epoch (via either MPI_Win_post or MPI_Win_fence) while at least one RMA lock is held on the target window.

User response: Make sure all of the RMA locks on the target window are released by the responsible origin tasks via MPI_Win_unlock prior to starting an exposure epoch at the target.

Error Class: MPI_ERR_RMA_SYNC

0032-457 Pending origin activity when freeing a window in *string, task number*

Explanation: An access epoch previously started at the task has not been terminated by the MPI_Win_free time.

User response: Make sure the access epoch has been terminated by an appropriate synchronization call.

Error Class: MPI_ERR_RMA_SYNC

0032-458 Pending target activity when freeing a window in *string, task number*

Explanation: An exposure epoch or lock period previously started at the task has not been terminated by the MPI_Win_free time.

User response: Make sure the exposure epoch has been terminated by an appropriate synchronization call, and all RMA locks held on the target are released by the lock origins via MPI_Win_unlock.

Error Class: MPI_ERR_RMA_SYNC

0032-459 RMA communication call in progress in *string*, *task number*

Explanation: An RMA communication call is being executed by another thread at the task concurrently with an RMA synchronization call.

User response: Make sure no RMA communication calls are being executed by any other thread at the task.

Error Class: MPI_ERR_RMA_OTHER

0032-460 RMA synchronization call in progress in *string*, *task number*

Explanation: An RMA synchronization call is being executed by another thread at the task concurrently with either an RMA synchronization call or an RMA communication call

User response: Make sure no RMA synchronization calls are being executed by any other thread at the task.

Error Class: MPI_ERR_RMA_OTHER

0032-461 Invalid typeclass in *string*, *task number*

Explanation: The type class specified is not valid. The valid type classes are: MPI_TYPECLASS_COMPLEX, MPI_TYPECLASS_INTEGER, and MPI_TYPECLASS_REAL.

User response: Correct the *typeclass* parameter.

Error Class: MPI_ERR_TYPE

0032-462 The typeclass has no MPI_Datatype of size (*size*) in *string*, *task number*

Explanation: There is no MPI_Datatype of the specified byte size in the type class.

User response: MPI provides data types which match the FORTRAN language types. The size parameter must correspond to the number of bytes in a FORTRAN data type within the type class.

Error Class: MPI_ERR_TYPE

0032-463 The system does not support the floating point precision (*precision*) in *string*, *task number*

Explanation: The function returns an MPI_Datatype that will support the requested decimal precision. If the upper limit supported by the FORTRAN compiler is

exceeded, this error is reported.

User response: MPI provides data types that match the FORTRAN language types. Use a precision no higher than is supported by the compiler.

Error Class: MPI_ERR_PARM

0032-464 The system does not support the floating point range (*exponent*) in *string*, *task number*

Explanation: The function returns an MPI_Datatype that will support the requested decimal exponent. If the upper limit supported by the FORTRAN compiler is exceeded, this error is reported.

User response: MPI provides data types that match the FORTRAN language types. Use an exponent no higher than is supported by the compiler.

Error Class: MPI_ERR_PARM

0032-465 Too many MPI_UNDEFINED arguments in *string*, *task number*

Explanation: At least one of the arguments must provide selection information. The other can be MPI_UNDEFINED.

User response: Use at least one meaningful selector.

Error Class: MPI_ERR_TYPE

0032-466 Cannot free an F90 type in *string*, *task number*

Explanation: The MPI_CREATE_F90_xxx routines create data types that are already committed and may not be freed.

User response: Call this routine only for user constructed data types.

Error Class: MPI_ERR_TYPE

0032-467 Call is from code not using the Fortran MPI module in *string*, *task number*

Explanation: The routine MPI_SIZEOF is supported only by FORTRAN code with a USE MPI statement. It is not supported for C code or for FORTRAN code that includes **mpif.h**.

User response: If the functionality is required, the code must be compiled as F90 code with a USE MPI statement.

Error Class: MPI_ERR_OTHER

0032-468 **User defined error raised (*code*) in *string, task number***

Explanation: One of the MPI_xxx_CALL_ERRORHANDLER subroutines has been called with a user-defined error code.

User response: The error is application-defined. Refer to any available application documentation.

Error Class: MPI_ERR_OTHER

0032-469 **Invalid errorclass (*class*) in *string, task number***

Explanation: Only a valid error class can be used with this subroutine.

Provide either a predefined error class or a previously-defined user error class.

Error Class: MPI_ERR_OTHER

0032-470 **Improper use of MPI_IN_PLACE in *string, task number***

Explanation: MPI_IN_PLACE is only permitted in certain contexts. It has been used as an argument where it is not permitted.

User response: Refer to the man page for information about the use of MPI_IN_PLACE in this subroutine.

Error Class: MPI_ERR_ARG

0032-480 **Cross memory attachment kernel extension not available in *string task number***

Explanation: The cross memory attachment kernel extension can not be found or loaded. The attempt to enable MPI shared memory collective communication optimization failed.

User response: The cross memory attachment kernel extension is part of **rsct.lapi** fileset. Make sure it is installed. Check config method to ensure that the kernel extension will be loaded and correctly configured. If MP_SHARED_MEMORY is set to **yes**, it can be unset as a work around until the problem is corrected.

Error Class: MPI_ERR_OTHER

0032-481 **No shared memory for MPI shared memory collective communication optimization in *string task number*.**

Explanation: No available segment for MPI shared memory collective communication optimization or failure to attach to shared memory region.

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

Error Class: MPI_ERR_OTHER

0032-485 **Mismatching blocking and non-blocking collectives in *string, task number***

Explanation: The use of MPI shared memory collective communication optimization does not allow blocking collectives to be used in conjunction with nonblocking collective (MPE) routines.

User response: Refer to man page for information about the use of MP_SHARED_MEMORY environment variable and nonblocking collective routines.

Error Class: MPI_ERR_OTHER

Chapter 6. PE Benchmark messages

2554-002 **internal error from** *file:line-number*

Explanation: An internal error was found at the specified line number.

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

2554-003 **syntax error, near** *location*

Explanation: A syntax error was found near the location of the command.

User response: Correct the input command and retry.

2554-004 **duplicate keyword** *keyword found*

Explanation: The command keyword was repeated more than once.

User response: Correct the error and retry.

2554-005 **connect command has both all and task/group qualifier**

Explanation: Both the *all* and *task* group qualifiers are present with the **connect** command.

User response: Remove either the *all* or the *task* qualifier.

2554-006 **The task does not exist, is in an inappropriate state, or does not contain the data requested.**

Explanation: There was an attempt to retrieve data, such as a file ID, on a task that either does not exist or does not have the data requested. Also, the task could be in a state that does not allow the specified action, such as a disconnected task trying to be destroyed. You can destroy the target if it is disconnected, but you cannot specify individual tasks.

User response: Try a different task, different data, or both.

2554-007 **group name** *group-name* **is not a defined group**

Explanation: The specified group name is not defined.

User response: Use **show groups** to find all of the defined groups.

2554-008 **group name** *group-name* **is empty**

Explanation: The specified group name is empty.

User response: Enter some tasks into the specified group.

2554-009 **cannot find the default group or the default group is empty**

Explanation: The default group could not be found, or the default group is empty.

User response: If the application is not connected, connect to it. Run the **show group** command to see the tasks.

2554-010 **You need to load or connect to a program before running this command**

Explanation: The session is not connected to any application.

User response: Correct the error and retry.

2554-011 **AisStatus failure code** *code*

Explanation: The dynamic probe class library (DPCL) returned an AisStatus error code.

User response: For information about AisStatus error codes, see the *DPCL Class Reference* at: <http://dpcl.sourceforge.net>

2554-012 **Cannot modify predefined group name** *group-name*

Explanation: The group name is a predefined name. Tasks cannot be added or removed.

User response: Use the **connect** or **disconnect** command to add or remove tasks in the connected group.

2554-013 **The target application has completed or has been killed on its own.**

Explanation: The target application has either completed or has been stopped using **<Ctrl-C>**. Also, the target application may have been destroyed in some other manner, external to the tool.

User response: You must load or connect to a new target application before doing any more work.

2554-014 **The command failed to allocate enough memory for its use.**

Explanation: The current command failed to allocate memory.

User response: Check the system memory usage and page space.

2554-015 **Multiple programs detected in the command. Subgroup the application into multiple homogeneous programs and rerun the command on each group.**

Explanation: An attempt was made to run the command in an unsupported heterogeneous environment.

User response: Use the **group** command to partition the images and rerun the command on each partition.

2554-016 **Input line is longer than the 1000 byte limit**

Explanation: The input string exceeds the 1000 byte restriction.

User response: Check the input line against the limit. For input strings that exceed the limit, use file I/O.

2554-017 **Program exit with the messages:**
diagnostic-messages.

Explanation: Cannot continue execution because DPCL returned an unrecoverable AisStatus error.

User response: For information about AisStatus error codes, see the *DPCL Class Reference* at: <http://dpcl.sourceforge.net>.

2554-018 **Some *list of tasks* are not connected.**

Explanation: Cannot continue execution because some tasks are not connected.

User response: Connect the listed tasks.

2554-021 **session is already connected to an application**

Explanation: The session is already connected to an application.

User response: Correct the error and retry.

2554-022 **cannot disconnect task *number***

Explanation: The task cannot be disconnected.

User response: Check the task number; the task must be connected or suspended.

2554-023 **pid *pid* specified is not valid**

Explanation: The process ID is not valid.

User response: Double check the process ID.

2554-024 **All tasks in this command are already connected**

Explanation: All tasks in the **connect** command are already connected, or there was an attempt to connect an empty group.

User response: Correct the error and retry.

2554-025 **pid *pid* specified is not a valid poe pid**

Explanation: The process ID is not a valid POE process ID.

User response: Double check the process ID.

2554-026 **cannot find help information for *string***

Explanation: There is no help information available for the specified string.

User response: Correct the error and retry.

2554-031 **cannot suspend *task-number***

Explanation: The specified task cannot be suspended.

User response: Check the task number; the task must be connected or loaded.

2554-033 **cannot resume *task-number***

Explanation: The specified task cannot be resumed.

User response: Check the task number; the task must be suspended.

2554-036 **Target application not connected.**

Explanation: There is no target application to destroy.

User response: Connect to a target application.

2554-038 **The target application was not loaded.**

Explanation: The target application was connected to, not created.

User response: Do not try the **start** command on this target application.

2554-041 **The stdin command input is not valid.**

Explanation: The text part of the **stdin** command is not valid.

User response: Check the input text; it must be a quoted string.

2554-042 The application loaded cannot take stdin as input

Explanation: The application that is loaded reads the STDIN from a file.

User response: If the application needs to read the input from user input, remove the **stdin** clause from the **load** command.

2554-043 The user closed STDIN already

Explanation: The user has closed STDIN.

User response: The user cannot close STDIN if more input is expected.

2554-051 No file_spec was provided.

Explanation: No **file_spec** was specified for a command that requires it.

User response: Type **file regexp**, where *regexp* is a regular expression such as: *;.

2554-052 session loaded with tool-name already

Explanation: The session loaded a tool.

User response: Use a separate session.

2554-053 tool name string is not a valid tool name

Explanation: The string specified is not a valid tool name.

User response: Use **show tools** to find all the defined tools.

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

2554-054 Tool tool-name failed to load

Explanation: The tool specified in the *tool-name* field did not load.

User response: Report the failure to the owner of the tool.

2554-055 Tool tool-name failed to initialize.

Explanation: The tool specified in the *tool-name* field did not initialize properly.

User response: Report the failure to the owner of the tool.

2554-060 The file id string provided is invalid.

Explanation: The file ID specified does not exist.

User response: Enter a different file ID. Use the **file** command to find a list of valid file ID.

2554-061 The function id string provided is invalid.

Explanation: The function ID specified does not exist.

User response: Enter a different function ID. Use the **function** command to find a list of valid function ids.

2554-062 End of File

Explanation: The end of the file was reached.

User response: State an earlier line.

2554-063 file string was not found.

Explanation: The file specified was not found.

User response: State a different file name.

2554-064 Function string was not found.

Explanation: The function specified was not found.

User response: State a different function name.

2554-065 The first line specified is invalid.

Explanation: The file does not have this many lines.

User response: Enter a smaller line number. The number must be positive, that is, greater than 0.

2554-066 The last line specified is invalid.

Explanation: The file does not have this many lines.

User response: Enter a smaller line number. The number must be positive, that is, greater than 0, and must be greater than or equal to the start line.

2554-067 No path was set.

Explanation: The path was not yet set. The default path is the current directory.

User response: Issue a **set sourcepath** command.

2554-068 no previous file set for this command

Explanation: There is no previous file set for this command.

User response: Use the **list file** command before the **list next** call.

2554-069 Mixed function and block cluster in the same command

Explanation: Functions and blocks cannot be used in the same command.

User response: Separate the command into two, one for functions, and the other for blocks.

2554-070 The *block-id* provided is invalid.

Explanation: The block id provided doesn't exist

User response: Enter a different block id. For a list of valid block id's, use the block command.

2554-071 Same *blockid* applies to multiple files.

Explanation: The same blockid cannot be applied to multiple files.

User response: Use multiple add commands.

2554-076 File *file-name* failed to open

Explanation: The file specified cannot be opened.

User response: Check to see if the user has permission to open the file to write.

2554-077 File *file-name* failed to write

Explanation: The file specified cannot be written to.

User response: Check if the file system has sufficient disk space to write.

2554-080 *poeargs* was specified but not *poe*.

Explanation: The user tried to specify the **poeargs** argument for a job that is not a POE job.

User response: If the job is supposed to be a POE job, type **poe** on the line; if not, do not use **poeargs**.

2554-081 load command needs an *exec* clause or *mpmcmd* clause to specify program to load.

Explanation: There is no program specified to attempt to load.

User response: Try **load** again; this time with an **exec** clause or **mpmcmd** clause.

2554-082 load failed.

Explanation: PE Benchmarker was unable to load the program specified.

User response: Make sure the correct path was specified, that the program is the correct one, and if it is a POE program, that either environment variables are set or you specify **poeargs**.

2554-083 load command cannot have both *exec* clause and *mpmcmd* clause.

Explanation: You cannot specify both the **exec** clause and the **mpmcmd** clause with the **load** command.

User response: Try **load** again; this time with only an **exec** clause or an **mpmcmd** clause.

2554-084 *mpmcmd* clause also requires *poe* keyword.

Explanation: The **load mpmcmd** command requires the **poe** keyword.

User response: Try **load** again; this time with the **poe** keyword.

2554-085 different version between tool and application.

Explanation: The tool and target application do not have the same version.

User response: Recompile the application.

2554-086 *path-name* is not a full path.

Explanation: The specified path is not a full path.

User response: Use the full path name.

2554-087 Target was linked with *-pg* or contains disallowed function '*monstartup*'.

Explanation: The performance collection tool's session manager does not allow targets that have **monstartup** system calls.

User response: Make sure the program does not contain an explicit reference to **monstartup** and was not linked with the **-p** flag or the **-pg** flag.

2554-088 *application-name* is a *poe* application. Type '*load poe exec*' in command line, or select '*SPMD parallel*' in GUI.

Explanation: The 'load exec' command was issued with a poe application.

User response: Re-issue the command using 'load poe exec' or select the 'SPMD parallel' option in the "Load Application Window" in the GUI version.

2554-093 Cannot search or write to the path *path-name* in *task(s)* *task-list*

Explanation: Cannot search or write to the path specified in the listed task(s).

User response: Change to a different path name.

2554-094 Path *path-name* does not exist in *task-list*

Explanation: Cannot create the path specified in the listed task(s).

User response: Change to a valid path name

2554-095 Path *path-name* is invalid in task(s) *task-list*

Explanation: The path specified failed in the listed task(s).

User response: Change to a different path name.

2554-100 The maximum number of probes per process has been reached.

Explanation: Each probe uses a small amount of memory in the first 32m of the instrumented process's text segment. There is no more memory available to add more probes.

User response: In future runs, add less probes per process.

2554-101 The maximum number of probes per daemon has been reached.

Explanation: Each probe uses a small amount of memory in a shared memory segment shared by the dpcl daemon and the instrumented process. The probes have used all of this memory.

User response: In future runs, add less probes per node.

2554-201 Path name not set.

Explanation: The path name is not set yet.

User response: Set the path name.

2554-202 Excessive probe data size: *number*.

Explanation: The size of the probe data memory is too large to allocate.

User response: Try using a smaller amount.

2554-203 Error has occurred while updating MPI event masks.

Explanation: One of the probe expressions that was executing failed.

User response: Note the scenario that causes the error message to occur, then report the problem to IBM support using the usual problem reporting procedures.

2554-204 Error has occurred while installing and activating probes.

Explanation: One or more of the probe installations or activations failed.

User response: Note the scenario that causes the error message to occur, then report the problem to IBM support using the usual problem reporting procedures

2554-205 The probe id: *number* is out of range.

Explanation: The probe ID is either less than 0 or is greater than the number of probes.

User response: List the probes to see how many there are and choose a valid ID.

2554-206 The task id: *number* has previous errors.

Explanation: The task ID has had an **AisStatus** error on a previous add.

User response: Use a different task or restart the tool.

2554-207 Invalid probe path: *string*.

Explanation: The path assigned using the **trace set path** or **profile set path** command is incorrect for a given task.

User response: Make sure you have set an output directory using the **trace set path** or **profile set path** command. If you have, make sure the specified directory exists.

2554-208 Multiple programs detected in the command. Subgroup the application into multiple homogeneous programs and rerun the command on each group.

Explanation: An attempt was made to run the command in an unsupported heterogeneous environment.

User response: Use the **group** command to partition the images and rerun the command on each partition.

2554-221 Invalid keyword *string* found in trace help command.

Explanation: Incorrect help keyword.

User response: Check the input text.

2554-231 event *string* is unknown to the command.

Explanation: The event name specified is unknown to this command. No events are set.

User response: Provide a valid event name.

2554-232 **bufsize specified size K is outside the valid range minimum-size K — maximum-size K.**

Explanation: The size specified is incorrect.

User response: Provide a valid size.

2554-233 **logsize specified size M is outside the valid range minimum-size M — maximum-size M.**

Explanation: The size specified is incorrect.

User response: Provide a valid size.

2554-234 **Path string is invalid.**

Explanation: The path specified is incorrect.

User response: Provide a valid path.

2554-241 **No functions were found to meet any of the expressions provided.**

Explanation: Unlike specific function IDs or ranges, an expression may match nothing and will not produce an error in the internal functions. For the adding of probes and markers, this is incorrect. Therefore, if not even one function from any function expression provided produces a match, and a valid function ID is provided, then the **add** command itself will produce this generic message.

User response: Provide a valid file ID and expression and a valid function ID and expression. Use the **file**, **function**, and **point** commands to find out what is and is not valid.

2554-242 **Invalid mpiname string found in the command**

Explanation: The list of MPI names is not valid.

User response: Run the **trace show probtotypes** command to see the list of valid MPI names.

2554-243 **Invalid mpiid string found in the command**

Explanation: The list of MPI IDs is not valid.

User response: Run the **trace show probtotypes** command to see the list of valid MPI IDs.

2554-244 **Fail to add because some of the tasks have already been probed.**

Explanation: Some of the tasks have point probe added. Probes cannot be added in global fashion.

User response: Remove the previous added probes.

2554-245 **Fail to add because some of the tasks have all functions probed.**

Explanation: Some of the tasks have all function probe added. Probes cannot be added to the subset of functions.

User response: Remove the previous added probes in those tasks.

2554-251 **More than one instrumentation point can be derived from this command**

Explanation: Only one instrumentation point can occur in one **add marker** command.

User response: Check the input text and remove the extra files or functions, especially if a regular expression is involved.

2554-252 **no instrumentation point can be derived from this command**

Explanation: Only one instrumentation point can occur in one **add marker** command.

User response: Check the input text, or use the **point** command to find all of the available points.

2554-253 **no matching marker name string found from previous commands**

Explanation: The marker name must be paired with the previous begin marker.

User response: Issue **trace show markers** to see all of the previously-defined markers.

2554-254 **no marker name found in the command**

Explanation: The marker name is missing for the begin marker and the end marker.

User response: Add the marker name.

2554-255 **different tasks between 'beginmarker' and 'endmarker'**

Explanation: Tasks are mismatched for the begin marker and the end marker.

User response: Match the tasks.

2554-256 **duplicate name marker-name found in marker id marker-ID.**

Explanation: A duplicate name was found in the previously-defined marker.

User response: Change the name.

2554-257 Invalid marker name found

Explanation: The marker name contains unprintable characters.

User response: Change the name.

2554-261 Marker id *marker-ID* is invalid.

Explanation: The marker ID specified is not valid.

User response: Issue the **trace show markers** command to find all of the valid marker IDs.

2554-262 Marker id *marker-ID* is already removed.

Explanation: The marker ID specified is already removed.

User response: Issue the **trace show markers** command to find all of the valid marker IDs.

2554-263 Probe id *probe-ID* has already been removed.

Explanation: The probe ID specified has already been removed.

User response: Issue the **trace show probes** command to find all of the valid probe IDs.

2554-301 Path name not set

Explanation: The path name is not set.

User response: Set the path name.

2554-302 The task id: *task-ID* has previous errors.

Explanation: The task ID has had an **AisStatus** error on a previous add.

User response: Use a different task or restart tool.

2554-303 Multiple programs detected in the command. Subgroup the application into multiple homogeneous programs and rerun the command on each group.

Explanation: An attempt was made to run the command in an unsupported heterogeneous environment.

User response: Use the **group** command to partition the images and rerun the command on each partition.

2554-321 Invalid keyword *string* found in profile help command.

Explanation: A non-valid help keyword was found.

User response: Check the input text.

2554-326 ProfName *string* is unknown to this cpu type

Explanation: The ProfName used in this **show probetype** command is not valid.

User response: Use the **show probetypes** command to find a valid name.

2554-331 Path *path-name* is not valid

Explanation: The given path name is invalid.

User response: User needs to use a different path name such as **profile set path "valid/path"**.

2554-332 Path cannot be changed after add probe

Explanation: The output file path is locked after the first probe is added.

User response: Restart pct and specify the desired path.

2554-333 Mode cannot be changed after add probe

Explanation: The mode is locked after the first probe added.

User response: Restart pct and specify the desired mode.

2554-334 Unknown mode name *mode-name*, valid names are *correct-name-list*

Explanation: The name provided is incorrect.

User response: Use the correct mode name.

2554-341 Profid or ProfName is not valid in this cpu type

Explanation: The Profid or ProfName used in this **add** command is not valid.

User response: Make sure the tasks do not have mixed cpu type.

2554-342 Option part of the command is not valid in this ProfType

Explanation: The Option part of the command is not valid for the ProfType.

User response: Make sure the option specified is valid.

2554-343 Profld has been specified, Only one option is allowed

Explanation: Only one Profld/Option pair is allowed in the command.

User response: Remove the duplicates.

2554-344 Some functions are profiled in the probe id *probe-number*, duplication is not allowed

Explanation: Some of the functions are profiled in the previous command. Duplication is not allowed

User response: Use the **profile show probes** command to examine the command in question.

2554-345 Task *task-ID* has different probe type specified.

Explanation: The task ID had been used before with a different probe type. Only one probe type can be used in a profile session.

User response: The user needs to plan ahead on what profile type to monitor, and use that type across the profiling session.

2554-346 The source file, function, or source block location specified for profile probe addition does not exist.

Explanation: The specified file/function (or file/block) combination generates an empty result.

User response: Use the **function** command to verify the function list.

2554-347 Too many files/functions in the add command.

Explanation: The number of functions that can be added in a single **add** command is 200.

User response: Separate the command in two.

2554-348 Name *string* is unknown to the command.

Explanation: The event name specified is unknown to the **add** command.

User response: Use the command **profile show probetypes** to find the correct name.

2554-349 At least one task *task-ID* does not have PMAPI installed.

Explanation: The host that runs the specified task ID does not have PMAPI installed and cannot collect the hardware counter event information.

User response: Install the PMAPI on the node.

2554-351 No previous added probes to be removed

Explanation: There are no previous added probes to be removed. The range specified is outside the boundary of the added probes.

User response: Issue **profile add** command before the **profile remove** command.

2554-352 The range started from *number* is too big.

Explanation: The range specified is outside the boundary of the added profile.

User response: Issue **profile show probes** to see the list of probes.

2554-401 Path name not set

Explanation: The path name is not set

User response: Set the path name.

2554-402 The *task-id* has previous errors.

Explanation: The task id had an AisStatus error on a previous add.

User response: Use a different task or restart tool.

2554-403 Multiple programs detected in the command. Subgroup the application into multiple homogeneous programs and rerun the command on each group.

Explanation: An attempt was made to run the command in an unsupported heterogeneous environment.

User response: Use the **group** command to partition the images and rerun the command on each partition.

2554-421 Invalid keyword *key-word* found in openmp help command.

Explanation: Invalid help keyword.

User response: Check the input text.

2554-431 Path *path-name* is not valid

Explanation: The given path name is invalid.

User response: User needs to use a different path name such as **openmp set path "valid/path"**.

2554-432 Path cannot be changed after add probe

Explanation: The output file path is locked after the first probe added.

User response: Restart pct and specify the desired path.

2554-433 Mode cannot be changed after add probe

Explanation: The mode is locked after the first probe added.

User response: Restart pct and specify the desired mode.

2554-434 Unknown mode name *mode-name*, valid names are *correct-name-list*

Explanation: The name provided is incorrect.

User response: Use the correct mode name.

2554-441 One or more of the specified OmpId values are invalid

Explanation: At least one of the values specified for the *ompid* keyword in this **openmp add** command is outside the range of valid values.

User response: Use **openmp show probetypes** to see all the valid OmpId values.

2554-442 Fail to add because some of the tasks have already been probed.

Explanation: Some of the tasks have point probe added, cannot add probes in global fashion.

User response: Remove the probes previously added.

2554-443 Fail to add because some of the tasks have all functions probed.

Explanation: Some of the tasks have all function probe added, cannot add probes to the subset of functions

User response: Remove the probes previously added in those tasks.

2554-444 OmpId has been specified, Only one option is allowed

Explanation: Duplicate OmpIds are not allowed in the command.

User response: Remove duplicate OmpIds.

2554-445 Some functions are profiled in the probe Id *probe-number*, duplication is not allowed

Explanation: Some of the functions are profiled in the previous command. Duplication is not allowed.

User response: Use the **openmp show probes** command to examine the questioned command.

2554-446 There is no function in the specified file and function combination

Explanation: The specified file and function combination generates empty results.

User response: Use **function** command to verify the function list

2554-447 Too many files/functions in the add command

Explanation: The number of functions that can be added in a single add command is 200.

User response: Separate the command into two.

2554-448 The specified OmpName *event-name* is not a valid name

Explanation: The name specified for the *ompname* keyword in this **openmp add** command is not a valid OmpName value.

User response: Use the command **openmp show probetypes** to see all the valid OmpName values.

2554-451 No previous added probes to be removed

Explanation: There are no previous added probes to be removed

User response: Issue **openmp add** command before **openmp remove** command.

2554-452 The range started from *number* is too big

Explanation: The range specified is outside the boundary of the added probes.

User response: Issue **openmp show probes** to see the list of profiles.

2554-501 Path name not set

Explanation: The path name is not set.

User response: Set the path name.

2554-502 The *task-id* has previous errors

Explanation: The task id has had an AisStatus error on a previous add.

User response: Use a different task or restart tool.

2554-503 Multiple programs detected in the command. Subgroup the application into multiple homogeneous programs and rerun the command on each group.

Explanation: An attempt was made to run the command in unsupported heterogeneous environment.

User response: Use the **group** command to partition the images and rerun the command on each partition.

2554-521 Invalid *keyword* found in commcount help command.

Explanation: Invalid help keyword.

User response: Check the input text.

2554-531 Path *path-name* is not valid

Explanation: The given path name is invalid.

User response: User needs to use a different path name such as **commcount set path "valid/path"**.

2554-532 Path cannot be changed after add probe

Explanation: The output file path is locked after the first probe added.

User response: Restart pct and specify the desired path.

2554-533 Mode cannot be changed after add probe

Explanation: The mode is locked after the first probe added.

User response: Restart pct and specify the desired mode.

2554-534 Unknown mode name *mode-name*. Valid names are *correct-name-list*

Explanation: The name provided is incorrect.

User response: Use the correct mode name.

2554-535 CommName *comm-name* is unknown

Explanation: The CommName used in this show probetype command is not valid.

User response: Use the **commcount show probetypes** command to find valid name.

2554-541 One or more of the CommId values are invalid

Explanation: At least one of the values specified for the *commid* keyword in this **commcount add** command is outside the range of valid values.

User response: Use **commcount show probetypes** to see all the valid CommId values.

2554-542 Fail to add because some of the tasks have already been probed.

Explanation: Some of the tasks have point probe added. You cannot add probes in global fashion.

User response: Remove the previously added probes.

2554-543 Fail to add because some of the tasks have all functions probed.

Explanation: Some of the tasks have all function probe added. You cannot add probes to the subset of functions.

User response: Remove the previously added probes in those tasks.

2554-544 CommId has been specified, Only one option is allowed

Explanation: Only one CommId/Option pair is allowed in the command.

User response: Remove duplicates.

2554-545 Some functions are profiled in the probe Id *probe number*, duplication is not allowed"

Explanation: Some of the functions are profiled in the previous command; duplication is not allowed.

User response: Use the command **commcount show probes** to examine the questioned command.

2554-546 The source file, function, or source block location specified for commcount probe addition does not exist.

Explanation: The specified file/function or source block location for commcount probe addition does not exist.

User response: Use the **function** command to verify

the function list or use the **block** command to verify the block list.

2554-547 Too many files/functions in the add command

Explanation: The number of functions that can be added in a single **add** command is 200

User response: Separate the command into two.

2554-548 The specified CommName *event-name* is not a valid name

Explanation: The name specified for the *commname* keyword in this **commcount add** command is not a valid CommName value.

User response: Use **commcount show probetypes** to see all the valid CommName values.

2554-549 Task *task-id* has different Probe Type specified.

Explanation: The task id had been used with different probe type before only one probe type can be used in a commcount session.

User response: Plan ahead on what type of count to monitor and use that type across the session.

2554-551 No previous added probes to be removed

Explanation: There is no previous added probes to be removed.

User response: Issue **commcount add** commands before **commcount remove** commands.

2554-552 The range started from *number* is too big

Explanation: The range specified is outside the boundary of the added probes.

User response: Issue **commcount show probes** to see the list of probes.

Chapter 7. Unified Trace Environment (UTE) messages

2554-900 *count* record(s) excluded due to invalid field(s).

Explanation: One or more records were excluded because they did not contain one or more fields that were expected to be in all records.

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

2554-901 *count* record(s) were excluded from table *table* due to invalid field(s).

Explanation: Records were excluded from a table because the records did not contain an expected field or the field had a value other than an expected type.

User response: Correct the table definition to use fields that exist in all selected records.

2554-902 Could not open file *filename: reason*.

Explanation: An attempt to open a file failed.

User response: Use the correct file name.

2554-903 Program option *option_name* *option_value* is invalid.

Explanation: A program option value is invalid.

User response: Correct the option value.

2554-904 Field *field_name* in record type *record_type* (*record_index*) could not be mapped to a bin in table *table_name*.

Explanation: A field to be mapped to a table index bin had a value that was not in the domain of the mapping.

User response: Change the table definition to select records with values that are in the domain of mapped values.

2554-905 Field *field_name* in record type *record_type* (*record_index*) could not be used as a table index.

Explanation: A field to be used as a table index was not an unsigned integer field or a signed field with a nonnegative value.

User response: Change the table definition to use an unsigned field.

2554-906 *count* interval(s) excluded due to missing begin record.

Explanation: Intervals were excluded from the

statistics because the input files contained an end record for the interval, but no begin record.

User response: Run the program on files containing all interval records.

2554-907 *count* continuation record(s) excluded due to wrong event type.

Explanation: Records were excluded from the statistics because the input files contained continuation records whose event type did not match the event type at the top of the state stack.

User response: Report the error; it should not happen.

2554-908 *count* interval(s) excluded due to missing end record.

Explanation: Intervals were excluded from the statistics because the input files contained a begin record for the interval, but no end record.

User response: Run the program on files containing all interval records.

2554-909 Output format *format* does not support tables with *count* dimensions.

Explanation: The output tables have more dimensions than the output format supports.

User response: Specify a different output format.

2554-910 *reason* on line number *number* near *string*.

Explanation: Statistics table specification could not be parsed.

User response: Correct the table specifications.

2554-911 *construct* on line number is not supported.

Explanation: Statistics table specification contained a feature that is not currently supported.

User response: Correct the table specifications.

2554-912 *utestats: string*

Explanation: A system library routine returned an error code.

User response: Report the error; it should not happen.

2554-913 *profile_name* does not define the field *field_name*.

Explanation: The profile file does not contain a definition for a field that was expected to be present in all UTE interval records.

User response: Specify the correct profile file as a command argument.

2554-914 *field_name* is not in record type *record_type* (*record_index*).

Explanation: The profile file does not contain a definition for a field that was expected to be present in an UTE interval record of the given type.

User response: Specify the correct profile file as a command argument or correct the field name.

2554-915 Line number *line_number* contains unterminated string *string*.

Explanation: Statistics table specification contains a quoted string that was not ended before the end of the line.

User response: Correct the table specifications.

2554-916 Usage:

```
utestats [-?] [-o out_file] [-B n]
input_file...

-?          Display this message
-o out_file Output file
            (default: stdout)
-B n        Number of time bins
            in predefined overview
            table (default: bins)
input_file... UTE interval files to
            generate statistics from
```

Explanation: The command line contained an invalid option flag or it contained the option flag that triggers the usage message.

User response: Correct the command line options.

2554-917 *field_name* in record type *record_type* (*record_index*) is a vector.

Explanation: A field to aggregate statistics on is a vector field.

User response: Change the table definition to use a scalar field.

2554-918 Field *field_name* in record type *record_type* (*record_index*) is a vector; it cannot be used as an index.

Explanation: A field to use as a table index was a vector field.

User response: Change the table definition to use a scalar field.

2554-919 Missing argument for '-o' option

Explanation: user supplied -o without an accompanying filename argument.

User response: supply a filename for the -o option.

Appendix. Accessibility features for PE

Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, to use information technology products successfully.

Accessibility features

The following list includes the major accessibility features in IBM Parallel Environment. These features support:

- Keyboard-only operation.
- Interfaces that are commonly used by screen readers.
- Keys that are tactilely discernible and do not activate just by touching them.
- Industry-standard devices for ports and connectors.
- The attachment of alternative input and output devices.

Note: The IBM eServer Cluster Information Center and its related publications are accessibility-enabled for the IBM Home Page Reader. You can operate all features using the keyboard instead of the mouse.

Keyboard navigation

This product uses standard Microsoft® Windows® navigation keys.

IBM and accessibility

See the *IBM Accessibility Center* at <http://www.ibm.com/able> for more information about the commitment that IBM has to accessibility.

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All implemented function in the PE MPI product is designed to comply with the requirements of the Message Passing Interface Forum, MPI: A Message-Passing Interface Standard. The standard is documented in two volumes, Version 1.1, University of Tennessee, Knoxville, Tennessee, June 6, 1995 and *MPI-2: Extensions to the Message-Passing Interface*, University of Tennessee, Knoxville, Tennessee, July 18, 1997. The second volume includes a section identified as MPI 1.2 with clarifications and limited enhancements to MPI 1.1. It also contains the extensions identified as MPI 2.0. The three sections, MPI 1.1, MPI 1.2 and MPI 2.0 taken together constitute the current standard for MPI.

PE MPI provides support for all of MPI 1.1 and MPI 1.2. PE MPI also provides support for all of the MPI 2.0 Enhancements, except the contents of the chapter titled *Process Creation and Management*.

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Index

Numerics

0029 messages 3
0030 messages 17
0031 messages 19
0032 messages 69
2554 messages 97
2554-9 messages 109

A

abbreviated names vi
accessibility 111
 keyboard 111
 shortcut keys 111
acknowledgments 116
acronyms for product names vi

B

bad code path
 error 67

C

codes, status
 UTE 109
commands
 errpt 67
conventions v

D

diagnostic messages
 2554-9 messages 109
 for PE Benchmark (2554) 97
 for Unified Trace Environment (UTE) 109
 message format 1
 MPI messages (0032) 69
 Parallel operating environment (POE) messages
 (0031) 19
 pdbx messages (0029) 3
 pedb messages (0030) 17
 UTE 109
disability 111

E

error log entries
 POE 67
errors
 UTE 109

L

LookAt message retrieval tool vii

lost contact
 error 67

M

message retrieval tool, LookAt vii
messages
 UTE 109

S

shortcut keys
 keyboard 111
status codes
 UTE 109

T

trademarks 115

U

user authentication
 error 67
UTE
 status codes 109

W

warnings
 UTE 109

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