

IBM Parallel Environment for AIX 5L



# Messages

*Version 4 Release 2*



IBM Parallel Environment for AIX 5L



# Messages

*Version 4 Release 2*

**Note**

Before using this information and the product it supports, read the information in "Notices" on page 117.

**Third Edition (April 2005)**

This edition applies to version 4, release 2 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 SA22-7944-01. 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

<b>About this book</b> . . . . .	<b>v</b>
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 . . . . .	vi
Using LookAt to look up message explanations . . . . .	vii
How to send your comments . . . . .	vii
National language support (NLS) . . . . .	vii
Summary of changes for Parallel Environment 4.2 . . . . .	viii
<b>Chapter 1. Understanding the diagnostic message format</b> . . . . .	<b>1</b>
<b>Chapter 2. Parallel debugger (pdbx) messages</b> . . . . .	<b>3</b>
<b>Chapter 3. Parallel operating environment (POE) messages</b> . . . . .	<b>19</b>
<b>Chapter 4. POE Error Report Log Entries</b> . . . . .	<b>75</b>
<b>Chapter 5. Message Passing Interface (MPI) messages</b> . . . . .	<b>77</b>
<b>Chapter 6. PE Benchmark messages</b> . . . . .	<b>105</b>
<b>Chapter 7. Unified Trace Environment (UTE) messages</b> . . . . .	<b>113</b>
<b>Appendix. Accessibility</b> . . . . .	<b>115</b>
Accessibility information . . . . .	115
Using assistive technologies . . . . .	115
<b>Notices</b> . . . . .	<b>117</b>
Trademarks . . . . .	119
Acknowledgments. . . . .	120
<b>Glossary</b> . . . . .	<b>121</b>



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## About this book

This book is designed to help any user of IBM® Parallel Environment for AIX® 5L (PE) 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 @server Cluster 1600 hardware.

This book assumes that AIX 5L™ Version 5.1 or higher, and the X-Windows system are already installed, if required. For information on installing AIX 5L Version 5.1 and X-Windows, consult the *IBM AIX for RS/6000 Installation Guide*.

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## 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.

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## 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 75
- Chapter 5, "Message Passing Interface (MPI) messages," on page 77
- Chapter 6, "PE Benchmark messages," on page 105
- Chapter 7, "Unified Trace Environment (UTE) messages," on page 113

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## Conventions and terminology used in this book

This book uses the following typographic conventions:

Table 1. Conventions and terminology used in this book

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

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.

*Table 2. Parallel Environment abbreviations*

Short Name	Full Name
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
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 <sup>®</sup>	IBM @server pSeries
PSSP	IBM Parallel System Support Programs for AIX
RISC	reduced instruction set computer
RSCT	Reliable Scalable Cluster Technology
rsh	remote shell
RS/6000	IBM RS/6000
SP	IBM RS/6000 SP
STDERR	standard error
STDIN	standard input
STDOUT	standard output

---

## Prerequisite and related information

The Parallel Environment library consists of:

- *IBM Parallel Environment for AIX 5L: Introduction, SA22-7947*
- *IBM Parallel Environment for AIX 5L: Installation, GA22-7943*
- *IBM Parallel Environment for AIX 5L: Messages, GA22-7944*

- *IBM Parallel Environment for AIX 5L: MPI Programming Guide*, SA22-7945
- *IBM Parallel Environment for AIX 5L: MPI Subroutine Reference*, SA22-7946
- *IBM Parallel Environment for AIX 5L: Operation and Use, Volume 1*, SA22-7948
- *IBM Parallel Environment for AIX 5L: Operation and Use, Volume 2*, SA22-7949

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

<http://publib.boulder.ibm.com/infocenter/clresctr/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 and Linux<sup>®</sup>:

- 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.

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## How to send your comments

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

- Send your comments by e-mail to: [mhvrcfs@us.ibm.com](mailto: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 4.2

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

- Support for POWER3™, POWER4™, and POWER5™ servers running AIX 5L V5.2 or AIX 5L V5.3
- Support for IBM @server p5 servers and the High Performance Switch (HPS) with AIX 5L V5.2 only, and coexistence in a cluster managed by Cluster Systems Management (CSM)
- Remote Direct Memory Access (RDMA) for bulk data copy and transfer, and large contiguous messages, only on the HPS
- Support for striping of messages over multiple adapters attached to the pSeries HPS
- MPI support for 128 tasks per node using shared memory
- Support for LoadLeveler® performance improvements
- Support for up to 8192 tasks in a single job, with improved memory utilization for large jobs
- MPI collectives algorithm and optimization improvements
- MPI shared memory collectives use AIX 5L V5.3 cross-memory attachment enhancements
- Point-to-point messages in shared memory use AIX 5L V5.3 cross-memory attachment enhancements
- MPI/LAPI performance statistics
- The SP Switch is no longer supported
- PE 4.2 is the **last** release of PE that will support Parallel Systems Support Programs for AIX (PSSP), the SP Switch2, and POWER3 servers

---

## Chapter 1. Understanding the diagnostic message format

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

**0029-*nnnn***

Parallel debugger (**pdbx**)

**0031-*nnn***

Parallel operating environment (POE)

**0032-*nnn***

Message Passing Interface (MPI)

**2554-*nnn***

PE Benchmark

**2554-9*nn***

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.

| The chapter Chapter 4, "POE Error Report Log Entries," on page 75 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.



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## 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 for AIX 5L: 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: **/tmpdirl.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 for AIX 5L: 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 for AIX 5L: 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** *poe\_process\_id*  
[-**c** *command\_file*]  
[-**d** *nesting\_depth*]  
[-**I** *directory* [-**I** *directory*]...]  
[-**F**] [-**x**] [*poe options*]

**pdbx** -**h**

**Flags:**

-**a** Attaches to a running POE job by specifying its process ID. The debugger must be executed from the node from which the POE job was initiated. Note that when using the debugger in attach mode there are some debugger command line arguments that should not be used. In general, any arguments that control how the partition is set up, or specify program names and arguments, should not be used.

-**c** Reads startup commands from the specified *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. Retry the job. 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.

---

**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**     **Error initializing communication subsystem.**

**Explanation:** 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.

---

**0031-003**     **Invalid value (*string*) for *pmd\_version*.**

**Explanation:** The user specified a value of other than 2, 3, or 4 via the **-pmd\_version** command-line option or the **MP\_PMD\_VERSION** environment variable.

**User Response:** Correct the non-valid entry.

---

**0031-004**     **MPCI and LAPI Statistical information not available**

**Explanation:** **MP\_STATISTICS** not enabled and LAPI initialization not complete.

**User Response:** Export **MP\_STATISTICS=1** to enable MPCI statistics. Wait for **MPI\_Init** to finish to get LAPI statistics.

---

**0031-005**     **MPCI statistical information not available**

**Explanation:** **MP\_STATISTICS** not enabled.

**User Response:** Export **MP\_STATISTICS=1** to enable MPCI 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 re-run 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.

---

**0031-011**     **tcp service *string* unknown**

**Explanation:** The Partition Manager terminates.

**User Response:** The PM daemon, **pmd**, is not known to the system. Review the results of installation to assure that the daemon specified by **inetd** is startable on each remote node.

---

**0031-012 pm\_contact: socket**

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

**User Response:** 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 **pockpt** 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 AIX 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. 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.

---

**0031-019 pm\_contact: connect failed**

**Explanation:** The Partition Manager cannot connect to a remote node, so it terminates. This is probably a PE system error. Message 0031-020 follows.

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

---

**0031-020 Couldn't connect to task *number* (*string*)**

**Explanation:** The Partition Manager terminates.

**User Response:** For the indicated remote task number and indicated host name, socket connection could not be established. Check for valid names.

---

**0031-021 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.

---

**0031-026**     **Couldn't create socket for PM Array**

**Explanation:** The Partition Manager terminates. An explanatory sentence follows.

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

---

**0031-027**     **Write to PM Array**

**Explanation:** The Partition Manager continues. An explanatory sentence follows.

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

---

**0031-028**     **pm\_mgr\_handle; can't send a signal message to remote nodes**

**Explanation:** The Partition Manager terminates. An explanatory sentence follows.

**User Response:** Probable PE error. This error has occurred in the Partition Manager signal handler. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-029**     **Caught signal number (string), sending to tasks...**

**Explanation:** The indicated signal is not used specifically by Partition Manager, and is being passed on to each remote task.

**User Response:** Verify that the signal was intended.

---

---

**0031-030**     **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.

---

**0031-031**     **task number is alive**

**Explanation:** The message is sent from the indicated task in response to signal SIGUSR2.

**User Response:** Verify that the signal was intended.

---

**0031-032**     **exiting...**

**Explanation:** The message is sent from the indicated task in response to signal SIGINT, and the remote node is exiting.

**User Response:** Verify that the signal was intended.

---

**0031-033**     **Your application has forced paging space to be exceeded...bailing out**

**Explanation:** The remote node exits with signal SIGDANGER. The message is sent from the indicated task in response to signal SIGDANGER. AIX is running out of paging space.

---

**0031-034**     **task signal number: string**

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

**User Response:** Verify that the signal was intended.

---

**0031-035**     **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 AIX 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 AIX **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.

---

**0031-077 invalid tracelevel**

**Explanation:** The **-tracelevel** option is no longer valid. Parallel tracing is no longer supported.

**User Response:** Do not specify **-tracelevel** or **-tlevel**.

---

**0031-078 invalid retrytime**

**Explanation:** The **-retrytime** option was neither a 0 nor a positive number.

**User Response:** Correct the flag.

---

**0031-079 invalid pmlights**

**Explanation:** The **-pmlights** option was neither a 0 nor a positive number.

**User Response:** Correct the flag.

---

**0031-080 invalid usrport**

**Explanation:** The **-usrport** option was neither a 0 nor a positive number less than 32768.

**User Response:** Correct the flag.

---

**0031-081 invalid samplefreq**

**Explanation:** The **-samplefreq** option was neither a 0 nor a positive number.

**User Response:** Correct the flag.

---

**0031-083 invalid wrap trace buffer**

**Explanation:** The **-tbufwrap** option was neither YES or NO.

**User Response:** Correct the flag.

---

**0031-084 invalid tbufsize value**

**Explanation:** The **-tbufsize** option specifies too large a trace buffer (or an invalid number).

**User Response:** Correct the flag.

---

---

**0031-085      invalid tbufssize unit**

**Explanation:** The `-tbufssize` option is not of the form *numberK* or *numberM*.

**User Response:** Correct the flag.

---

**0031-086      invalid ttempsize value**

**Explanation:** The `-ttempsize` option specifies too large a file (or an invalid number).

**User Response:** Correct the flag.

---

**0031-087      invalid ttempsize unit**

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

**User Response:** Correct the flag.

---

**0031-088      invalid tpermsize value**

**Explanation:** The `-tpermsize` option specifies too large a file (or an invalid number).

**User Response:** Correct the flag.

---

**0031-089      invalid tpermsize unit**

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

**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.

---

---

**0031-094      MP\_TRACELEVEL not set correctly**

**Explanation:** The `MP_TRACELEVEL` environment variable is no longer valid. Parallel tracing is no longer supported.

**User Response:** Do not specify `MP_TRACELEVEL`, or `-tracelevel/-tlevel`.

---

**0031-095      MP\_RETRY not set correctly**

**Explanation:** The `MP_RETRY` environment variable is neither 0 or a positive number less than 32768.

**User Response:** Correct the variable.

---

**0031-096      MP\_PMLIGHTS not set correctly**

**Explanation:** The `MP_PMLIGHTS` environment variable is neither 0 nor a positive number.

**User Response:** Correct the variable.

---

**0031-097      MP\_USRPORT not set correctly**

**Explanation:** The `MP_USRPORT` environment variable is neither 0 nor a positive number less than 32768.

**User Response:** Correct the variable.

---

**0031-098      MP\_SAMPLEFREQ not set correctly**

**Explanation:** The `MP_SAMPLEFREQ` environment variable is neither 0 nor a positive number less than 32768.

**User Response:** Correct the variable.

---

**0031-100      MP\_TBUFFWRAP not set correctly**

**Explanation:** The `MP_TBUFFWRAP` environment variable is neither YES nor NO.

**User Response:** Correct the variable.

---

**0031-101      Invalid 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.

---

---

**0031-103 Invalid MP\_TTEMPSIZE**

**Explanation:** The `MP_TTEMPSIZE` environment variable specifies too large a trace file (or an invalid number).

**User Response:** Reduce or correct the size.

---

**0031-104 Incorrect MP\_TTEMPSIZE unit**

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

**User Response:** Correct the flag.

---

**0031-105 Invalid MP\_TPERMSIZE**

**Explanation:** The `MP_TPERMSIZE` environment variable specifies too large a trace file (or an invalid number).

**User Response:** Reduce or correct the size.

---

**0031-106 Incorrect MP\_TPERMSIZE unit**

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

**User Response:** Correct the flag.

---

**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 *IBM LoadLeveler for AIX 5L: 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: atexit**

**Explanation:** The user exit handler could not be installed.

**Cause:** Probable PE error.

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

---

**0031-111 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 for AIX 5L: 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 AIX.

**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 for AIX 5L: 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 string 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 computing nodes in your network cluster of RS/6000 SP systems or IBM @server pSeries and RS/6000 systems. Otherwise, wait until later when the needed number of nodes is available. You might want to specify the retry option by either setting the **MP\_RETRY** environment variable or using the **-retry** command line flag.

---

**0031-126 Unable to read string for current directory**

**Explanation:** The Partition Manager is unable to interpret the data from the **pwd** command. 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:** Re-specify the **euilib** as either **ip** or **us**.

---

**0031-129 Invalid euidesvelop option**

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

**User Response:** Re-specify **euidesvelop** 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:** Re-specify **newjob** with either **YES** or **NO**.

---

**0031-131 Invalid pmdlog option, should be YES or NO**

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

**User Response:** Re-specify **pmdlog** with either **YES** or **NO**.

---

**0031-132 Invalid io\_errlog option, should be YES or NO**

**Explanation:** An **io\_errlog** other than **YES** or **NO** was entered.

**User Response:** Re-specify **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:** Re-specify **stdoutmode** with either **ORDERED**, **UNORDERED** or a number.

---

**0031-134 Invalid mode for stdinmode**

**Explanation:** A **stdinmode** other than **ALL** or an integer from 0 to (the number of tasks -1) was entered.

**User Response:** Re-specify **stdinmode** with either **ALL** or a number.

---

**0031-135 Invalid labelio option, should be YES or NO**

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

**User Response:** Re-specify **labelio** with either **YES** or **NO**.

---

**0031-136 Invalid MP\_NOARGLIST option, should be YES or NO**

**Explanation:** The Partition Manager terminates.

**User Response:** Enter YES or NO for MP\_NOARGLIST.

---

**0031-137 poe: Internal Error: Could not broadcast ACK for *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 SP, contact the System Administrator to determine if that node is up on the switch. For non-SP jobs, verify that the node can be contacted by other means. Also, refer to the node-specific error message related to **mpci\_connect** for more information on what could be causing the problem (e.g. unauthorized user). If 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.

---

**0031-143 Could not read message from debug socket.**

**Explanation:** The call to read() failed when attempting to read a message from the debug socket.

**User Response:** None.

---

**0031-144 error creating directory for core files, reason: <*string*>**

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

**User Response:** Fix reason and rerun job.

---

**0031-145 error changing to *string* corefile directory, reason <*string*>**

**Explanation:** The core file could not be dumped to the named directory for the reason specified in the message.

**User Response:** Fix the problem and re-run 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 MP\_HOLD\_STDIN is ignored when MP\_STDINMODE is set to "none"**

**Explanation:** If you set the MP\_STDINMODE environment variable or the **-stdinmode** option to **none**, MP\_HOLD\_STDIN=yes is ignored.

**User Response:** To eliminate this warning message, you should set MP\_HOLD\_STDIN to **no**.

---

---

**0031-148 Using redirected STDIN for program name resolution**

**Explanation:** You redirected stdin without specifying a program name or command file name, and you did not set the **MP\_STDINMODE** environment variable or the **-stdinmode** option to **none**. Because program behavior is undefined in this case, a warning is issued.

**User Response:** You should set the **MP\_STDINMODE** environment variable or the **-stdinmode** option to **none**. For more details, see "Managing Standard Input" in *IBM Parallel Environment for AIX 5L: Operation and Use, Volume 1*.

---

**0031-149 Unable to load shared objects required for LoadLeveler.**

**Explanation:** You submitted a POE job through LoadLeveler and a shared object or library required for LoadLeveler does not exist. This error usually indicates files created at install time have been deleted, moved, or had their permissions changed.

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 your system administrator to determine if the files described above are accessible, and correct if possible. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-150 Invalid shm\_cc option, should be YES or NO**

**Explanation:** A **shm\_cc**. other than YES or NO was entered.

**User Response:** Re-specify **shm\_cc** with either YES or NO.

---

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

**Explanation:** Pool entries in a hostfile must be the same for all tasks.

**User Response:** Modify the hostfile 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 hostfile.

**User Response:** Remove the usage specifications from the hostfile to eliminate the warning messages, if desired. Usages are described in *IBM Parallel Environment for AIX 5L: 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 ll\_parse\_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.

---

**0031-157 Couldn't flush parallel traces**

**Explanation:** The program continues.

**User Response:** At termination, the Partition Manager was unable to successfully terminate parallel trace processing. Check for any additional messages issued.

---

**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:** Re-specify **corefile\_sigterm** with either YES or NO.

---

**0031-163**      **poe: Internal Error: Could not send *string* data to node *string***

**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 hostfile 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 hostfile that contains hostnames, 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 hostfile 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 hostfile, 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 hostfile, 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

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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\_KEEPALIVE):** <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.

---

**0031-212** **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.

---

**0031-216 POE (number) - pmd (number) - user program (number) versions incompatible**

**Explanation:** The versions of the POE home node, the pmd and the user's program are incompatible.

**User Response:** You should first check that the POE home node, the **pmd**, and **libmpi.a** are at compatible PE version levels. If necessary, install compatible versions. You should also check that the user program has been compiled with a version of PE that is compatible with the version of PE on the home node and the **pmd**. If necessary, recompile the user program using compatible POE home node and **pmd** versions.

---

**0031-217 POE (number), pmd (number), and dbengine (number) versions are incompatible.**

**Explanation:** The versions of POE, pmd, and the debug engine (dbengine) are incompatible.

**User Response:** You should check that POE, pmd, and dbengine are at compatible PE version levels. If necessary, install compatible versions.

---

**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 for AIX 5L: 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.

---

**0031-235 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 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.

---

**0031-243 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.

---

**0031-249 Job number completed with exit status number. Use the ipcrm command to reclaim shared memory if necessary.**

**Explanation:** The job has completed, but probably abnormally terminated and did not reclaim shared memory used by the communication protocols. The job identifier is a hexadecimal value.

**User Response:** Unreclaimed shared memory segments will eventually affect the system's ability to allocate shared memory, so they should be reclaimed periodically. Use the **ipcs -m** command to identify shared segments in use on each node. The job identifier in this message is the shared memory key for the segment listed in the **ipcs** command. The segment may then be removed via the **ipcrm -m** command, where the argument is the memory segment identifier listed in the second column of the **ipcs** command. This process should be repeated for each node on which the parallel job the shared memory communication protocol option.

---

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 with SMIT.

---

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

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

**User Response:** Add the group ID to the host with SMIT.

---

---

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

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

**User Response:** 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 for AIX 5L: 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 for AIX 5L: Installation*.

---

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.

---

**0031-310 Socket open failed during message passing initialization, task number, reason: string**

**Explanation:** The Communication Subsystem was unable to open a socket for message passing for the indicated task for the reason given.

**User Response:** If the reason given is "No buffer space available," have the system administrator raise the value of **sb\_max** using the **no** command. The current suggested value is 128000.

For any other reason, an internal error has most likely occurred. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-311 Restart of program string failed. Return code is number.**

**Explanation:** The restart of the program indicated was unsuccessful.

**User Response:** Check that the program name is valid, and that it was previously checkpointed.

---

**0031-312 The checkpoint file string already exists in the working directory.**

**Explanation:** While attempting to checkpoint the program, an existing version of the checkpoint file was found in the working directory. Execution is terminated.

**User Response:** Check the name of the file specified by the **MP\_CHECKFILE** and **MP\_CHECKDIR** environment variables. If necessary, remove the previous version of the file.

---

**0031-313 Error saving information for program string. Return code is number.**

**Explanation:** The internal routine setExecInfo failed. This is an unrecoverable internal error.

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

---

**0031-314 Checkpointing is not enabled. Set CHKPT\_STATE to enable.**

**Explanation:** Checkpointing of the program is not enabled, because the value of the **CHKPT\_STATE** LoadLeveler environment variable was not set to enable.

**User Response:** To enable checkpointing, set `CHKPT_STATE` to enable.

---

**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`.

---

**0031-318 Checkpointing failed. Return code is number.**

**Explanation:** An error occurred during the checkpointing process.

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

---

**0031-319 Error blocking signals during checkpointing. Return code is number.**

**Explanation:** An error occurred attempting to block all signals 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.

---

**0031-320 Error occurred saving file information during checkpointing. Return code is number.**

**Explanation:** An error occurred attempting to save the file information for the data segment 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.

---

**0031-321 Error occurred saving signal information during checkpointing. Return code is number.**

**Explanation:** An error occurred attempting to save the signal information for the data segment 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.

---

**0031-322 Error occurred opening the checkpoint file.**

**Explanation:** An error occurred attempting to open the checkpoint file. Processing is terminated.

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

---

**0031-323 Error occurred writing header information during checkpointing. Return code is number.**

**Explanation:** An error occurred writing the header information 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.

---

**0031-324 Error occurred writing program information during checkpointing. Return code is number.**

**Explanation:** An error occurred writing the program information 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.

---

**0031-325 Error occurred saving data segment during checkpointing. Return code is number.**

**Explanation:** An error occurred saving the data segment 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.

---

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

**Explanation:** An error occurred saving the MPCPI 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.

---

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**0031-327**     **Error occurred saving the stack data during checkpointing. Return code is *number*.**

**Explanation:** An error occurred saving the stack 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.

---

**0031-328**     **Error occurred writing the footer data during checkpointing. Return code is *number*.**

**Explanation:** An error occurred writing the footer 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.

---

**0031-329**     **Error occurred unblocking signals during checkpointing. Return code is *number*.**

**Explanation:** An error occurred unblocking signals 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 MPCPI during checkpointing. Return code is *number*.**

**Explanation:** An error occurred disconnecting from MPCPI 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.

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---

**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.

---

**0031-333**     **More node information found than expected.**

**Explanation:** An internal error was detected where there was more node information returned from `SSM_CSS_INIT` than expected. The remote node terminates.

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

---

**0031-334**     **SSM not SSM\_ACK to our sync request.**

**Explanation:** An internal error was detected where there was no acknowledgement returned for a synchronization request. The remote node terminates.

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

---

**0031-335**     **SSM subtype not what was expected**

**Explanation:** An internal error was detected where an unexpected message type was returned. The remote node terminates.

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

---

**0031-337**     **Error in starting the user's code.**

**Explanation:** An internal error was detected after trying to start the user executable code in the remote node. The remote node terminates.

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

---

**0031-338**     **Error sending exit request to home node.**

**Explanation:** An internal error was detected after trying to send an exit request to the home node. The remote node terminates.

This is probably a PE error.

**User Response:** Gather information about the problem

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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 MPC I during checkpointing. Return code is *number*.**

**Explanation:** An error occurred reestablishing the connections to MPC I 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.

---

**0031-343 Error occurred opening the checkpoint directory.**

**Explanation:** An error occurred during opening the checkpoint file directory 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.

---

**0031-344 Checkpoint files were not found. Restart cannot be performed.**

**Explanation:** Local checkpoint/restart files were not found. As a result, restart of the program is not possible.

**User Response:** Make sure the location of the checkpoint files match what is specified by the **MP\_CHECKDIR** and **MP\_CHECKFILE** environment variables, and that those files are valid from a previously checkpointed parallel program. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-345 Checkpointed program is not a parallel program. Restart cannot be performed.**

**Explanation:** The program contained in the checkpoint file is not a parallel program. As a result, restart of the program is not possible.

**User Response:** Make sure the location of the checkpoint files match what is specified by the **MP\_CHECKDIR** and **MP\_CHECKFILE** environment variables, and that those files are valid from a previously checkpointed parallel program. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-346 Error occurred restoring data segment. Return code is *number*.**

**Explanation:** An error occurred restoring the data segment of 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.

---

**0031-347 Error occurred restoring file descriptors. Return code is *number*.**

**Explanation:** An error occurred restoring the file descriptors of 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.

---

**0031-348 Error occurred restoring signal handlers. Return code is *number*.**

**Explanation:** An error occurred restoring the signal handlers of 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.

---

**0031-349 Program restart processing ended without program being restarted.**

**Explanation:** The program restart function completed without the checkpointed program ever restarting.

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

---

**0031-350 Error occurred comparing environment variables during restart. Return code is *number*.**

**Explanation:** The original POE and MPI environment variables do not match those contained in the program to be restarted. As a result, the program cannot be restarted.

**User Response:** Make sure the contents of the checkpoint files specified by the **MP\_CHECKDIR** and **MP\_CHECKFILE** environment variables is valid for the previously checkpointed parallel program. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-351 Error occurred unblocking signals during restore processing. Return code is *number*.**

**Explanation:** An error occurred unblocking the signals 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.

---

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

**Explanation:** An error occurred reconnecting to MPI/MPCI 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.

---

**0031-353 Error occurred synchronizing POE tasks during restore processing. Return code is *number*.**

**Explanation:** An error occurred synchronizing the POE tasks 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.

---

**0031-355 Error allocating data while restoring a checkpointed program.**

**Explanation:** An error occurred allocating storage during the restore processing of 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.

---

**0031-359**     **Comparison of values for *string* is not consistent between original and restored value.**

**Explanation:** The original and restored values of the environment variable indicated were not consistent, when a checkpointed program was being restored.

**User Response:** Make sure the contents of the checkpoint files specified by the MP\_CHECKDIR and MP\_CHECKFILE environment variables is valid for the previously checkpointed parallel program. Otherwise, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-360**     **Variable *string* was not found in the environment when restoring program.**

**Explanation:** The environment variable indicated was not found in the current environment, for a previously checkpointed program during restore processing.

**User Response:** Make sure the contents of the checkpoint files specified by the MP\_CHECKDIR and MP\_CHECKFILE environment variables is valid for the previously checkpointed parallel program. Otherwise, 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 *IBM LoadLeveler for AIX 5L: 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 for AIX 5L: 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 for AIX 5L: 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.

---

**0031-376**      **Conflicting specification for `-euidevice`, using *string*.**

**Explanation:** A batch job using POE was submitted to LoadLeveler with a network statement in the Job Command File that contained a specification for the message passing device that was different than the specification provided to POE via the `MP_EUIDEVICE` environment variable or the `-euidevice` 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.

---

**0031-377**      **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 hostfile was found.

**User Response:** Ensure that use of the hostfile 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 spsec\_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.

---

**0031-383 Error determining whether DCE authentication was in use.**

**Explanation:** An internal error occurred when calling spsec\_using\_auth\_method to determine if DCE authentication in use on the home node. This message should be followed by an additional message containing the DCE error text. POE terminates.

**User Response:** Check that the system has the proper level of PSSP installed, which supports the SP Security functions. If the problem persists, 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 for AIX 5L: 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.

---

**0031-387 Error obtaining PMD service DCE principal name for *string*.**

**Explanation:** An error occurred trying to get the PMD service DCE principal on the POE home node for the remote node indicated. It is possible that DCE authentication is enabled but there is no DCE principal defined for the PMD service. This message may be followed by an additional message containing the DCE error text. POE will continue if the compatibility authentication method is enabled; otherwise, it terminates.

**User Response:** Consult with your system administrator to ensure the PMD service principal has been properly set up in DCE for the remote node using the SP Security Services. If the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-388 Error obtaining user's DCE credentials for *string***

**Explanation:** An internal error occurred calling spsec\_get\_client\_creds to obtain the user's DCE credentials and security context for the remote node

indicated. This message may be followed by an additional message containing the DCE error text. POE will continue if the compatibility authentication method is enabled; otherwise, it terminates.

**User Response:** Contact the system administrator to ensure the proper authentication methods and service principals are enabled. Also check that the system has the proper level of PSSP installed, which supports the SP Security functions. If the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-389 No PMD service configured for DCE authentication on node *string*...processing continues.**

**Explanation:** POE could not get the PMD service principal for the remote node indicated, so no DCE authentication can be performed. Processing continues normally.

**User Response:** If the remote node indicated was expected to have a DCE principal for the PMD service, contact the system administrator to ensure the proper authentication methods and principals are enabled.

---

**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.

---

**0031-391 Error occurred seeking in checkpoint file during restore processing. Error code is *number*.**

**Explanation:** An error occurred while performing a seek operation of the checkpoint file 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.

---

**0031-392 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 hostfile (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 hostfile or modify the hostfile 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 for AIX 5L: 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.

---

**0031-402 Using `css0` as `euidvice` for User Space job**

**Explanation:** You (or another user) specified the command-line option `-euidvice` or used the `MP_EUIDVICE` environment variable with a setting

that was something other than `css0`.

You must use a setting of `css0` for User Space jobs. The value you entered has been overridden to allow the job to continue.

**User Response:** None.

---

**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 AIX 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 hostfile 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.

---

**0031-407**      **LoadLeveler unable to allocate nodes to POE for batch job, rc = *number***

**Explanation:** An internal error occurred in LoadLeveler. Reason codes follow:

- 2 Could not get jobid from environment
- 5 Socket error
- 6 Could not connect to host
- 8 Could not get hostlist

**User Response:** Retry. If the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**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 hostname
- 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\_LLFILE 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 unsubmittable. 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\_LLFILE 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 checkpnt\_commit call in POE failed**

**Explanation:** Either the checkpoint operation was cancelled prior to POE calling checkpnt\_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 the required 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.

---

**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 methods 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:** Re-run 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:** AIX 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 bulxfser specification may not be changed when restarting.

**Explanation:** The user attempted to restart a POE job with a different bulxfser 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 bulxfser 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.

---

**0031-501** 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.

---

**0031-505 Error sending a restarting failure to home node.**

**Explanation:** An internal error was detected after trying to send a restarting failure to the home node. The remote node terminates.

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

---

**0031-506 Unexpected environment variable *string* was set.**

**Explanation:** An unexpected environment variable was set during executing the `poerestart` command.

**User Response:** Unset the unexpected environment variable.

---

**0031-507 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.

---

| **0031-508 `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 hostfile 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 hostfile entry.

---

**0031-605 Unexpected EOF on allocation file for task *number***

**Explanation:** There were not enough entries in the hostfile for the number of processes specified.

**User Response:** Lower the number of processes or add more entries to the hostfile.

---

**0031-606 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 co-existed in hostfile.

**User Response:** Modify hostfile to contain only pool requests or only hostnames.

---

**0031-608 Unrecognized option for task *number*: <*string*>**

**Explanation:** An option other than **shared**, **dedicated**, **multiple**, or **unique** was found in the hostfile.

**User Response:** Correct hostfile entry.

---

**0031-609 Unable to open save\_hostfile *string***

**Explanation:** Specified save hostfile could not be opened.

**User Response:** Check pathname and permissions.

---

**0031-610 Error in command broadcast**

**Explanation:** An error occurred in broadcasting the **poe** command to the partition. Probably one of the remote nodes is no longer accessible. POE terminates.

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

---

**0031-611 Unable to open command file <*string*>**

**Explanation:** The file designated to issue POE commands can not be opened. POE terminates.

**User Response:** Verify that the file name is spelled correctly and is readable.

---

**0031-612 pm\_contact: write select error**

**Explanation:** A system error occurred while writing to a remote node. The system error message is appended. POE terminates.

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

---

**0031-613 Unable to send command to task *number***

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

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

---

**0031-614 Unable to send single command to task *number***

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

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

---

**0031-615 strappend failed for *string* , rc = *number***

**Explanation:** The internal string append function failed. The system terminates.

**User Response:** Probable PE error. Gather information

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

---

**0031-616**     **gethostbyname failed for home node**

**Explanation:** The internal `gethostbyname` function failed. The system terminates.

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

---

**0031-617**     **pm\_getcwd failed, rc = *number***

**Explanation:** The internal `pm_getcwd` function failed. A return code of 1 implies either 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.

---

**0031-621**     **pm\_SSM\_write failed in sending the partition map information for taskid *number***

**Explanation:** The internal `pm_SSM_write` function failed. The system terminates.

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

---

**0031-622**     **unexpected msg from task *number*, type *number* Text: *string***

**Explanation:** An unexpected message was returned from the indicated task. The system continues.

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

---

**0031-623**     **task *number*: hostname *string***

**Explanation:** The line indicates the task number and associated host name. See message 0031-618 and 0031-631 for more information.

**User Response:** The list may contain names of failing nodes. Verify that connectivity exists and the `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.

---

**0031-631**      **pm\_contact: signal received; nprocs = *number*, code = *number***

**Explanation:** Operation was terminated by a signal, either created by the user (SIGINT), or with the system (for example, SIGPIPE). POE terminates. The code indicates where in the contact sequence the signal occurred as follows:

- 2 - connect
- 3 - write select
- 4 - write message 1
- 5 - write message 2
- 6 - read select
- 7 - read acknowledgement
- 8 - end of contact routine

**User Response:** The remote nodes do not respond. Verify that the node can be contacted by other means. Verify that the **pmdv4** daemon is executable on the indicated remote node. If necessary, the timeout interval may be set with the environment variable **MP\_TIMEOUT**. The default is 150 seconds. If the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-632**      **Can't connect to PM Array. errno = *number***

**Explanation:** POE tried to connect to the Program Marker Array tool, but was unsuccessful. The system error number is returned. Most likely, the Program Marker Array has not been started.

**User Response:** The Program Marker Array is no longer supported. Users should discontinue its use.

---

**0031-633**      **Unexpected EOF on socket to task *number***

**Explanation:** POE got a socket EOF when trying to broadcast a message to the partition. The affected node is marked as not active, and the broadcast continues. The broadcast calling routine may take additional actions.

**User Response:** Verify the reason for loss of connection. Often this means that a remote node is not responding. Verify that the node can be contacted by other means. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-634**      **Non-zero status *number* returned from pm\_parse\_args**

**Explanation:** An error has occurred parsing the parameters.

**User Response:** More information or error messages should accompany this message, describing the errors in more detail. Correct the invalid values and retry.

---

**0031-635**      **Non-zero status *number* returned from pm\_mgr\_init**

**Explanation:** An error has occurred in a lower level function.

**User Response:** Perform whatever corrective action is indicated for earlier messages and retry. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-636**      **User requested or EOF termination of pm\_command**

**Explanation:** End of file was reached in the specified command file or user typed **quit**.

**User Response:** If termination is unexpected, verify that command file contains correct number of commands based on **MP\_PROCS** and **MP\_PGMMODEL** settings.

---

**0031-637**      **Non-zero status *number* returned from pm\_command**

**Explanation:** An error has occurred in a lower level function.

**User Response:** Perform whatever corrective action is indicated for earlier messages and retry. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-638**      **Non-zero status *number* returned from pm\_respond**

**Explanation:** An error has occurred in a lower level function.

**User Response:** Perform whatever corrective action is indicated for earlier messages and retry. If problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-639**      **Exit status from pm\_respond = *number***

**Explanation:** The **pm\_respond** function exited with the indicated status.

**User Response:** If other error messages occurred,

perform corrective action indicated for the 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**      **End of File from Program Marker Array**

**Explanation:** The socket connecting POE to the Program Marker Array has returned EOF. Execution of POE continues.

**User Response:** The Program Marker Array is no longer supported. Users should discontinue its use.

---

**0031-643**      **Error read from Program Marker Array**

**Explanation:** The socket connecting POE to the Program Marker Array has returned an error condition. POE continues. The defined error codes are:

- 1 - I/O error on the socket. An explanatory message is appended if **errno** is set.
- 2 - POE was unable to allocate storage for the message from PM Array. Probable internal error. Gather information about the problem and follow local site procedures for reporting hardware and software problems.
- 3 - Some other error. An explanatory message is appended if **errno** is set.

**User Response:** The Program Marker Array is no longer supported. Users should discontinue its use.

---

**0031-644**      **Can't route PM Array message to task *number***

**Explanation:** An error occurred while trying to forward a message from the Program Marker array to

the indicated task. POE continues, but the connection to PM Array is closed.

**User Response:** The Program Marker Array is no longer supported. Users should discontinue its use.

---

**0031-645**      **PM Array message to unknown destination** *number*

**Explanation:** The PM Array message is not to a remote task and not for the Home Node. The destination code is given. POE continues, but the connection to PM Array is closed.

**User Response:** The Program Marker Array is no longer supported. Users should discontinue its use.

---

**0031-646**      **PM Array is trying to tell us something**  
...

**Explanation:** A message from PM Array is directed to the Home Node. At present there are no Home Node functions responding to the PM Array, so the message text is just printed out.

**User Response:** The Program Marker Array is no longer supported. Users should discontinue its use.

---

**0031-647**      *string*

**Explanation:** This is the message buffer text from PM Array as described in message 0031-646.

**User Response:** Verify that the PM Array tool is working correctly.

---

**0031-648**      **Couldn't tell world about EOF on STDIN**

**Explanation:** An error occurred while broadcasting EOF on STDIN to the partition. The partition is terminated, and POE exits.

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

---

**0031-649**      **Couldn't tell task** *number* **about EOF on STDIN**

**Explanation:** An error occurred while sending EOF on STDIN to the indicated task. The partition is terminated, and POE exits.

**User Response:** Verify that the remote node is accessible and restart POE. If the failure continues, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-650**      **No receiver for STDIN bound for** *number*

**Explanation:** STDINMODE defines a task number that is not active.

**User Response:** Probable user error. Verify the value of 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. Message 0031-663 gives the text sent.

**User Response:** Consult the explanatory text. If that fails to disclose the problem, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-663**     *string*

**Explanation:** This is the text of a message received instead of the expected PROFILE\_DONE message.

**User Response:** If the text fails to disclose the problem, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-664**     **Unknown message type *number* received**

**Explanation:** The indicated message type is not known by POE. Execution is terminated.

**User Response:** Probably the socket contains a non-structured message, which would be a stray. If the source of the stray socket message cannot be determined, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-665**     **Invalid value for SSM\_SINGLE *number***

**Explanation:** The indicated value is invalid as a destination for SINGLE I/O mode. The specification is ignored.

**User Response:** Verify that the correct value for SINGLE I/O mode is used.

---

**0031-666**     **Out of range value for SSM\_SINGLE**  
*number*

**Explanation:** The indicated value is out of range: less than zero, or greater than the number of tasks. The specification is ignored.

**User Response:** Verify that the correct value for SINGLE I/O mode is used.

---

**0031-667**     **Invalid value for SSM\_UNORDERED**  
*number*

**Explanation:** The indicated value is invalid as a specification for UNORDERED I/O mode. The specification is ignored.

**User Response:** Verify that the correct value for I/O mode is used.

---

**0031-668**     **pm\_io\_command: error in**  
**pm\_SSM\_write, rc = number**

**Explanation:** An error occurred while responding to a STDIO MODE QUERY message. The response is abandoned.

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

---

**0031-669**     **Can't acknowledge IO\_command sync**

**Explanation:** A socket error occurred while broadcasting a synchronization request acknowledgment. The partition is terminated and POE exits.

**User Response:** One or more remote nodes may not be reachable. Verify that the remote nodes can be contacted, and restart POE. If problems persist, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-670**     **Illegal stdout mode** *number*

**Explanation:** The indicated value for STDOUT mode is not valid. The requested I/O buffering is not performed.

**User Response:** Correct the value for STDOUT mode.

---

**0031-671**     **Can't acknowledge PMArray data from**  
**task** *number*

**Explanation:** An error occurred trying to return an acknowledgement to a node sending data to PM Array.

**User Response:** Probable POE internal error. The error may also be caused by loss of contact with the remote node. Gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-672**     **Invalid routing request from task**  
**number to task** *number*

**Explanation:** The Home Node has received a message, but 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 **mp\_stdoutmode** with invalid mode.

**User Response:** Refer to man page for explanation of valid modes.

---

**0031-676**     **Invalid value** *string* **for mp\_euidevice**

**Explanation:** The **mp\_euidevice** specified on the command line with **-euidevice** or in the environment with MP\_EUIDEVICE is not valid.

**User Response:** Refer to *IBM Parallel Environment for AIX 5L: Operation and Use, Volume 1* for valid choices and rerun.

---

**0031-677**     **Unexpected return code** *number* **from**  
**\_mp\_stdoutmode**

**Explanation:** An error may have occurred in a lower-level function.

**User Response:** If earlier error messages exist, perform whatever corrective 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 hostfile contained pool requests.

**User Response:** Use hostnames in the hostfile 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.

---

**0031-687      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.

---

---

**0031-700      invalid priority received**

**Explanation:** The **priority** received by the **pm** daemon is invalid.

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

---

**0031-701      invalid envc received**

**Explanation:** The **envc** received by the **pm** daemon is invalid.

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

---

**0031-702      invalid pmdlog argument**

**Explanation:** The **pmdlog** argument received by the **pm** daemon is invalid.

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

---

**0031-703      invalid nprocs argument**

**Explanation:** The **nprocs** argument received by the **pm** daemon is invalid.

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

---

**0031-704      invalid newjob argument**

**Explanation:** The **newjob** argument received by the **pm** daemon is invalid.

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

---

**0031-705      invalid pdbx argument**

**Explanation:** The **pdbx** argument received by the **pm** daemon is invalid.

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

---

---

**0031-706      invalid spmd argument**

**Explanation:** The **spmd** 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<sup>®</sup> 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.

---

0031-723      **userid = *<number>***

**Explanation:** userid is set to the given userid.

**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 eulibpath includes the following path: /usr/lpp/ppe.poe/lib.

---

0031-726      **pmd: error sending node attach data record to home node.**

**Explanation:** The remote node PMD was not able to send the node attach data via IP communications to home node. The remote node will now exit.

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

---

0031-727      **pmd parent: error writing to child's debug engine pipe**

**Explanation:** pm daemon parent was not able to write to debug engine pipe, which is used to communicate with the node debug server.

**User Response:** Probable system error.

---

0031-728      **Cannot set *string* limit to *number*, hard limit is *number*.**

**Explanation:** If the user's soft limit is greater than the 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.

---

**0031-730**     **Error initializing DCE on remote 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.

---

**0031-731**     *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.

---

**0031-732**     **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.

---

**0031-734**     **DCE is not available...processing continues.**

**Explanation:** DCE was not installed on the remote node host, so no DCE authentication can be performed. Processing continues normally.

**User Response:** If the remote node host was expected to have DCE available, contact the system

administrator to ensure the proper authentication methods are enabled.

---

**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.

---

**0031-738**     **Error determining whether DCE authentication method was in use on node string.**

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

**User Response:** Check that the system has the proper level of PSSP installed, which supports the SP Security functions. If the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-739**     **Error determining whether compatibility authentication method was in use on node string.**

**Explanation:** An internal error occurred when calling

spsec\_using\_auth\_method to determine if compatibility authentication was in use on the remote node. This message should be followed by an additional message containing the DCE error text. POE terminates.

**User Response:** Check that the system has the proper level of PSSP installed, which supports the SP Security functions. If the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-740 Error reading DCE credentials on node *string*.**

**Explanation:** An internal error occurred reading the DCE credentials 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.

---

**0031-741 Error logging into DCE with PMD server principal on node *string*.**

**Explanation:** An internal error occurred when calling spsec\_login\_as\_service to log in to DCE with the PMD server principal. This message should be followed by an additional message containing the DCE error text. POE will continue if the compatibility authentication method is enabled; otherwise, it terminates.

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

---

**0031-742 Error authenticating user's credentials on node *string*.**

**Explanation:** An internal error occurred when calling spsec\_authenticate\_client to check the authenticity of the user's credentials on the remote node followed by an additional message containing the DCE error text. POE will continue if the compatibility authentication method is enabled; otherwise, it terminates.

**User Response:** Consult with the system administrator to ensure the user is properly authorized to access the Partition Manager Daemon service principal (ppe/pmdv3) according to DCE, and that their DCE principal and credentials are valid and have not yet expired, using the DCE klist command. If the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-743 Error obtaining PMD client identity on node *string*.**

**Explanation:** An internal error occurred when calling spsec\_get\_client\_identity to obtain the UID for the authenticated principal. This message should be followed by an additional message containing the DCE

error text. POE will continue if the compatibility authentication method is enabled; otherwise, it terminates.

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

---

**0031-744 Error establishing the login context on node *string*.**

**Explanation:** An internal error occurred when calling spsec\_assume\_client\_identity to establish the user's login context as the current login context. This message should be followed by an additional message containing the DCE error text. POE will continue if the compatibility authentication method is enabled; otherwise, it terminates.

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

---

**0031-745 DCE user authentication failed on node *string*.**

**Explanation:** The user does not have the proper DCE authorization to submit parallel jobs on this node. The Partition Manager will continue if the compatibility authentication method is enabled; otherwise, it terminates.

**User Response:** Consult with the system administrator to ensure the user is properly authorized to access the Partition Manager Daemon service principal (ppe/pmdv3) according to DCE, and that their DCE principal and credentials are valid and have not yet expired, using the DCE klist command. If the problem persists, gather information about the problem and follow local site procedures for reporting hardware and software problems.

---

**0031-746 Error converting DCE principal to Kerberos cell name on node *string*.**

**Explanation:** An internal error occurred when calling spsec\_convert\_dce\_principal\_to\_k5 to convert the DCE principal to its corresponding Kerberos Version cell name. The Partition Manager will continue if the compatibility authentication method is enabled; otherwise, it terminates.

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

---

**0031-747 Error resuming PMD server identity on node *string*.**

**Explanation:** An internal error occurred when calling spsec\_resume\_server\_identity to re-establish the identity of the PMD server principal. The Partition Manager 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.

---

**0031-749**      **Error changing owner of *string*, *errno* is *number*.**

**Explanation:** An internal error occurred changing the owner and group of the DCE credentials file indicated. 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.

---

**0031-750**      **DCE authentication is enabled on node *string* however no credentials were sent.**

**Explanation:** DCE authentication has been enabled on the remote node indicated. However, the POE home node did not send any DCE credentials to the Partition Manager daemon. Most likely the POE home node is not enabled for DCE, yet the remote node has been enabled. DCE authentication will be attempted without credentials, which may result in the ultimate failure of the parallel job.

**User Response:** Consult with the system administrator to ensure the security authentication methods have been properly established and are compatible among the POE home and remote nodes. There appears to be a mismatch between nodes expected to run with DCE, in which case a different set of nodes should be used to submit the parallel job, or the home node needs to be enabled to use DCE authentication.

---

**0031-751**      **Error obtaining PMD server principal after login on node *string*.**

**Explanation:** An error occurred when calling `spsec_get_my_identity` after login into DCE with the PMD server principal was successful. This message should be followed by an additional message containing the DCE error text. POE will continue if the compatibility authentication method is enabled; otherwise, it terminates.

**User Response:** Consult with the system administrator to ensure the security authentication methods have been properly established and the DCE principals for the PMD service have been properly defined.

Otherwise, if the problems persist, 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 executing 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 was not set, the **MP\_HOSTFILE** environment should be set, or a **host.list** file should exist in the directory from which the command was run, or the **MP\_RMPOOL** environment 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.

---

**0031-807**     **Invalid node pool specified: *string***  
**Explanation:** **-rmpool** should be an integer  $\geq 0$ .  
**User Response:** Reenter **-rmpool** followed by an integer  $\geq 0$ .

---

**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 hostfile did not exist.  
**User Response:** Ensure that the absence of a hostfile was intended, verify the command-line or environment variable settings of **hostfile**, **resd**, and **rmpool**, and then retry. See *IBM Parallel Environment for AIX 5L: Operation and Use, Volume 1* for more information.

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**0031-809**     **-tracefile *string* ignored in remote child**  
**Explanation:** -tracefile interpreted only in parent code.  
**User Response:** None.

---

**0031-810**     **-tracelevel *string* ignored in remote child**  
**Explanation:** -tracelevel interpreted only in parent code.  
**User Response:** None.

---

**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.

---

**0031-817**     **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**, etc).

---

---

**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.

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## 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.



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## Chapter 5. Message Passing Interface (MPI) messages

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### 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 datatype before using it in the specified function.

**Error Class:** MPI\_ERR\_TYPE

---

**0032-110**      **Attempt to free a predefined datatype (*number*) in *string*, task *number***

**Explanation:** It is not valid to attempt to free a predefined datatype.

**User Response:** Call MPI\_Type\_free for user-defined datatypes 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 non-blocking collective communication extensions to MPI.

**User Response:** Only use point-to-point request handles with this function.

**Error Class:** MPI\_ERR\_REQUEST

---

**0032-113**      **Out of memory in *string*, task *number***

**Explanation:** There is insufficient memory available to continue.

**User Response:** Reduce the size of user storage required per task.

**Error Class:** MPI\_ERR\_INTERN

---

**0032-114**      **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 datatype.

**Error Class:** MPI\_ERR\_TYPE

---

**0032-120**     **Declaration has upper bound < lower bound (*number*) in *string*, *task number***

**Explanation:** No **datatype** can be defined with negative extent (upper bound less than lower bound).

**User Response:** Make sure any MPI\_LB or MPI\_UB argument to MPI\_Type\_struct is consistent with the layout being defined.

**Error Class:** MPI\_ERR\_ARG

---

**0032-121**     **Invalid rank (*number*) in *string*, *task number***

**Explanation:** The value specified for **rank** is out of range.

**User Response:** Make sure that **rank** is within the range 0 to  $N-1$ , where  $N$  is the number of tasks in the group or communicator.

**Error Class:** MPI\_ERR\_RANK

---

**0032-122**     **Invalid dimension (*number*) in *string*, *task number***

**Explanation:** The specified dimension is 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 datatype 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 non-blocking send operation were modified before the send was completed.

**User Response:** Make sure that the buffer used to send a message is not reused before a WAIT or STATUS operation indicates that the send is complete.

**Error Class:** MPI\_ERR\_OTHER

---

**0032-136**     **Invalid communicator** (*number*) in *string*,  
**task number**

**Explanation:** The value used for **communicator** is not a valid communicator handle.

**User Response:** Make sure that the communicator is valid (predefined or created by an MPI function) and has not been freed by MPI\_Comm\_free.

**Error Class:** MPI\_ERR\_COMM

---

**0032-137**     **Invalid keyval** (*number*) in *string*, **task**  
**number**

**Explanation:** The value used for **keyval** is not a valid attribute key handle.

**User Response:** Make sure that the key handle is valid (predefined or created by an MPI function) and has not been freed by MPI\_Keyval\_free.

**Error Class:** MPI\_ERR\_ARG

---

**0032-138**     **Undefined datatype** (*number*) in *string*,  
**task number**

**Explanation:** The **datatype** handle does not represent a defined datatype.

**User Response:** Make sure the MPI\_Datatype argument is either an MPI predefined type or has been defined by an MPI type constructor function.

**Error Class:** MPI\_ERR\_TYPE

---

**0032-139**     **Invalid reduction operation** (*number*) in  
*string*, **task number**

**Explanation:** The value used for **op** is 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 datatypes were used by different tasks in the collective communication operation.

**User Response:** Make sure that all tasks use the same datatype.

**Error Class:** MPI\_ERR\_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 datatype specified is not allowed.

**User Response:** Check the MPI documentation to determine which datatypes are allowed with each reduction operation.

**Error Class:** `MPI_ERR_TYPE`

---

**0032-169**     **Invalid buffer size (number) in string,**  
**task number**

**Explanation:** The size of a buffer must be greater than or equal to zero.

**User Response:** Make sure that the buffer size is 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

**Note:** The MPCI 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.

---

**Memory is corrupted**

**Explanation:** Either the message header or the send/receive descriptor of a message is corrupted.

**User Response:** Contact IBM service.

---

**Memory is exhausted**

**Explanation:** Could not allocate from predefined system memory.

**User Response:** Allocate more memory by increasing MP\_BUFFER\_MEM size. If this size already equals maximum value (64 MB) then contact IBM service

---

**Incorrect argument.**

**Explanation:** Internal (communication subsystem) error.

**User Response:** If the application program has called the MPCI functions `mpci_env_get` and `mpci_env_set`, modify program. Otherwise Contact IBM service.

---

**Unknown error.**

**Explanation:** Unknown communication subsystem error.

**User Response:** Contact IBM service.

---

**MPCI Internal error.**

**Explanation:** Error occurs in the MPCI internal component of the MPI library.

**User Response:** Contact IBM service.

---

**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.

---

**MPI library is not in initializing state.**

**Explanation:** Internal (Communication subsystem) error.

**User Response:** If the application program has called the MPCI functions `mpci_env_get` and `mpci_env_set`,

errors are explained immediately below. If any reason string displays without a message ID number and not listed below, contact IBM service.

**User Response:** **Error Class:** MPI\_ERR\_INTERN

modify program. Otherwise contact IBM services.

---

**MPI library is not in connected state.**

**Explanation:** Communication subsystem has not established connection.

**User Response:** Check switch and network connectivity.

---

**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`.

---

**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.

---

**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.

---

**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.

---

**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.

---

**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.

---

**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 datatype 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 datatypes 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 datatype 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 datatypes 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 datatype 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 datatypes 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 datatype would create a type with an upper bound, lower bound or other displacement within the datatype 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 datatypes of smaller magnitude.

**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:** Non-blocking 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 datatype given is a named predefined datatype which cannot be decoded.

**User Response:** When attempting to decode a datatype be sure that it is a derived datatype.

**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 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 elements.

**Error Class:** MPI\_ERR\_ARG

---

**0032-314**      **Invalid psize element (number) in** *string, task number*.

**Explanation:** One element of the array\_of\_psize 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 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, array\_of\_dargs, and array\_of\_gsize do not satisfy the condition: array\_of\_array\_of\_psize[i] \* array\_of\_dargs[i] >= array\_of\_gsize[i], whereas distribution MPI\_DISTRIBUTE\_BLOCK has been set in dimension i.

**User Response:** Set appropriate values to array\_of\_psize, array\_of\_dargs, and array\_of\_gsize elements.

**Error Class:** MPI\_ERR\_ARG

---

**0032-316**      **Invalid subarray size (number) in** *string, task number*.

**Explanation:** One element of the array\_of\_subsize argument to MPI\_TYPE\_CREATE\_SUBARRAY() has a

value greater than the element of *array\_of\_sizes* in the same dimension.

**User Response:** Correct the value of the *array\_of\_subsizes* element.

**Error Class:** MPI\_ERR\_ARG

---

**0032-317 Invalid start element (*number*) in *string*, *task number*.**

**Explanation:** One element of the *array\_of\_starts* argument to MPI\_TYPE\_CREATE\_SUBARRAY() has a value which is not compatible with the values of the elements of *array\_of\_sizes* and *array\_of\_subsizes* in the same dimension.

**User Response:** Set appropriate values to *array\_of\_starts*, *array\_of\_sizes*, and *array\_of\_subsizes* 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 data representation *string*, *task number*.**

**Explanation:** An incorrect data representation was specified.

**User Response:** Assign to *datarep* either a predefined data representation or a user-defined data representation that has been previously registered.

**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 datatypes specified by the participating processes do not have the same extent.

**User Response:** Modify the elementary datatypes 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 pre-allocating 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\_atomics 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 datatype.

**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**

---

**0032-425**     **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 datatype handle is not valid.

**User Response:** Make sure that the handle is associated with either a predefined datatype (except MPI\_LB, MPI\_UB, and MPI\_PACKED) or an existing derived datatype 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 datatype handle is not valid.

**User Response:** Make sure that the handle is associated with either a predefined datatype (except MPI\_LB, MPI\_UB, and MPI\_PACKED) or an existing derived datatype 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 datatype is neither a predefined datatype nor a derived datatype whose basic components are all of the same predefined datatype.

**User Response:** Make sure that the datatype is built of a single predefined datatype.

**Error Class:** MPI\_ERR\_TYPE

---

**0032-441**      **Target datatype inappropriate for MPI\_ACCUMULATE** (*number*) in *string*, *task number*

**Explanation:** The specified target datatype is neither a predefined datatype nor a derived datatype whose basic components are all of the same predefined datatype.

**User Response:** Make sure that the datatype is built of a single predefined datatype.

**Error Class:** MPI\_ERR\_TYPE

---

**0032-442**      **Incompatible origin and target datatypes in** *string*, *task number*

**Explanation:** The origin and target datatypes specified for MPI\_Accumulate are built of different predefined datatypes.

**User Response:** Make sure that the origin and target datatypes' 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 datatypes which match the FORTRAN language types. The size parameter must correspond to the number of bytes in a FORTRAN datatype 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 datatypes 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 datatypes 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 datatypes that are already committed and may not be freed.

**User Response:** Call this routine only for user constructed datatypes.

**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 non-blocking collective (MPE) routines.

**User Response:** Refer to man page for information about the use of MP\_SHARED\_MEMORY environment variable and non-blocking 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     **session needs to connect or load before running the 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://oss.software.ibm.com/developerworks/opensource/dpcl/>

---

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>.

---

**2554-021**      **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 *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.

---

**2554-027**      **Help is not available in the beta release**

**Explanation:** Help is not provided in beta release.

**User Response:** None.

---

**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.

---

**2554-076      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.

---

2554-080      **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 mpmdcmd 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 **mpmdcmd** 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 mpmdcmd clause.**

**Explanation:** You cannot specify both the **exec** clause and the **mpmdcmd** clause with the **load** command.

**User Response:** Try **load** again; this time with only an **exec** clause or an **mpmdcmd** clause.

---

2554-084      **mpmdcmd clause also requires poe keyword.**

**Explanation:** The **load mpmdcmd** 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.

---

2554-201      **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 probetypes** 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 probetypes** 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.

---

**2554-341**      **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**      **ProfId has been specified, Only one option is allowed**

**Explanation:** Only one ProfId/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 **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**      **There is no function in the specified file and function combination.**

**Explanation:** The specified file and function 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:** Type 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 profile to be removed**

**Explanation:** There is no previous added profile to be removed.

**User Response:** Issue the **add** command before the **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 **show probes** to see the list of profiles.

---



---

## 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 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.

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## Appendix. Accessibility

Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, to use software products successfully. The major accessibility features enable users to:

- Use assistive technologies such as screen readers and screen magnifier software
- Operate specific or equivalent features using only the keyboard
- Customize display attributes such as color, contrast, and font size.

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### Accessibility information

Accessibility information for IBM products is available online. Visit the IBM Accessibility Center at:

<http://www.ibm.com/able/>

To request accessibility information, click **Product accessibility information**.

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### Using assistive technologies

Assistive technology products, such as screen readers, function with user interfaces. Consult the assistive technology documentation for specific information when using such products to access interfaces.



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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*.

If you believe that PE MPI does not comply with the MPI standard for the portions that are implemented, please contact IBM Service.

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## **Acknowledgments**

The PE Benchmark product includes software developed by the Apache Software  
Foundation, <http://www.apache.org>.

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# Glossary

## A

**AFS.** Andrew File System.

**address.** A value, possibly a character or group of characters that identifies a register, a device, a particular part of storage, or some other data source or destination.

**AIX.** Abbreviation for Advanced Interactive Executive, IBM's licensed version of the UNIX operating system. AIX is particularly suited to support technical computing applications, including high-function graphics and floating-point computations.

**AIXwindows Environment/6000.** A graphical user interface (GUI) for the IBM RS/6000. It has the following components:

- A graphical user interface and toolkit based on OSF/Motif
- Enhanced X-Windows, an enhanced version of the MIT X Window System
- Graphics Library (GL), a graphical interface library for the application programmer that is compatible with Silicon Graphics' GL interface.

**API.** Application programming interface.

**application.** The use to which a data processing system is put; for example, a payroll application, an airline reservation application.

**argument.** A parameter passed between a calling program and a called program or subprogram.

**attribute.** A named property of an entity.

**Authentication.** The process of validating the identity of a user or server.

**Authorization.** The process of obtaining permission to perform specific actions.

## B

**bandwidth.** The difference, expressed in hertz, between the highest and the lowest frequencies of a range of frequencies. For example, analog transmission by recognizable voice telephone requires a bandwidth of about 3000 hertz (3 kHz). The bandwidth of an optical link designates the information-carrying capacity of the link and is related to the maximum bit rate that a fiber link can support.

**blocking operation.** An operation that does not complete until the operation either succeeds or fails. For example, a blocking receive will not return until a

message is received or until the channel is closed and no further messages can be received.

**breakpoint.** A place in a program, specified by a command or a condition, where the system halts execution and gives control to the workstation user or to a specified program.

**broadcast operation.** A communication operation where one processor sends (or broadcasts) a message to all other processors.

**buffer.** A portion of storage used to hold input or output data temporarily.

## C

**C.** A general-purpose programming language. It was formalized by Uniform in 1983 and the ANSI standards committee for the C language in 1984.

**C++.** A general-purpose programming language that is based on the C language. C++ includes extensions that support an object-oriented programming paradigm. Extensions include:

- strong typing
- data abstraction and encapsulation
- polymorphism through function overloading and templates
- class inheritance.

**chaotic relaxation.** An iterative relaxation method that uses a combination of the Gauss-Seidel and Jacobi-Seidel methods. The array of discrete values is divided into subregions that can be operated on in parallel. The subregion boundaries are calculated using the Jacobi-Seidel method, while the subregion interiors are calculated using the Gauss-Seidel method. See also *Gauss-Seidel*.

**client.** A function that requests services from a server and makes them available to the user.

| **cluster.** A group of processors interconnected through  
| a high-speed network that can be used for  
| high-performance computing.

**Cluster 1600.** See IBM @server Cluster 1600.

**collective communication.** A communication operation that involves more than two processes or tasks. Broadcasts, reductions, and the **MPI\_Allreduce** subroutine are all examples of collective communication operations. All tasks in a communicator must participate.

**command alias.** When using the PE command-line debugger **pdbx**, you can create abbreviations for existing commands using the **pdbx alias** command. These abbreviations are known as *command aliases*.

| **Communication Subsystem (CSS).** A component of  
| the IBM Parallel System Support Programs for AIX that  
| provides software support for the high performance  
| switch. CSS provides two protocols: Internet Protocol  
| (IP) for LAN-based communication and User Space  
| protocol as a message passing interface that is  
| optimized for performance over the switch. See also  
| *Internet Protocol* and *User Space*.

**communicator.** An MPI object that describes the communication context and an associated group of processes.

**compile.** To translate a source program into an executable program.

**condition.** One of a set of specified values that a data item can assume.

**control workstation.** A workstation attached to the IBM RS/6000 SP that serves as a single point of control allowing the administrator or operator to monitor and manage the system using IBM Parallel System Support Programs for AIX.

**core dump.** A process by which the current state of a program is preserved in a file. Core dumps are usually associated with programs that have encountered an unexpected, system-detected fault, such as a Segmentation Fault or a severe user error. The current program state is needed for the programmer to diagnose and correct the problem.

**core file.** A file that preserves the state of a program, usually just before a program is terminated for an unexpected error. See also *core dump*.

**current context.** When using the **pdbx** debugger, control of the parallel program and the display of its data can be limited to a subset of the tasks belonging to that program. This subset of tasks is called the *current context*. You can set the current context to be a single task, multiple tasks, or all the tasks in the program.

## D

**data decomposition.** A method of breaking up (or decomposing) a program into smaller parts to exploit parallelism. One divides the program by dividing the data (usually arrays) into smaller parts and operating on each part independently.

**data parallelism.** Refers to situations where parallel tasks perform the same computation on different sets of data.

**dbx.** A symbolic command-line debugger that is often provided with UNIX systems. The PE command-line debugger **pdbx** is based on the **dbx** debugger.

**debugger.** A debugger provides an environment in which you can manually control the execution of a program. It also provides the ability to display the program's data and operation.

**distributed shell (dsh).** An IBM Parallel System Support Programs for AIX command that lets you issue commands to a group of hosts in parallel. See *IBM Parallel System Support Programs for AIX: Command and Technical Reference* for details.

**domain name.** The hierarchical identification of a host system (in a network), consisting of human-readable labels, separated by decimal points.

| **DPCL target application.** The executable program that  
| is instrumented by a Dynamic Probe Class Library  
| (DPCL) analysis tool. It is the process (or processes)  
| into which the DPCL analysis tool inserts probes. A  
| target application could be a serial or parallel program.  
| Furthermore, if the target application is a parallel  
| program, it could follow either the SPMD or the  
| MPMD model, and may be designed for either a  
| message-passing or a shared-memory system.

## E

**environment variable.** (1) A variable that describes the operating environment of the process. Common environment variables describe the home directory, command search path, and the current time zone. (2) A variable that is included in the current software environment and is therefore available to any called program that requests it.

**Ethernet.** A baseband local area network (LAN) that allows multiple stations to access the transmission medium at will without prior coordination, avoids contention by using carrier sense and deference, and resolves contention by using collision detection and delayed retransmission. Ethernet uses carrier sense multiple access with collision detection (CSMA/CD).

**event.** An occurrence of significance to a task — the completion of an asynchronous operation such as an input/output operation, for example.

**executable.** A program that has been link-edited and therefore can be run in a processor.

**execution.** To perform the actions specified by a program or a portion of a program.

**expression.** In programming languages, a language construct for computing a value from one or more operands.

## F

**fairness.** A policy in which tasks, threads, or processes must be allowed eventual access to a resource for which they are competing. For example, if multiple threads are simultaneously seeking a lock, no set of circumstances can cause any thread to wait indefinitely for access to the lock.

**FDDI.** Fiber Distributed Data Interface.

**Fiber Distributed Data Interface (FDDI).** An American National Standards Institute (ANSI) standard for a local area network (LAN) using optical fiber cables. An FDDI LAN can be up to 100 kilometers (62 miles) long, and can include up to 500 system units. There can be up to 2 kilometers (1.24 miles) between system units and concentrators.

**file system.** In the AIX operating system, the collection of files and file management structures on a physical or logical mass storage device, such as a diskette or minidisk.

**fileset.** (1) An individually-installable option or update. Options provide specific functions. Updates correct an error in, or enhance, a previously installed program. (2) One or more separately-installable, logically-grouped units in an installation package. See also *licensed program* and *package*.

**foreign host.** See *remote host*.

**FORTRAN.** One of the oldest of the modern programming languages, and the most popular language for scientific and engineering computations. Its name is a contraction of *FORmula TRANslation*. The two most common FORTRAN versions are FORTRAN 77, originally standardized in 1978, and FORTRAN 90. FORTRAN 77 is a proper subset of FORTRAN 90.

**function cycle.** A chain of calls in which the first caller is also the last to be called. A function that calls itself recursively is not considered a function cycle.

**functional decomposition.** A method of dividing the work in a program to exploit parallelism. The program is divided into independent pieces of functionality, which are distributed to independent processors. This method is in contrast to data decomposition, which distributes the same work over different data to independent processors.

**functional parallelism.** Refers to situations where parallel tasks specialize in particular work.

## G

**Gauss-Seidel.** An iterative relaxation method for solving Laplace's equation. It calculates the general solution by finding particular solutions to a set of discrete points distributed throughout the area in

question. The values of the individual points are obtained by averaging the values of nearby points. Gauss-Seidel differs from Jacobi-Seidel in that, for the  $i+1$ st iteration, Jacobi-Seidel uses only values calculated in the  $i$ th iteration. Gauss-Seidel uses a mixture of values calculated in the  $i$ th and  $i+1$ st iterations.

**global max.** The maximum value across all processors for a given variable. It is global in the sense that it is global to the available processors.

**global variable.** A variable defined in one portion of a computer program and used in at least one other portion of the computer program.

**gprof.** A UNIX command that produces an execution profile of C, COBOL, FORTRAN, or Pascal programs. The execution profile is in a textual and tabular format. It is useful for identifying which routines use the most CPU time. See the man page on **gprof**.

**graphical user interface (GUI).** A type of computer interface consisting of a visual metaphor of a real-world scene, often of a desktop. Within that scene are icons, which represent actual objects, that the user can access and manipulate with a pointing device.

**GUI.** Graphical user interface.

## H

**high performance switch.** The high-performance message-passing network of the IBM RS/6000 SP that connects all processor nodes.

**HIPPI.** High performance parallel interface.

**hook.** A **pdbx** command that lets you re-establish control over all tasks in the current context that were previously unhooked with this command.

**home node.** The node from which an application developer compiles and runs his program. The home node can be any workstation on the LAN.

**host.** A computer connected to a network that provides an access method to that network. A host provides end-user services.

**host list file.** A file that contains a list of host names, and possibly other information, that was defined by the application that reads it.

**host name.** The name used to uniquely identify any computer on a network.

**hot spot.** A memory location or synchronization resource for which multiple processors compete excessively. This competition can cause a disproportionately large performance degradation when one processor that seeks the resource blocks, preventing many other processors from having it, thereby forcing them to become idle.

## I

**IBM @server Cluster 1600.** An IBM @server Cluster 1600 is any PSSP or CSM-managed cluster comprised of POWER microprocessor based systems (including RS/6000 SMPs, RS/6000 SP nodes, and pSeries SMPs).

**IBM Parallel Environment (PE) for AIX.** A licensed program that provides an execution and development environment for parallel C, C++, and FORTRAN programs. It also includes tools for debugging, profiling, and tuning parallel programs.

**installation image.** A file or collection of files that are required in order to install a software product on a IBM RS/6000 workstation or on SP system nodes. These files are in a form that allows them to be installed or removed with the AIX **installp** command. See also *fileset*, *licensed program*, and *package*.

**Internet.** The collection of worldwide networks and gateways that function as a single, cooperative virtual network.

**Internet Protocol (IP).** (1) The TCP/IP protocol that provides packet delivery between the hardware and user processes. (2) The SP switch library, provided with the IBM Parallel System Support Programs for AIX, that follows the IP protocol of TCP/IP.

IP. Internet Protocol.

## J

**Jacobi-Seidel.** See *Gauss-Seidel*.

## K

**Kerberos.** A publicly available security and authentication product that works with the IBM Parallel System Support Programs for AIX software to authenticate the execution of remote commands.

**kernel.** The core portion of the UNIX operating system that controls the resources of the CPU and allocates them to the users. The kernel is memory-resident, is said to run in *kernel mode* (in other words, at higher execution priority level than *user mode*), and is protected from user tampering by the hardware.

## L

**Laplace's equation.** A homogeneous partial differential equation used to describe heat transfer, electric fields, and many other applications.

**latency.** The time interval between the instant when an instruction control unit initiates a call for data transmission, and the instant when the actual transfer

of data (or receipt of data at the remote end) begins. Latency is related to the hardware characteristics of the system and to the different layers of software that are involved in initiating the task of packing and transmitting the data.

**licensed program.** A collection of software packages sold as a product that customers pay for to license. A licensed program can consist of packages and file sets a customer would install. These packages and file sets bear a copyright and are offered under the terms and conditions of a licensing agreement. See also *fileset* and *package*.

**lightweight corefiles.** An alternative to standard AIX corefiles. Corefiles produced in the *Standardized Lightweight Corefile Format* provide simple process stack traces (listings of function calls that led to the error) and consume fewer system resources than traditional corefiles.

**LoadLeveler.** A job management system that works with POE to let users run jobs and match processing needs with system resources, in order to make better use of the system.

**local variable.** A variable that is defined and used only in one specified portion of a computer program.

**loop unrolling.** A program transformation that makes multiple copies of the body of a loop, also placing the copies within the body of the loop. The loop trip count and index are adjusted appropriately so the new loop computes the same values as the original. This transformation makes it possible for a compiler to take additional advantage of instruction pipelining, data cache effects, and software pipelining.

See also *optimization*.

## M

| **management domain .** A set of nodes configured for  
| manageability by the Clusters Systems Management  
| (CSM) product. Such a domain has a management  
| server that is used to administer a number of managed  
| nodes. Only management servers have knowledge of  
| the whole domain. Managed nodes only know about  
| the servers managing them; they know nothing of each  
| other. Contrast with *peer domain*.

**menu.** A list of options displayed to the user by a data processing system, from which the user can select an action to be initiated.

**message catalog.** A file created using the AIX Message Facility from a message source file that contains application error and other messages, which can later be translated into other languages without having to recompile the application source code.

**message passing.** Refers to the process by which parallel tasks explicitly exchange program data.

**Message Passing Interface (MPI).** A standardized API for implementing the message-passing model.

**MIMD.** Multiple instruction stream, multiple data stream.

**Multiple instruction stream, multiple data stream (MIMD).** A parallel programming model in which different processors perform different instructions on different sets of data.

**MPMD.** Multiple program, multiple data.

**Multiple program, multiple data (MPMD).** A parallel programming model in which different, but related, programs are run on different sets of data.

**MPI.** Message Passing Interface.

## N

**network.** An interconnected group of nodes, lines, and terminals. A network provides the ability to transmit data to and receive data from other systems and users.

**Network Information Services.** A set of UNIX network services (for example, a distributed service for retrieving information about the users, groups, network addresses, and gateways in a network) that resolve naming and addressing differences among computers in a network.

**NIS.** See *Network Information Services*.

**node.** (1) In a network, the point where one or more functional units interconnect transmission lines. A computer location defined in a network. (2) In terms of the IBM RS/6000 SP, a single location or workstation in a network. An SP node is a physical entity (a processor).

**node ID.** A string of unique characters that identifies the node on a network.

**nonblocking operation.** An operation, such as sending or receiving a message, that returns immediately whether or not the operation was completed. For example, a nonblocking receive will not wait until a message is sent, but a blocking receive will wait. A nonblocking receive will return a status value that indicates whether or not a message was received.

## O

**object code.** The result of translating a computer program to a relocatable, low-level form. Object code contains machine instructions, but symbol names (such as array, scalar, and procedure names), are not yet given a location in memory. Contrast with *source code*.

**optimization.** A widely-used (though not strictly accurate) term for program performance improvement,

especially for performance improvement done by a compiler or other program translation software. An optimizing compiler is one that performs extensive code transformations in order to obtain an executable that runs faster but gives the same answer as the original. Such code transformations, however, can make code debugging and performance analysis very difficult because complex code transformations obscure the correspondence between compiled and original source code.

**option flag.** Arguments or any other additional information that a user specifies with a program name. Also referred to as *parameters* or *command-line options*.

## P

**package.** A number of file sets that have been collected into a single installable image of licensed programs. Multiple file sets can be bundled together for installing groups of software together. See also *fileset* and *licensed program*.

**parallelism.** The degree to which parts of a program may be concurrently executed.

**parallelize.** To convert a serial program for parallel execution.

**parallel operating environment (POE).** An execution environment that smooths the differences between serial and parallel execution. It lets you submit and manage parallel jobs. It is abbreviated and commonly known as POE.

**parameter.** (1) In FORTRAN, a symbol that is given a constant value for a specified application. (2) An item in a menu for which the operator specifies a value or for which the system provides a value when the menu is interpreted. (3) A name in a procedure that is used to refer to an argument that is passed to the procedure. (4) A particular piece of information that a system or application program needs to process a request.

**partition.** (1) A fixed-size division of storage. (2) In terms of the IBM RS/6000 SP, a logical collection of nodes to be viewed as one system or domain. System partitioning is a method of organizing the SP system into groups of nodes for testing or running different levels of software of product environments.

**Partition Manager.** The component of the parallel operating environment (POE) that allocates nodes, sets up the execution environment for remote tasks, and manages distribution or collection of standard input (STDIN), standard output (STDOUT), and standard error (STDERR).

**pdbx.** The parallel, symbolic command-line debugging facility of PE. **pdbx** is based on the **dbx** debugger and has a similar interface.

**PE.** The IBM Parallel Environment for AIX 5L licensed program.

| **peer domain.** A set of nodes configured for high  
| availability by the RSCT configuration manager. Such a  
| domain has no distinguished or master node. All nodes  
| are aware of all other nodes, and administrative  
| commands can be issued from any node in the domain.  
| All nodes also have a consistent view of the domain  
| membership. Contrast with *management domain*.

**performance monitor.** A utility that displays how effectively a system is being used by programs.

**PID.** Process identifier.

**POE.** parallel operating environment.

**pool.** Groups of nodes on an SP system that are known to LoadLeveler, and are identified by a pool name or number.

**point-to-point communication.** A communication operation that involves exactly two processes or tasks. One process initiates the communication through a *send* operation. The partner process issues a *receive* operation to accept the data being sent.

**procedure.** (1) In a programming language, a block, with or without formal parameters, whose execution is invoked by means of a procedure call. (2) A set of related control statements that cause one or more programs to be performed.

**process.** A program or command that is actually running the computer. It consists of a loaded version of the executable file, its data, its stack, and its kernel data structures that represent the process's state within a multitasking environment. The executable file contains the machine instructions (and any calls to shared objects) that will be executed by the hardware. A process can contain multiple threads of execution.

The process is created with a **fork()** system call and ends using an **exit()** system call. Between **fork** and **exit**, the process is known to the system by a unique process identifier (PID).

Each process has its own virtual memory space and cannot access another process's memory directly. Communication methods across processes include pipes, sockets, shared memory, and message passing.

**prof.** A utility that produces an execution profile of an application or program. It is useful to identify which routines use the most CPU time. See the man page for **prof**.

**profiling.** The act of determining how much CPU time is used by each function or subroutine in a program. The histogram or table produced is called the execution profile.

**Program Marker Array.** An X-Windows run time monitor tool provided with parallel operating environment, used to provide immediate visual feedback on a program's execution.

**pthread.** A thread that conforms to the POSIX Threads Programming Model.

## R

**reduced instruction-set computer.** A computer that uses a small, simplified set of frequently-used instructions for rapid execution.

**reduction operation.** An operation, usually mathematical, that reduces a collection of data by one or more dimensions. For example, the arithmetic SUM operation is a reduction operation that reduces an array to a scalar value. Other reduction operations include MAXVAL and MINVAL.

**Reliable Scalable Cluster Technology.** A set of software components that together provide a comprehensive clustering environment for AIX. RSCT is the infrastructure used by a variety of IBM products to provide clusters with improved system availability, scalability, and ease of use.

**remote host.** Any host on a network except the one where a particular operator is working.

**remote shell (rsh).** A command supplied with both AIX and the IBM Parallel System Support Programs for AIX that lets you issue commands on a remote host.

**RISC.** See *reduced instruction-set computer*.

**RSCT.** See Reliable Scalable Cluster Technology.

**RSCT peer domain.** See *peer domain*.

## S

**shell script.** A sequence of commands that are to be executed by a shell interpreter such as the Bourne shell (**sh**), the C shell (**csh**), or the Korn shell (**ksh**). Script commands are stored in a file in the same format as if they were typed at a terminal.

**segmentation fault.** A system-detected error, usually caused by referencing a non-valid memory address.

**server.** A functional unit that provides shared services to workstations over a network — a file server, a print server, or a mail server, for example.

**signal handling.** A type of communication that is used by message passing libraries. Signal handling involves using AIX signals as an asynchronous way to move data in and out of message buffers.

**Single program, multiple data (SPMD).** A parallel programming model in which different processors execute the same program on different sets of data.

**source code.** The input to a compiler or assembler, written in a source language. Contrast with *object code*.

**source line.** A line of source code.

**SP.** IBM RS/6000 SP; a scalable system arranged in various physical configurations, that provides a high-powered computing environment.

**SPMD.** Single program, multiple data.

**standard input (STDIN).** In the AIX operating system, the primary source of data entered into a command. Standard input comes from the keyboard unless redirection or piping is used, in which case standard input can be from a file or the output from another command.

**standard output (STDOUT).** In the AIX operating system, the primary destination of data produced by a command. Standard output goes to the display unless redirection or piping is used, in which case standard output can go to a file or to another command.

**STDIN.** Standard input.

**STDOUT.** Standard output.

**stencil.** A pattern of memory references used for averaging. A 4-point stencil in two dimensions for a given array cell,  $x(i,j)$ , uses the four adjacent cells,  $x(i-1,j)$ ,  $x(i+1,j)$ ,  $x(i,j-1)$ , and  $x(i,j+1)$ .

**subroutine.** (1) A sequence of instructions whose execution is invoked by a call. (2) A sequenced set of instructions or statements that can be used in one or more computer programs and at one or more points in a computer program. (3) A group of instructions that can be part of another routine or can be called by another program or routine.

**synchronization.** The action of forcing certain points in the execution sequences of two or more asynchronous procedures to coincide in time.

**system administrator.** (1) The person at a computer installation who designs, controls, and manages the use of the computer system. (2) The person who is responsible for setting up, modifying, and maintaining the Parallel Environment.

**System Data Repository.** A component of the IBM Parallel System Support Programs for AIX software that provides configuration management for the SP system. It manages the storage and retrieval of system data across the control workstation, file servers, and nodes.

## T

**target application.** See *DPCL target application*.

**task.** A unit of computation analogous to an AIX process.

**thread.** A single, separately dispatchable, unit of execution. There can be one or more threads in a process, and each thread is executed by the operating system concurrently.

**tracing.** In PE, the collection of information about the execution of the program. This information is accumulated into a trace file that can later be examined.

**tracepoint.** Tracepoints are places in the program that, when reached during execution, cause the debugger to print information about the state of the program.

**trace record.** In PE, a collection of information about a specific event that occurred during the execution of your program. For example, a trace record is created for each send and receive operation that occurs in your program (this is optional and might not be appropriate). These records are then accumulated into a trace file that can later be examined.

## U

**unrolling loops.** See *loop unrolling*.

**user.** (1) A person who requires the services of a computing system. (2) Any person or any thing that can issue or receive commands and message to or from the information processing system.

| **User Space.** A version of the message passing library  
| that is optimized for direct access to the high  
| performance switch, that maximizes the performance  
| capabilities of the SP hardware.

**utility program.** A computer program in general support of computer processes; for example, a diagnostic program, a trace program, a sort program.

**utility routine.** A routine in general support of the processes of a computer; for example, an input routine.

## V

**variable.** (1) In programming languages, a named object that may take different values, one at a time. The values of a variable are usually restricted to one data type. (2) A quantity that can assume any of a given set of values. (3) A name used to represent a data item whose value can be changed while the program is running. (4) A name used to represent data whose value can be changed, while the program is running, by referring to the name of the variable.

**view.** (1) To display and look at data on screen. (2) A special display of data, created as needed. A view temporarily ties two or more files together so that the combined files can be displayed, printed, or queried. The user specifies the fields to be included. The original files are not permanently linked or altered; however, if the system allows editing, the data in the original files will be changed.

## **X**

**X Window System.** The UNIX industry's graphics windowing standard that provides simultaneous views of several executing programs or processes on high resolution graphics displays.

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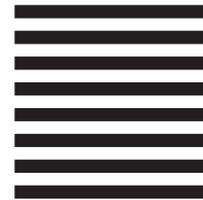
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