EXPRESSCLUSTER X SingleServerSafe 5.1 for Linux Operation Guide

Release 1

NEC Corporation

Apr 10, 2023

TABLE OF CONTENTS:

CHAPTER

ONE

PREFACE

1.1 Who Should Use This Guide

The *EXPRESSCLUSTER® X SingleServerSafe Operation Guide* is intended for system administrators who will operate and maintain an introduced system.

1.2 How This Guide Is Organized

- 2. *EXPRESSCLUSTER X SingleServerSafe command reference*: Provides information on commands available to use in EXPRESSCLUSTER.
- 3. *Notes and restrictions*: Provides information on known problems and restrictions.
- 4. *Error messages*: Lists and describes error messages you might encounter when operating EXPRESSCLUSTER X SingleServerSafe.

1.3 Terms Used in This Guide

EXPRESSCLUSTER X SingleServerSafe, which is described in this guide, uses windows and commands common to those of the clustering software EXPRESSCLUSTER X to ensure high compatibility with EXPRESSCLUSTER X in terms of operation and other aspects. Therefore, cluster-related terms are used in parts of the guide.

The terms used in this guide are defined below.

Cluster, cluster system A single server system using EXPRESSCLUSTER X SingleServerSafe

Cluster shutdown, reboot Shutdown or reboot of a system using EXPRESSCLUSTER X SingleServerSafe

Cluster resource A resource used in EXPRESSCLUSTER X SingleServerSafe

Cluster object A resource object used in EXPRESSCLUSTER X SingleServerSafe

Failover group A group of group resources (such as applications and services) used in EXPRESSCLUSTER X SingleServerSafe

1.4 EXPRESSCLUSTER X SingleServerSafe Documentation Set

The EXPRESSCLUSTER X SingleServerSafe documentation consists of the three guides below. The title and purpose of each guide is described below:

EXPRESSCLUSTER X SingleServerSafe Installation Guide

> This guide is intended for system engineers who intend to introduce a system using EXPRESSCLUSTER X SingleServerSafe and describes how to install EXPRESSCLUSTER X SingleServerSafe.

EXPRESSCLUSTER X SingleServerSafe Configuration Guide

> This guide is intended for system engineers who intend to introduce a system using EXPRESSCLUSTER X SingleServerSafe and system administrators who will operate and maintain the introduced system. It describes how to set up EXPRESSCLUSTER X SingleServerSafe.

EXPRESSCLUSTER X SingleServerSafe Operation Guide

> This guide is intended for system administrators who will operate and maintain an introduced system that uses EXPRESSCLUSTER X SingleServerSafe. It describes how to operate EXPRESSCLUSTER X SingleServerSafe.

1.5 Conventions

In this guide, **Note**, **Important**, and **See also** are used as follows:

Note: Used when the information given is important, but not related to the data loss and damage to the system and machine.

Important: Used when the information given is necessary to avoid the data loss and damage to the system and machine.

See also:

Used to describe the location of the information given at the reference destination.

The following conventions are used in this guide.

Convention	Usage	Example
Bold	Indicates graphical objects, such as fields, list boxes, menu selections, buttons, labels, icons, etc.	In User Name, type your name. On the File menu, click Open Database.
Angled bracket within the command line	Indicates that the value specified inside of the angled bracket can be omitted.	`clpstat -s [-h host_name]`
#	Prompt to indicate that a Linux user has logged in as root user.	`# clpcl -s -a`
Monospace	Indicates path names, commands, system output (message, prompt, etc), directory, file names, functions and parameters.	`/Linux/5.1/en/server/`
bold	Indicates the value that a user actually enters from a command line.	Enter the following: **clpcl -s -a**
italic	Indicates that users should replace italicized part with values that they are actually working with.	`rpm -i expressclssss-<version_number>-<release_number>.x86_64.rpm`


In the figures of this guide, this icon represents EXPRESSCLUSTER X SingleServerSafe.

1.6 Contacting NEC

For the latest product information, visit our website below:

https://www.nec.com/global/prod/expresscluster/

CHAPTER

TWO

EXPRESSCLUSTER X SINGLESERVERSAFE COMMAND REFERENCE

This chapter describes the commands available with EXPRESSCLUSTER X SingleServerSafe.

EXPRESSCLUSTER X SingleServerSafe uses commands common to those of the clustering software EXPRESSCLUSTER X to ensure high compatibility with EXPRESSCLUSTER X in terms of operation and other aspects.

This chapter covers:

2.1 Operating the cluster from the command line

EXPRESSCLUSTER X SingleServerSafe provides various commands for performing operations from the command prompt. These commands are useful in such cases as when you are setting up a cluster or cannot use the Cluster WebUI. You can perform a greater number of operations by using the command line than by using the Cluster WebUI.

Note: If the monitor resource detects an error when you have specified a group resource (such as an application resource) as a recovery target in the settings for error detection by a monitor resource, do not perform the following control operations for any service or group by using a command or the Cluster WebUI during recovery (reactivation -> final action).

- Stopping or suspending a service
- Starting or stopping a group

If you perform the above-mentioned operations while recovery caused by detection of an error by a monitor resource is in progress, other group resources of the group with an error may not stop.
However, you can perform them when the final action is completed.

Important: The installation directory contains executable-format files and script files that are not listed in this guide. Do not execute these files by programs or applications other than EXPRESSCLUSTER. Any problems caused by not using EXPRESSCLUSTER will not be supported.

2.2 EXPRESSCLUSTER commands

- Commands for construction

command	Explanation	Refer to
clpcfctrl	Delivers the configuration data created by the Cluster WebUI to servers. Backs up the configuration data to be used by the Cluster WebUI.	2.8. *Applying and backing up configuration data (clpcfctrl command)*
clplcnsc	Manages the product or trial version license of this product.	2.11. *Managing licenses (clplcnsc command)*
clpcfchk	Checks cluster configuration data.	2.19. *Checking the cluster configuration information (clpcfchk command)*
clpfwctrl.sh	Adds a firewall rule.	2.20. *Adding a firewall rule (clpfwctrl command)*

- Commands for showing status

command	Explanation	Refer to
clpstat	Displays the status and configuration data of EXPRESSCLUSTER X SingleServerSafe.	2.3. *Displaying the status (clpstat command)*
clphealthchk	Check the process health.	2.17. *Checking the process health (clphealthchk command)*

- Commands for operation

command	Explanation	Refer to
clpcl	Starts, stops, suspends, or resumes the daemon.	2.4. *Operating the EXPRESSCLUSTER daemon (clpcl command)*
clpstdn	Stops and shuts down the EXPRESSCLUSTER daemon.	2.5. *Shutting down the server (clpstdn command)*
clpgrp	Starts and stops groups.	2.6. *Operating groups (clpgrp command)*
clptoratio	Extends or displays the timeout values.	2.9. *Adjusting time-out temporarily (clptoratio command)*
clpmonctrl	Suspends and/or resumes monitor resources on a server.	2.13. *Controlling monitor resources (clpmonctrl command)*
clpregctrl	Displays and/or initializes reboot count on a single server.	2.16. *Controlling reboot count (clpregctrl command)*
clprsc	Suspends or resumes group resources.	2.14. *Controlling group resources (clprsc command)*
clprexec	Requests that an EXPRESSCLUSTER server execute a process from external monitoring.	2.15. *Requesting processing to cluster servers (clprexec command)*

- Commands for logs

command	Explanation	Refer to
clplogcc	Collects logs and OS information.	2.7. *Collecting logs (clplogcc command)*
clplogcf	Modifies and displays log level and log output file size.	2.10. *Modifying the log level and size (clplogcf command)*
clpperfc	Displays cluster statistical information on a group or a monitor resource.	2.18. *Displaying the cluster statistics information (clpperfc command)*

- Script-related commands

command	Explanation	Refer to
clplogcmd	Write this command in the EXEC resource script to output messages to any destination.	2.12. *Outputting messages (clplogcmd command)*

Important: The installation directory contains executable files and script files that are not listed in this guide. Do not execute these files by using any program other than EXPRESSCLUSTER X SingleServerSafe. Any problems caused by not using EXPRESSCLUSTER will not be supported.

2.3 Displaying the status (clpstat command)

Displays the status and configuration data of EXPRESSCLUSTER X SingleServerSafe.

Command line

clpstat: -s [--long]
clpstat: -g
clpstat: -m
clpstat: -i [--detail]
clpstat: --cl [--detail]
clpstat: --sv [--detail]
clpstat: --grp [group_name] [--detail]
clpstat: --rsc [resource_name] [--detail]
clpstat: --mon [monitor_name] [--detail]

Description

Displays the server status and configuration information.

Option

-s

None
Displays the status.

--long
Displays a name of the cluster name and resource name until the end.

-g
Displays a group map.

-m
Displays the status of each monitor resource.

-i
Displays the configuration data.

--cl
Displays the configuration data.

--sv
Displays the server configuration information.

--grp [group_name]
Displays server group configuration information. By specifying the name of a server group, you can display only the information on the specified server group.

--rsc [resource_name]
Displays group resource configuration information. By specifying the name of a group resource, you can display only the information on the specified group resource.

--mon [monitor_name]
Displays monitor resource configuration information. By specifying the name of a monitor resource, you can display only the information on the specified monitor resource.

--detail
Displays more detailed information on the setting.

Return Value

0	Success
Other than the above	Failure

Notes

This command must be executed by a user with the root privilege.

For the language used for this command output, see "Info tab" of "Cluster properties" in "Details of other settings" in "EXPRESSCLUSTER X SingleServerSafe Configuration Guide".

When you run the clpstat command with the -s option or without any option, names such as a server name and a resource name are displayed only partway.

Error Messages

Message	Cause/Solution
Log in as root.	Log on as root user.
Invalid configuration file. Create valid cluster configuration data.	Create valid cluster configuration data by using the Cluster WebUI.
Invalid option.	Specify a valid option.
Could not connect to the server. Check if the cluster daemon is active.	Check if the EXPRESSCLUSTER Information Base service is started.
Invalid server status.	Check if the cluster daemon is started.
Server is not active. Check if the cluster daemon is active.	Check if the cluster daemon is started.
Invalid server name. Specify a valid server name in the cluster.	Specify the valid name of a server in the cluster.
Invalid heartbeat resource name. Specify a valid heartbeat resource name in the cluster.	Specify the valid name of a heartbeat resource in the cluster.
Invalid network partition resource name. Specify a valid network partition resource name in the cluster.	Specify the valid name of a network partition resolution resource in the cluster.
Invalid group name. Specify a valid group name in the cluster.	Specify the valid name of a group in the cluster.
Invalid group resource name. Specify a valid group resource name in the cluster.	Specify the valid name of a group resource in the cluster.
Invalid monitor resource name. Specify a valid monitor resource name in the cluster.	Specify the valid name of a monitor resource in the cluster.
Connection was lost. Check if there is a server where the cluster daemon is stopped in the cluster.	Check if there is any server on which the cluster daemon has stopped in the cluster.
Invalid parameter.	The value specified as a command parameter may be invalid.

Continued on next page

Table 2.6 – continued from previous page

Message	Cause/Solution
Internal communication timeout has occurred in the cluster server. If it occurs frequently, set the longer timeout.	A time-out occurred in the EXPRESSCLUSTER internal communication. If time-out keeps occurring, set the internal communication time-out longer.
Internal error. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.
Invalid server group name. Specify a valid server group name in the cluster.	Specify the correct server group name in the cluster.
The cluster is not created.	Create and apply the cluster configuration data.
Could not connect to the server. Internal error. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.
Cluster is stopped. Check if the cluster daemon is active.	Check if the cluster daemon is started.
Cluster is suspended. To display the cluster status, use --local option.	Cluster is suspended. To display the cluster status, use --local option.

2.4 Operating the EXPRESSCLUSTER daemon (clpcl command)

Operates the EXPRESSCLUSTER daemon.

Command line

clpcl -s
clpcl -t [-w *timeout*] [--apito *timeout*]
clpcl -r [-w *timeout*] [--apito *timeout*]
clpcl --suspend [--force] [-w *timeout*] [--apito *timeout*]
clpcl --resume

Description

This command starts, stops, suspends, or resumes the EXPRESSCLUSTER daemon.

Option

-s
Starts the EXPRESSCLUSTER daemon.

-t
Stops the EXPRESSCLUSTER daemon.

-r
Restarts the EXPRESSCLUSTER daemon.

--suspend
Suspends the EXPRESSCLUSTER daemon.

--resume
Resumes the EXPRESSCLUSTER daemon.

-w timeout

Specifies the wait time to stop or suspend the cluster daemon to be completed when -t, -r, or --suspend option is used.
The unit of time is second.
When a timeout is not specified, it waits for unlimited time.
When "0" is specified in timeout, it does not wait for the completion of stop or suspension of the EXPRESSCLUSTER daemon.
When the -w option is not specified, it waits for the completion of stop or suspension of the EXPRESSCLUSTER daemon for (heartbeat timeout x 2) (seconds).

--force
When used with the --suspend option, this option forcefully suspends the service regardless of the server status.

--apito timeout

Specify the interval (internal communication timeout) to wait for the EXPRESSCLUSTER daemon start or stop in seconds. A value from 1 to 9999 can be specified.
If the --apito option is not specified, waiting for the EXPRESSCLUSTER daemon start or stop is performed according to the value set to the internal communication timeout of the cluster properties.

Return Value

0	Success
Other than 0	Failure

Remarks

When this command is executed with the -s or --resume option specified, it returns control when processing starts on the target server.

When this command is executed with the -t or --suspend option specified, it returns control after waiting for the processing to complete.

When this command is executed with the -r option specified, it returns control when the EXPRESSCLUSTER daemon restarts on the target server after stopping once.

Run the clpstat command to display the started or resumed status of the EXPRESSCLUSTER daemon.

Notes

This command must be executed by a user with the root privilege.

This command cannot be executed while a group is being started or stopped.

Execute the --suspend option when the EXPRESSCLUSTER daemon is active. The --force option forcibly suspends the EXPRESSCLUSTER daemon.

When executing the --resume option, make sure that the EXPRESSCLUSTER daemon is not running by the clpstat command.

Example

Example 1: Activating the EXPRESSCLUSTER daemon in the server

```
# clpcl -s
```

- Suspend and Resume

When you want to update configuration data or EXPRESSCLUSTER, you can stop the EXPRESSCLUSTER daemon while continuing the operation. This status is called "suspend." Returning from the suspended status to normal status is called "resume."

The suspend and resume operations request processing of the server. The EXPRESSCLUSTER daemon of the server must be active when you execute a suspend operation.

The following functions stop when the cluster is suspended because the cluster daemon stops while active resources stay active.

- All monitor resources stop.
- You cannot perform operations on groups or group resources (start/stop).
- The following commands are disabled;
  - clpcl options other than --resume
  - clpstdn
  - clpgrp
  - clptoratio
  - clpmonctrl

Error Messages

Message	Cause/Solution
Log in as root.	Log on as root user.
Invalid configuration file. Create valid cluster configuration data .	Create valid cluster configuration data using the Cluster WebUI.
Invalid option.	Specify a valid option.
Performed stop processing to the stopped cluster daemon.	The stopping process has been executed on the stopped cluster daemon.
Performed startup processing to the active cluster daemon.	The startup process has been executed on the activated cluster daemon.
Could not connect to the server. Check if the cluster daemon is active.	Check if the cluster daemon is started.
Could not connect to the data transfer server. Check if the server has started up.	Check if the server is running.
Failed to obtain the list of nodes. Specify a valid server name in the cluster.	Specify the valid name of a server in the cluster.
Failed to obtain the daemon name.	Failed to obtain the cluster name.
Failed to operate the daemon.	Failed to control the cluster.
Resumed the daemon that is not suspended.	Performed the resume process for the HA Cluster daemon that is not suspended.
Invalid server status.	Check that the cluster daemon is started.
Server is busy. Check if this command is already run.	This command may have already been run.
Server is not active. Check if the cluster daemon is active.	Check if the cluster daemon is started.
There is one or more servers of which cluster daemon is active. If you want to perform resume, check if there is any server whose cluster daemon is active in the cluster.	When you execute the command to resume, check if there is no server in the cluster on which the cluster daemon is started.
All servers must be activated. When suspending the server, the cluster daemon need to be active on all servers in the cluster.	When you execute the command to suspend, the cluster daemon must be started in all servers in the cluster.
Resume the server because there is one or more suspended servers in the cluster.	Execute the command to resume because some server(s) in the cluster is in the suspend status.
Invalid server name. Specify a valid server name in the cluster.	Specify the valid name of a server in the cluster.
Connection was lost. Check if there is a server where the cluster daemon is stopped in the cluster.	Check if there is any server on which the cluster daemon is stopped in the cluster.
Invalid parameter.	The value specified as a command parameter may be invalid.
Internal communication timeout has occurred in the cluster server. If it occurs frequently, set the longer timeout.	A time-out occurred in the HA Cluster internal communication. If time-out keeps occurring, set the internal communication time-out longer.
Processing failed on some servers. Check the status of failed servers.	If stopping has been executed with all the servers specified, there is one of more server on which the stopping process has failed. Check the status of the server(s) on which the stopping process has failed.
Internal error. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.

Continued on next page

Table 2.7 – continued from previous page

Message	Cause/Solution
There is a server that is not suspended in cluster. Check the status of each server.	There is a server that is not suspended in the cluster. Check the status of each server.
Suspend %s : Could not suspend in time.	The server failed to complete the suspending process of the cluster daemon within the time-out period. Check the status of the server.
Stop %s : Could not stop in time.	The server failed to complete the stopping process of the cluster daemon within the time-out period. Check the status of the server.
Stop %s : Server was suspended. Could not connect to the server. Check if the cluster daemon is active.	The request to stop the cluster daemon was made. However the server was suspended.
Could not connect to the server. Check if the cluster daemon is active.	The request to stop the cluster daemon was made. However connecting to the server failed. Check the status of the server.
Suspend %s : Server already suspended. Could not connect to the server. Check if the cluster daemon is active.	The request to suspend the cluster daemon was made. However the server was suspended.
Event service is not started.	Event service is not started. Check it.
Mirror Agent is not started.	Mirror Agent is not started. Check it.
Event service and Mirror Agent are not started.	Event service and Mirror Agent are not started. Check them.
Some invalid status. Check the status of cluster.	The status of a group may be changing. Try again after the status change of the group is complete.

2.5 Shutting down the server (clpstdn command)

Shuts down the server.

Command line

clpstdn [-r]

Description

Stops and shuts down the EXPRESSCLUSTER daemon of the server.

Option

None

Shuts down the server.

-r

Shuts down and reboots the server.

Return Value

0	Success
Other than 0	Failure

Remarks

This command returns control when the group stop processing is completed.

Notes

This command must be executed by a user with the root privilege.

This command cannot be executed while a group is being started or stopped.

Examples

Example 1: Shutting down the server

```
# clpstdn
```

Example 2: Shutting down and rebooting the server

```
# clpstdn -r
```

2.6 Operating groups (clpgrp command)

Operates groups.

Command line

clpgrp -s [*group_name*] [--apito *timeout*]
clpgrp -t [*group_name*] [--apito *timeout*]

Description

Starts and stops groups.

Option

-s [group_name]
Starts a group. When you specify the name of a group, only the specified group starts up. If no group name is specified, all groups start up.

-t [group_name]
Stops a group. When you specify the name of a group, only the specified group stops. If no group name is specified, all groups stop.

--apito timeout

Specify the interval (internal communication timeout) to wait for the group resource start or stop in seconds. A value from 1 to 9999 can be specified.

If the --apito option is not specified, waiting for the group resource start or stop is performed according to the value set to the internal communication timeout of the cluster properties.

Return Value

0	Success
Other than 0	Failure

Notes

This command must be executed by a user with the root privilege.

The EXPRESSCLUSTER daemon must be started on the server that runs this command.

Examples

The following is a simple example of group operation.

The server has groupA.

- Run the following command on the server. Then groupA starts.

```
# clpgrp -s groupA
```

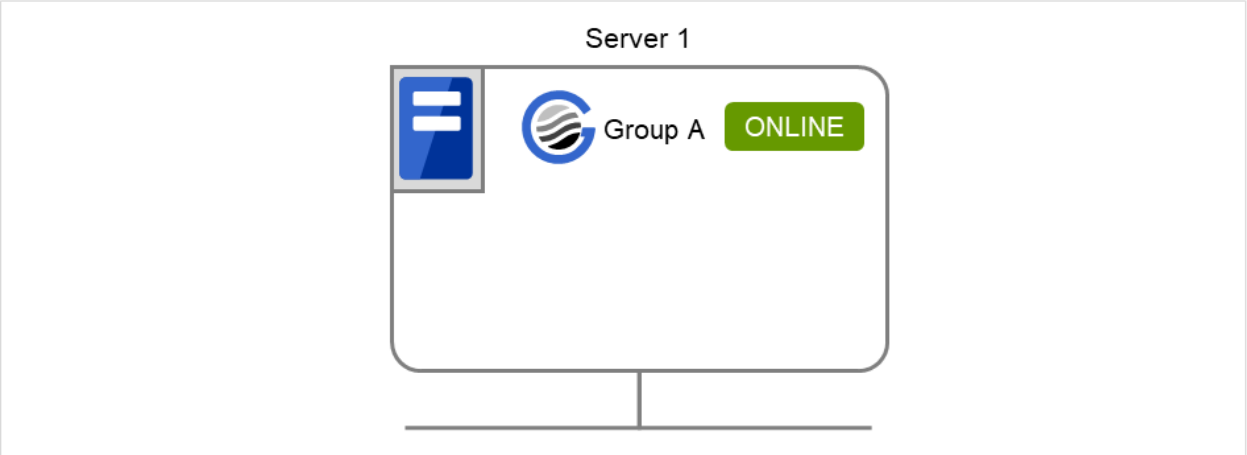


Fig. 2.1: Group startup

- Run the following command on the server. Then groupA stops.

```
# clpgrp -t groupA
```

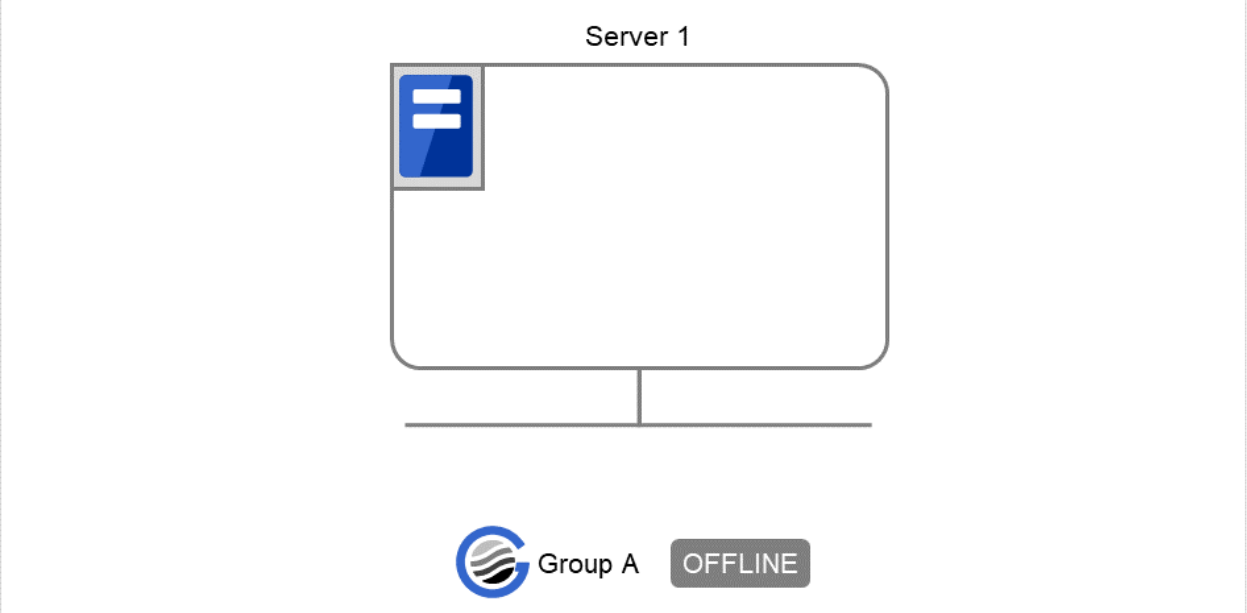


Fig. 2.2: Group stop

Error message

Message	Cause/Solution
Log in as root.	Log on as root user.
Invalid configuration file. Create valid cluster configuration data.	Create valid cluster configuration data using the Cluster WebUI.
Invalid option.	Specify a valid option.

Continued on next page

Table 2.8 – continued from previous page

Message	Cause/Solution
Could not connect to the server. Check if the cluster daemon is active.	Check if the cluster daemon is started.
Invalid server status.	Check if the cluster daemon is started.
Server is not active. Check if the cluster daemon is active.	Check if the cluster daemon is started.
Invalid server name. Specify a valid server name in the cluster.	Specify the valid name of server in the cluster.
Connection was lost. Check if there is a server where the cluster daemon is stopped in the cluster.	Check if there is any server on which the cluster daemon has stopped in the cluster.
Invalid parameter.	The value specified as a command parameter may be invalid.
Internal communication timeout has occurred in the cluster server. If it occurs frequently, set the longer timeout.	A time-out occurred in the EXPRESSCLUSTER internal communication. If time-out keeps occurring, set the internal communication time-out longer.
Invalid server. Specify a server that can run and stop the group, or a server that can be a target when you move the group.	The server that starts/stops the group or to which the group is moved is invalid. Specify a valid server.
Could not start the group. Try it again after the other server is started, or after the Wait Synchronization time is timed out.	Start up the group after waiting for the remote server to start up, or after waiting for the time-out of the start-up wait time.
No operable group exists in the server.	Check if there is any group that is operable in the server which requested the process.
The group has already been started on the local server.	Check the status of the group by using the Cluster WebUI or the clpstat command.
The group has already been started on the other server. To start/stop the group on the local server, use -f option.	Check the status of the group by using the Cluster WebUI or the clpstat command. If you want to start up or stop a group which was started in a remote server from the local server, move the group or run the command with the -f option.
The group has already been started on the other server. To move the group, use "-h <hostname>" option.	Check the status of the group by using the Cluster WebUI or clpstat command. If you want to move a group which was started on a remote server, run the command with the "-h <hostname>" option.
The group has already been stopped.	Check the status of the group by using the Cluster WebUI or the clpstat command.
Failed to start one or more group resources. Check the status of group	Check the status of group by using Cluster WebUI or the clpstat command.
Failed to stop one or more group resources. Check the status of group	Check the status of group by using the Cluster WebUI or the clpstat command.

Continued on next page

Table 2.8 – continued from previous page

Message	Cause/Solution
The group is busy. Try again later.	Wait for a while and then try again because the group is now being started up or stopped.
An error occurred on one or more groups. Check the status of group	Check the status of the group by using the Cluster WebUI or the clpstat command.
Invalid group name. Specify a valid group name in the cluster.	Specify the valid name of a group in the cluster.
Server is not in a condition to start group or any critical monitor error is detected.	Check the status of the server by using the Cluster WebUI or clpstat command. An error is detected in a critical monitor on the server on which an attempt was made to start a group.
There is no appropriate destination for the group. Other servers are not in a condition to start group or any critical monitor error is detected.	Check the status of the server by using the Cluster WebUI or clpstat command. An error is detected in a critical monitor on all other servers.
The group has been started on the other server. To migrate the group, use "-h <hostname>" option.	Check the status of the group by using the Cluster WebUI or clpstat command. If you want to move a group which was started on a remote server, run the command with the "-h <hostname>" option.
Some invalid status. Check the status of cluster.	Invalid status for some sort of reason. Check the status of the cluster.
Internal error. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.

2.7 Collecting logs (clplogcc command)

Collects logs.

Command line

clplogcc [-t *collect_type*] [-r *syslog_rotate_number*] [-o *path*]

Description

Collects information including logs and the OS information by accessing the data transfer server.

Option

None

Logs are collected.

-t `collect_type`

Specifies a log collection pattern. When this option is omitted, a log collection pattern will be type1.

-r `syslog_rotate_number`

Specifies how many generations of syslog will be collected. When this option is omitted, two generations will be collected.

-o `path`

Specifies the output destination of collector files. When this option is skipped, logs are output under tmp of the installation path.

Return Value

0	Success
Other than 0	Failure

Remarks

Since log files are compressed by tar.gz, add the xzf option to the tar command to decompress them.

Notes

This command must be executed by a user with the root privilege.

Examples

Example 1: Collecting logs from the server

```
# clplogcc
Collect Log server1 : Success
```

Log collection results (server status) of servers on which log collection is executed are displayed.

```
Process servername: Result (server status)
```

- Execution Result

  For this command, the following processes are displayed.

Steps in Process	Explanation
Connect	Displayed when the access fails.
Get Filesize	Displayed when acquiring the file size fails.
Collect Log	Displayed with the file acquisition result.

The following results (server status) are displayed:

Result (server status)	Explanation
Success	Log collection succeeded.
Timeout	Timeout occurred.
Busy	The server is busy.
Not Exist File	The file does not exist.
No Freespace	No free space on the disk.
Failed	Failure caused by other errors.

Error Message

Message	Cause/Solution
Log in as root.	Log in as a root user.
Invalid configuration file. Create valid cluster configuration data.	Create valid configuration data by using the Cluster WebUI.
Invalid option.	Specify the correct option.
Specify a number in a valid range.	Specify a number within a valid range.
Specify a correct number.	Specify a valid number.
Specify correct generation number of syslog.	Specify a valid number for the syslog generation.
Collect type must be specified 'type1' or 'type2' or 'type3' or 'type4' or 'type5' or 'type6'. Incorrect collection type is specified.	Invalid collection type is specified.
Specify an absolute path as the destination of the files to be collected.	Specify an absolute path for the output destination of collected files.
Specifiable number of servers are the max number of servers that can constitute a cluster.	The number of servers that can be specified is the maximum number of servers that can be set up.
Could not connect to the server. Check if the cluster daemon is active.	Check if the cluster daemon is started.
Invalid server status.	Check if the cluster daemon is started.
Server is busy. Check if this command is already run.	This command may be run already. Check them.
Internal error. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.

2.7.1 Collecting logs by specifying a type (-t option)

To collect only the specified types of logs, run the clplogcc command with the -t option.

Specify a type from 1 thorough 6 for the log collection.

	type1	type2	type3	type4	Type 5	Type 6
(1) Default collection information	✓	✓	✓	✓	n/a	n/a
(2) syslog	✓	✓	✓	n/a	n/a	n/a

Continued on next page

Table 2.12 – continued from previous page

	type1	type2	type3	type4	Type 5	Type 6
(3) core	✓	✓	n/a	✓	n/a	n/a
(4) OS information	✓	✓	✓	✓	n/a	n/a
(5) script	✓	✓	n/a	n/a	n/a	n/a
(6) ESMPRO/AC	✓	✓	n/a	n/a	n/a	n/a
(7) HA Logs	n/a	✓	n/a	n/a	n/a	n/a
(8) Mirror Statistics	n/a	n/a	n/a	n/a	n/a	n/a
(9) Cluster Statistics	n/a	n/a	n/a	n/a	n/a	✓
(10) System resource statistical information	✓	✓	✓	✓	n/a	✓

Run this command from the command line as follows.
Example: When collecting logs using type2

```
# clplogcc -t type2
```

When no option is specified, a log type will be type 1.

(1) Information to be collected by default

- Logs of each module in the EXPRESSCLUSTER Server
- Alert logs
- Attribute of each module (ls -l) in the EXPRESSCLUSTER Server
  - In bin, lib
  - In alert/bin, webmgr/bin
  - In ha/jra/bin, ha/sra/bin, ha/jra/lib, ha/sra/lib
  - In drivers/md
  - In drivers/khb
  - In drivers/ka
- All installed packages (rpm -qa execution result)
- EXPRESSCLUSTER X SingleServerSafe version (rpm -qi expresscls execution result)

- distribution (/etc/*-release)
- License Information
- Configuration data file
- Policy file
- Dump files in the shared memory used by EXPRESSCLUSTER X SingleServerSafe
- Local node status of EXPRESSCLUSTER (clpstat --local execution results)
- Process and thread information (ps, top execution result)
- PCI device information (lspci execution result)
- Service information (execution results of the commands such as systemctl, chkconfig, and ls)
- Output result of kernel parameter (sysctl -a execution results)
- glibc version (rpm -qi glibc execution result)
- Kernel loadable module configuration (/etc/modules.conf. /etc/modprobe.conf)
- Kernel ring buffer (dmesg execution result)
- File system (/etc/fstab)
- IPC resource (ipcs execution result)
- System (uname -a execution result)
- Network statistics (netstat and ss execution result IPv4/IPv6)
- ip (execution results of the command ip addr, link, maddr, route or -s l)
- All network interfaces (ethtool execution result)
- Information collected upon emergency OS shutdown
- libxml2 version (rpm -qi libxml2 execution result)
- Static host table (/etc/hosts)
- File system export table (exportfs -v execution result)
- User resource limitations (ulimit -a execution result)
- File system exported by kernel-based NFS (/etc/exports)
- OS locale
- Terminal session environment value (export execution result)
- Language locale (/etc/sysconfig/i18n)
- Time zone (env - date execution result)
- Work area of EXPRESSCLUSTER server
- Monitoring options
  This information is collected if options are installed.
- Collected dump information when the monitor resource timeout occurred
- Collected Oracle detailed information when Oracle monitor resource abnormity was detected
- Operation log of Cluster WebUI (see "Maintenance Guide" -> "The system maintenance information" -> "Function for outputting the operation log of Cluster WebUI")

- AWS-related information

  Results of executing the following commands:

  - which aws
  - aws --version
  - aws configure list
  - aws ec2 describe-network-interfaces
  - aws ec2 describe-instance-attribute --attribute disableApiStop

(2) syslog

- syslog (/var/log/messages)
- syslog (/var/log/syslog)
- Syslogs for the number of generations specified (/var/log/messages.x)
- journal log (such as files in /var/run/log/journal/)

(3) core file

- core file of EXPRESSCLUSTER module
  Stored in /opt/nec/clusterpro/log by the following archive names.

Alert related:

`alt`*`yyyymmdd_x`*`.tar`

Directory for the WebManager server related:

`wm`*`yyyymmdd`*`_`**`x`**`.tar`

EXPRESSCLUSTER core related:

`cls`*`yyyymmdd_x`*`.tar`

yyyymmdd indicates the date when the logs are collected. *x* is a sequence number.

(4) OS information

- Kernel mode LAN heartbeat, keep alive
  - /proc/khb_moninfo
  - /proc/ka_moninfo
- /proc/devices
- /proc/mdstat
- /proc/modules
- /proc/mounts
- /proc/meminfo
- /proc/cpuinfo
- /proc/partitions
- /proc/pci
- /proc/version
- /proc/ksyms

- /proc/net/bond*
- all files of /proc/scsi/ all files in the directory
- all files of /proc/ide/ all files in the directory
- /etc/fstab
- /etc/syslog.conf
- /etc/syslog-ng/syslog-ng.conf
- /proc/sys/kernel/core_pattern
- /proc/sys/kernel/core_uses_pid
- /etc/snmp/snmpd.conf
- Kernel ring buffer (dmesg execution result)
- ifconfig (ifconfig execution result)
- iptables (iptables -L execution result)
- ipchains (ipchains -L execution result)
- df (df execution result)
- raw device information (raw -qa execution result)
- kernel module load information (lsmod execution result)
- host name, domain information (hostname, domainname execution result)
- dmidecode (dmidecode execution result)
- LVM device information (vgdisplay -v execution result)
- snmpd version information (snmpd -v execution result)
- Virtual Infrastructure information (the result of running virt-what)

When you collect logs, you may find the following message on the console. This does not mean failure. The logs are collected normally.

```
hd#: bad special flag: 0x03
ip_tables: (C) 2000-2002 Netfilter core team
```

(Where hd# is the name of the IDE device that exists on the server)

(5) Script
Start/stop script for a group that was created with the Cluster WebUI.
If you specify a user-defined script other than the above (/opt/nec/clusterpro/scripts), it is not included in the log collection information. It must be collected separately.

(6) ESMPRO/AC Related logs
Files that are collected by running the acupslog command.

(7) HA logs

- System resource information
- JVM monitor log

- System monitor log

(8) Mirror Statistics
This version does not collect.

(9) Cluster Statistics

- Cluster Statistics
- In perf/cluster

(10) System resource statistics

- System resource statistics
- In perf/system

2.7.2 syslog generations (-r option)

To collect syslogs for the number of generations specified, run the following command.

Example: Collecting logs for the 3 generations

```
# clplogcc -r 3
```

The following syslogs are included in the collected logs.

/var/log/messages
/var/log/messages.1
/var/log/messages.2

- When no option is specified, two generations are collected.
- You can collect logs for 0 to 99 generations.
- When 0 is specified, all syslogs are collected.

Number of Generation	Number of generations to be acquired
0	All Generations
1	Current
2	Current + Generation 1
3	Current + Generation 1 to 2
:	
x	Current + Generation 1 to (x - 1)

2.7.3 Output paths of log files (-o option)

- Log file is named and be saved as "*server name*-log.tar.gz".
- Since log files are compressed by tar.gz, add the xzf option to the tar command to decompress them.

If not specifying -o option

Logs are output in tmp of installation path.

```
# clplogcc
Collect Log server-name: Success
```

```
# ls /opt/nec/clusterpro/tmp
server-name-log.tar.gz
```

When the -o option is specified:

If you run the command as follows, logs are located in the specified /home/log directory.

```
# clplogcc -o /home/log
Collect Log server-name: Success
# ls /home/log
server-name-log.tar.gz
```

2.7.4 Collecting information when a failure occurs

When the following failure occurs, the information for analyzing the failure is collected.

- When a server daemon configuring the server abnormally terminates due to interruption by a signal (core dump), an internal status error, or another cause
- When a group resource activation error or deactivation error occurs
- When monitoring error occurs in a monitor resource

Information to be collected is as follows:

- Server information
  - Some module logs in EXPRESSCLUSTER servers
  - Dump files in the shared memory used by EXPRESSCLUSTER X SingleServerSafe
  - Configuration data file
  - Core files of EXPRESSCLUSTER module
- OS information (/proc/*)
  - /proc/devices
  - /proc/partitions
  - /proc/mdstat
  - /proc/modules
  - /proc/mounts
  - /proc/meminfo
  - /proc/net/bond*
- Information created by running a command
  - Results of the sysctl -a
  - Results of the ps
  - Results of the top
  - Results of the ipcs
  - Results of the netstat -i
  - Results of the ifconfig
  - Results of the df
  - Results of the raw -qa

- journalctl -e execution result

These are collected by default in the log collection. You do not need to collect them separately.

2.8 Applying and backing up configuration data (clpcfctrl command)

2.8.1 Applying configuration data (clpcfctrl --push)

Applies the configuration data to servers.

Command line

clpcfctrl --push [-p *portnumber*] [-x *directory*] [--nocheck]

Description

Applies the configuration data created by the Cluster WebUI to servers.

Option

--push

Specify this option when applying the data.
This option cannot be omitted.

-p

portnumber Specifies a port number of data transfer port.
When this option is omitted, the default value is used. In general, it is not necessary to specify this option.

-x directory

Specify this option to apply the configuration data in the specified directory.

--nocheck

Configuration data is not checked. Use this option only when deleting a server.

Return Value

0	Success
Other than 0	Failure

Remarks

To deliver the cluster configuration data file exported from Cluster WebUI, to cluster servers by executing the clpcfctrl --push command, follow these steps:

1. Start Cluster WebUI, then switch to **Config Mode**.
2. If necessary, change the cluster configuration in Cluster WebUI.
3. In Cluster WebUI, select **Export**, then export the cluster configuration data file (in zip format) to any folder.
4. In any folder accessible from the cluster servers, unzip the exported zip file.
5. On any of the cluster servers, start Command Prompt, then execute the clpcfctrl --push command.

Notes

This command must be executed by a user with the root privilege.

Examples

Example 1: Delivering configuration data that was saved on the file system using the Cluster WebUI on Linux

```
# clpcfctrl --push -x /mnt/config
file delivery to server 127.0.0.1 success.
The upload is completed successfully.(cfmgr:0)
Command succeeded.(code:0)
```

Error Message

Message	Cause/Solution
Log in as root.	Log on as a root user.
This command is already run.	This command has already been run.
Invalid option.	The option is invalid. Check the option.
Invalid mode. Check if --push or --pull option is specified.	Check if the --push is specified.
The target directory does not exist.	The specified directory does not exist.
Invalid host name. Server specified by -h option is not included in the configuration data.	The server specified with -h is not included in configuration data. Check if the specified server name or IP address is correct.
Canceled.	This message is displayed when you enter a character other than "y" in response to the command.
Failed to initialize the xml library. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to load the configuration file. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to change the configuration file. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to load the all.pol file. Reinstall the RPM.	Reinstall the EXPRESSCLUSTER Server RPM.
Failed to load the cfctrl.pol file. Reinstall the RPM.	Reinstall the EXPRESSCLUSTER Server RPM.
Failed to get the install path. Reinstall the RPM.	Reinstall the EXPRESSCLUSTER Server RPM.
Failed to get the cfctrl path. Reinstall the RPM.	Reinstall the EXPRESSCLUSTER Server RPM.

Continued on next page

Table 2.14 – continued from previous page

Message	Cause/Solution
Failed to get the list of group.	Failed to acquire the list of group.
Failed to get the list of resource.	Failed to acquire the list of resource.
Failed to initialize the trncl library. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to connect to server %1. Check if the other server is active and then run the command again.	Accessing the server has failed. Check if other server(s) has been started. Run the command again after the server has started up.
Failed to connect to trnsv. Check if the other server is active.	Accessing the server has failed. Check if other server(s) has been started.
File delivery failed. Failed to deliver the configuration data. Check if the other server is active and run the command again.	Delivering configuration data has failed. Check if other server(s) has been started. Run the command again after the server has started up.
Multi file delivery failed. Failed to deliver the configuration data. Check if the other server is active and run the command again.	Delivering configuration data has failed. Check if other server(s) has been started. Run the command again after the server has started up.
Failed to deliver the configuration data. Check if the other server is active and run the command again.	Delivering configuration data has failed. Check if other server(s) has been started. Run the command again after the server has started up.
The directory "/work" is not found. Reinstall the RPM.	Reinstall the EXPRESSCLUSTER Server RPM.
Failed to make a working directory.	Memory or OS resources may not be sufficient. Check them.
The directory does not exist.	Check if the path to the cluster configuration data file is correct.
This is not a directory.	Check if the path to the cluster configuration data file is correct.
The source file does not exist.	Check if the path to the cluster configuration data file is correct.
The source file is a directory.	Check if the path to the cluster configuration data file is correct.
The source directory does not exist.	Check if the path to the cluster configuration data file is correct.
The source file is not a directory.	Check if the path to the cluster configuration data file is correct.

Continued on next page

Table 2.14 – continued from previous page

Message	Cause/Solution
Failed to change the character code set (EUC to SJIS).	Memory or OS resources may not be sufficient. Check them.
Failed to change the character code set (SJIS to EUC).	Memory or OS resources may not be sufficient. Check them.
Command error.	Memory or OS resources may not be sufficient. Check them.
Failed to initialize the cfmgr library. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to get size from the cfmgr library. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to allocate memory.	Memory or OS resources may not be sufficient. Check them.
Failed to change the directory.	Memory or OS resources may not be sufficient. Check them.
Failed to run the command.	Memory or OS resources may not be sufficient. Check them.
Failed to make a directory.	Memory or OS resources may not be sufficient. Check them.
Failed to remove the directory.	Memory or OS resources may not be sufficient. Check them.
Failed to remove the file.	Memory or OS resources may not be sufficient. Check them.
Failed to open the file.	Check if the path to the cluster configuration data file is correct.
Failed to read the file.	Memory or OS resources may not be sufficient. Check them.
Failed to write the file.	Memory or OS resources may not be sufficient. Check them.
Internal error. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
The upload is completed successfully. To apply the changes you made, shutdown and reboot the cluster.	The upload is completed successfully. To apply the changes you made, shut down the server, and then reboot it.
The upload was stopped. To upload the cluster configuration data, stop the cluster.	The upload was stopped. To upload the configuration data, stop the server.

Continued on next page

Table 2.14 – continued from previous page

Message	Cause/Solution
The upload was stopped. To upload the cluster configuration data, stop the Mirror Agent.	The upload was stopped. To upload the configuration data, stop MirrorAgent.
The upload was stopped. To upload the cluster configuration data, stop the resources to which you made changes.	The upload was stopped. To upload the configuration data, stop the resources you changed.
The upload was stopped. To upload the cluster configuration data, stop the groups to which you made changes.	The upload was stopped. To upload the configuration data, suspend the server. To upload, stop the group to which you made changes.
The upload was stopped. To upload the cluster configuration data, suspend the cluster.	The upload was stopped. To upload the configuration data, suspend the server.
The upload is completed successfully. To apply the changes you made, restart the Alert Sync service. To apply the changes you made, restart the WebManager service.	The upload is completed successfully. To apply the changes you made, restart the AlertSync service. To apply the changes you made, restart the WebManager service.
The upload is completed successfully. To apply the changes you made, restart the Information Base service.	The upload is completed successfully. To apply the changes you made, restart the Information Base service.
The upload is completed successfully. To apply the changes you made, restart the API service.	The upload is completed successfully. To apply the changes you made, restart the API service.
The upload is completed successfully. To apply the changes you made, restart the Node Manager service.	The upload is completed successfully. To apply the changes you made, restart the Node Manager service.
Internal error. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
The upload is completed successfully.	The upload is completed successfully.

Continued on next page

Table 2.14 – continued from previous page

Message	Cause/Solution
The upload was stopped. Failed to deliver the configuration data. Check if the other server is active and run the command again.	The upload was stopped. Delivering configuration data has failed. Check if the other server is active and run the command again.
The upload was stopped. There is one or more servers that cannot be connected to. To apply cluster configuration information forcibly, run the command again with "--force" option.	The upload was stopped. The server that cannot connect exists. To forcibly upload the configuration data, run the command again with the --force option.

2.8.2 Backing up the configuration data (clpcfctrl --pull)

Backs up the configuration data.

Command line

clpcfctrl --pull -ll-w [-p *portnumber*] [-x *directory*]

Description

Backs up the configuration data to be used by the Cluster WebUI.

Option

--pull

Specify this option when performing backup.
This option cannot be omitted.

-l

Specify this option when backing up data as the configuration data that is used for the Cluster WebUI on Linux.
You cannot specify both -l and -w together.

-w

Specify this option when backing up data as the configuration data that is used for the Cluster WebUI on Windows.
You cannot specify both -l and -w together.

-p

portnumber Specifies a port number of data transfer port.
When this option is omitted, the default value is used. In general, it is not necessary to specify this option.

-x directory

Specify this option when backing up configuration data in the specified directory.

Use this option with either -l or -w.

When -l is specified, configuration data is backed up in the format which can be loaded by the Cluster WebUI on Linux.

When -w is specified, configuration data is saved in the format which can be loaded by the Cluster WebUI on Windows.

Return Value

0	Success
Other than 0	Failure

Remarks

To deliver the cluster configuration data file obtained by executing the clpcfctrl --pull command, from Cluster WebUI to cluster servers, follow these steps:

1. Execute the clpcfctrl --pull command to save the cluster configuration data file (in zip format) to any folder.
2. Unzip the zip file, select the clp.conf file and the scripts folder, and then create a zipped file (named freely).
3. Start Cluster WebUI, switch to **Config Mode**, and then click **Import** to import the file created in Step 2.
4. If necessary, change the cluster configuration in Cluster WebUI, then click **Apply the Configuration File**.

Notes

This command must be executed by a user with the root privilege.

Examples

Example 1: Backing up configuration data to the specified directory so that the data can be loaded by the Cluster WebUI on Linux

```
# clpcfctrl --pull -l -x /mnt/config
Command succeeded.(code:0)
```

Error Message

Message	Cause/Solution
Log in as root.	Log on as a root user.
This command is already run.	This command has already been run.
Invalid option.	The option is invalid. Check the option.
Invalid mode. Check if --push or --pull option is specified.	Check if the --pull is specified.
The target directory does not exist.	The specified directory does not exist.
Canceled.	This message is displayed when you enter a character other than "y" in response to the command.
Failed to initialize the xml library. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to load the configuration file. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.

Continued on next page

Table 2.15 – continued from previous page

Message	Cause/Solution
Failed to change the configuration file. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to load the all.pol file. Reinstall the RPM.	Reinstall the EXPRESSCLUSTER Server RPM.
Failed to load the cfctrl.pol file. Reinstall the RPM.	Reinstall the EXPRESSCLUSTER Server RPM.
Failed to get the install path. Reinstall the RPM.	Reinstall the EXPRESSCLUSTER Server RPM.
Failed to get the cfctrl path. Reinstall the RPM.	Reinstall the EXPRESSCLUSTER Server RPM.
Failed to initialize the trncl library. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to connect to server %1. Check if the other server is active and then run the command again.	Accessing the server has failed. Check if other server(s) has been started. Run the command again after the server has started up.
Failed to connect to trnsv. Check if the other server is active.	Accessing the server has failed. Check if other server(s) has been started.
Failed to get configuration data. Check if the other server is active.	Acquiring configuration data has failed. Check if other server(s) has been started.
The directory "/work" is not found. Reinstall the RPM.	Reinstall the EXPRESSCLUSTER Server RPM.
Failed to make a working directory.	Memory or OS resources may not be sufficient. Check them.
The directory does not exist.	Memory or OS resources may not be sufficient. Check them.
This is not a directory.	Memory or OS resources may not be sufficient. Check them.

Continued on next page

Table 2.15 – continued from previous page

Message	Cause/Solution
The source file does not exist.	Memory or OS resources may not be sufficient. Check them.
The source file is a directory.	Memory or OS resources may not be sufficient. Check them.
The source directory does not exist.	Memory or OS resources may not be sufficient. Check them.
The source file is not a directory.	Memory or OS resources may not be sufficient. Check them.
Failed to change the character code set (EUC to SJIS).	Memory or OS resources may not be sufficient. Check them.
Failed to change the character code set (SJIS to EUC).	Memory or OS resources may not be sufficient. Check them.
Command error.	Memory or OS resources may not be sufficient. Check them.
Failed to initialize the cfmgr library. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to get size from the cfmgr library. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to allocate memory.	Memory or OS resources may not be sufficient. Check them.
Failed to change the directory.	Memory or OS resources may not be sufficient. Check them.
Failed to run the command.	Memory or OS resources may not be sufficient. Check them.
Failed to make a directory.	Memory or OS resources may not be sufficient. Check them.
Failed to remove the directory.	Memory or OS resources may not be sufficient. Check them.
Failed to remove the file.	Memory or OS resources may not be sufficient. Check them.
Failed to open the file.	Memory or OS resources may not be sufficient. Check them.
Failed to read the file.	Memory or OS resources may not be sufficient. Check them.
Failed to write the file.	Memory or OS resources may not be sufficient. Check them.
Internal error. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.

2.9 Adjusting time-out temporarily (clptoratio command)

Extends or displays the current timeout ratio.

Command line

clptoratio -r *ratio* -t *time*
clptoratio -i
clptoratio -s

Description

Temporarily extends the following timeout values:

- Monitor resource
- Heartbeat resource
- Alert synchronous service
- WebManager service

The current timeout ratio is displayed.

Option

-r ratio

Specifies the timeout ratio. Use 1 or larger integer. The maxim timeout ratio is 10,000.
If you specify "1," you can return the modified timeout ratio to the original as you can do so when you are using the -i option.

-t time

Specifies the extension period.
You can specify minutes for m, hours for h, and days for d. The maximum period of time is 30 days.
Example:
2m, 3h, 4d

-i

Sets back the modified timeout ratio.

-s

Refers to the current timeout ratio.

Return Value

0	Success
Other than 0	Failure

Remarks

When the server is shut down, the timeout ratio you have set will become ineffective. However, if the server is not shut down, the timeout ratio and the extension period that you have set will be maintained.
With the -s option, you can only refer to the current timeout ratio. You cannot see other information such as remaining time of extended period.

You can see the original timeout value by using the status display command.

Heartbeat timeout

```
# clpstat --cl --detail
```

Monitor resource timeout

```
# clpstat --mon monitor resource name --detail
```

Notes

This command must be executed by a user with the root privilege.
Execute this command when the EXPRESSCLUSTER daemon of the server is active.
When you set the timeout ratio, make sure to specify the extension period. However, if you set "1" for the timeout ratio, you cannot specify the extension period.
You cannot specify a combination such as "2m3h," for the extension period.

Examples

Example 1: Doubling the timeout ratio for three days

```
# clptoratio -r 2 -t 3d
```

Example 2: Setting back the timeout ratio to original

```
# clptoratio -i
```

Example 3: Referring to the current timeout ratio

```
# clptoratio -s
present toratio : 2
```

The current timeout ratio is set to 2.

Error Message

Message	Cause/Solution
Log in as root.	Log on as root user.
Invalid configuration file. Create valid cluster configuration data.	Create valid cluster configuration data by using the Cluster WebUI.
Invalid option.	Specify a valid option.
Specify a number in a valid range.	Specify a number within a valid range.
Specify a correct number.	Specify a valid number.
Scale factor must be specified by integer value of 1 or more.	Specify 1 or larger integer for ratio.
Specify scale factor in a range less than the maximum scale factor.	Specify a ratio that is not larger than the maximum ratio.
Set the correct extension period.	Set a valid extension period.
Ex) 2m, 3h, 4d	Set the extension period which does not exceed the maximum ratio.
Set the extension period in a range less than the maximum extension period.	Check if the cluster daemon is started.

Continued on next page

Table 2.16 – continued from previous page

Message	Cause/Solution
Could not connect to the server. Check if the cluster daemon is active.	Check if the cluster daemon is started.
Server is not active. Check if the cluster daemon is active.	Check if there is any server in the cluster with the cluster daemon stopped.
Connection was lost. Check if there is a server where the cluster daemon is stopped in the cluster.	Check if there is any server in the cluster with the cluster daemon stopped.
Invalid parameter.	The value specified as a parameter of the command may be invalid.
Internal communication timeout has occurred in the cluster server. If it occurs frequently, set the longer timeout.	Time-out has occurred in the internal communication of EXPRESSCLUSTER. If it occurs frequently, set the internal communication time-out longer.
Processing failed on some servers. Check the status of failed servers.	There are servers that failed in processing. Check the status of server in the cluster. Operate it while all the servers in the cluster are up and running.
Internal error. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.

2.10 Modifying the log level and size (clplogcf command)

Modifies and displays log level and log output file size.

Command line

clplogcf -t *type* -l *level* -s *size*

Description

Modifies the settings of the log level and log output file size.

Displays the currently specified values.

Option

-t type

Specifies a module type whose settings will be changed.

If both -l and -s are omitted, the information set to the specified module will be displayed. See the list of "Types that can be specified to the -t option" for types which can be specified.

-l level

Specifies a log level.

You can specify one of the following for a log level.

1, 2, 4, 8, 16, 32

You can see more detailed information as the log level increases.

-s

size Specifies the size of a file for log output.

The unit is byte.

None

Displays the entire configuration information currently set.

Return Value

0	Success
Other than 0	Failure

Remarks

Each type of log output by EXPRESSCLUSTER X SingleServerSafe uses four log files. Therefore, it is necessary to have the disk space that is four times larger than what is specified by -s.

Notes

This command must be executed by a user with the root privilege.

To run this command, the EXPRESSCLUSTER event service must be started.

The settings revert to the default values when the server restarts.

Examples

Example 1: Modifying the pm log level

```
# clplogcf -t pm -l 8
```

Example 2: Seeing the pm log level and log file size

```
# clplogcf -t pm
TYPE, LEVEL, SIZE
pm, 8, 1000000
```

Example 3: Displaying the values currently configured

```
# clplogcf
TYPE, LEVEL, SIZE
trnsv, 4, 1000000
xml, 4, 1000000
logcf, 4, 1000000
```

Error Message

Message	Cause/Solution
Log in as root.	Log on as a root user.
Invalid option.	The option is invalid. Check the option.
Failed to change the configuration. Check if clpevent is running.	clpevent may not be started yet.
Invalid level	The specified level is invalid.
Invalid size	The specified size is invalid.
Failed to load the configuration file. Check if memory or OS resources are sufficient.	The server has not been created.
Failed to initialize the xml library. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to print the configuration. Check if clpevent is running.	clpevent may not be started yet.

Types that can be specified for the -t option (y=yes, n=no)

Type:	Module Type	Explanation	The EXPRESSCLUSTER Server
apicl	libclpapicl.so.1.0	API client library	✓
apisv	libclpapisv.so.1.0	API server	✓
cl	clpcl	Server startup and stop command	✓
cfctrl	clpcfctrl	Server generation and server information backup command	✓
cfmgr	libclpcfmgr.so.1.0	Configuration data operation library	✓
grp	clpgrp	Group startup and stop command	✓
rsc	clprsc	Group resource startup and stop command	✓
haltp	clpuserw	Shutdown stalling monitoring	✓
healthchk	clphealthchk	Process health check command	✓
ibsv	clpibsv	Information Base server	✓
lcns	libclplcns.so.1.0	License library	✓
lcnsc	clplcnsc	License registration command	✓
logcc	clplogcc	Collect logs command	✓

Continued on next page

Table 2.18 – continued from previous page

Type:	Module Type	Explanation	The EXPRESSCLUSTER Server
logcf	clplogcf	Log level and size modification command	✓
logcmd	clplogcmd	Alert producing command	✓
mail	clpmail	Mail Report	✓
mgtmib	libclpmgtmib.so.1.0	SNMP coordination library	✓
monctrl	clpmonctrl	Monitoring control command	✓
nm	clpnm	node map management	✓
pm	clppm	Process management	✓
rc/rc_ex	clprc	Group and group resource management	✓
reg	libclpreg.so.1.0	Reboot count control library	✓
regctrl	clpregctrl	Reboot count control command	✓
rm	clprm	Monitor management	✓
roset	clproset	Disk control	✓
relpath	clprelpath	Process kill command	✓
scrpc	clpscrpc	Script log rotation command	✓
stat	clpstat:	Status display command	✓
stdn	clpstdn	Server shutdown command	✓
toratio	clptoratio	Timeout ratio modification command	✓
trap	clptrap	SNMP trap command	✓
trncl	libclptrncl.so.1.0	Transaction library	✓
rexec	clprexec	External monitoring link processing request command	✓
trnsv	clptrnsv	Transaction server	✓
alert	clpaltinsert	Alert	✓
webmgr	clpwebmc	WebManager service	✓
webalert	clpaltd	Alert synchronization	✓
exec	clpexec	Exec resource	✓
diskw	clpdiskw	Disk monitor resource	✓
ipw	clpipw	IP monitor resource	✓
miiw	clpmiiw	NIC Link Up/Down monitor resource	✓
mtw	clpmtw	Multi target monitor resource	✓
pidw	clppidw	PID monitor resource	✓
volmgrw	clpvolmgrw	Volume manager monitor resource	✓
userw	clpuserw	User mode monitor resource	✓
mrw	clpmrw	Message reception monitor resource	✓
snmpmgr	libclp snmpmgr	SNMP trap reception library	✓
lanhb	clplanhb	LAN heartbeat	✓
oraclew	clp_oraclew	Oracle monitor resource	✓
db2w	clp_db2w	DB2 monitor resource	✓
psqlw	clp_psqlw	PostgreSQL monitor resource	✓
mysqlw	clp_mysqlw	MySQL monitor resource	✓
odbcw	clp_odbcw	ODBC monitor resource	✓
sqlserverw	clp_sqlserverw	SQL Server monitor resource	✓
sambaw	clp_sambaw	Samba monitor resource	✓
nfsw	clp_nfsw	NFS monitor resource	✓
httpw	clp_httpw	HTTP monitor resource	✓

Continued on next page

Table 2.18 – continued from previous page

Type:	Module Type	Explanation	The EXPRESSCLUSTER Server
ftpw	clp_ftpw	FTP monitor resource	✓
smtpw	clp_smtpw	SMTP monitor resource	✓
pop3w	clp_pop3w	POP3 monitor resource	✓
imap4w	clp_imap4w	IMAP4 monitor resource	✓
tuxw	clp_tuxw	Tuxedo monitor resource	✓
wlsw	clp_wlsw	WebLogic monitor resource	✓
wasw	clp_wasw	WebSphere monitor resource	✓
otxw	clp_otxw	WebOTX monitor resource	✓
jraw	clp_jraw	JVM monitor resource	✓
sraw	clp_sraw	System monitor resource	✓
psrw	clp_psrw	Process resource monitor resource	✓
psw	clppsw	Process name monitor resource	✓
vmctrl	libclpvmctrl.so.1.0	VMCtrl library	✓
perfc	clpperfc	Command to display cluster statistical information	✓
cfchk	clpcfchk	Command to check cluster configuration data	✓

2.11 Managing licenses (clplcnsc command)

the clplcnsc command manages licenses.

Command line

clplcnsc -i [*licensefile...*]
clplcnsc -l [-a]
clplcnsc -d *serialno* [-q]
clplcnsc -d -t [-q]
clplcnsc -d -a [-q]
clplcnsc --reregister *licensefile...*

Description

This command registers, refers to and remove the licenses of the product version and trial version of this product.

Option

-i [licensefile...]
When a license file is specified, license information is acquired from the file for registration. You can specify multiple licenses. You can also specify a wildcard. If nothing is specified, you need to enter license information interactively.

-l [-a]

References the registered license.
The name of displayed items are as follows.

Item	Explanation
Serial No	Serial number (product version only)
User name	User name (trial version only)
Key	License key
Licensed Number of CPU	The number of license (per CPU)
Licensed Number of Computers	The number of license (per node)
Start date	Start date of valid period[1][2]
End date	End date of valid period[1][2]
Status	Status of the license

Status	Explanation
valid	valid
invalid	invalid
unknown	unknown
inactive	Before valid period[1][2]
expired	After valid period[1][2]

When -a option not specified, the license status of "invalid", "unknown" and "expired" are not displayed.
When specifying -a option, all the licenses are displayed regardless of the license status.

[1] Displayed in the case of the fixed term license
[2] Displayed in the case of the license of trial version

-d <param>
param

serialno Deletes the license with the specified serial number.

-t Deletes all the registered licenses of the trial version.

-a Deletes all the registered licenses.

-q
Deletes licenses without displaying a warning message. This is used with -d option.

--reregister licensefile...
Reregisters a fixed-term license. Usually, it is unnecessary to execute the command with this option.

Return Value

0	Normal termination
1	Cancel
3	Initialization error
5	The option is invalid
8	Other internal error

Example of a command entry:

- for registration
  - Registering the license interactively

    ```
    # clplcnsc -i
    ```

    Product Version/Product Version (Fixed Term)

    Select a product division.

    ```
    Selection of License Version
    1.  Product Version
    2.  Trial Version
    e. Exit
    Select License Version. [1, 2, or e (default:1)]...
    ```

    Enter a serial number.

    Enter serial number [Ex. XXXXXXXX000000]...

    Enter a license key.

    Enter license key [Ex. XXXXXXXX-XXXXXXXX-XXXXXXXX-XXXXXXXX]...

    Trial Version

    Select a product division.

    ```
    Selection of License Version
    1.  Product Version
    2.  Trial Version
    e. Exit
    Select License Version. [1, 2, or e (default:1)]...
    ```

    Enter a user name.

```
Enter user name [ 1 to 63byte ]...
```

Enter a license key.

```
Enter license key
[Ex. XXXXX-XXXXXXXX-XXXXXXXX-XXXXXXXX]...
```

Specify a license file

```
# clplcnsc -i /tmp/cpulcns.key
```

- **for referring to the license**

```
# clplcnsc -l
```

1. Product version

```
< EXPRESSCLUSTER X SingleServerSafe <PRODUCT> >

Seq... 1
Key..... A1234567-B1234567-C1234567-D1234567
Licensed Number of CPU... 2
Status... valid

Seq... 2
Serial No..... AAAAAAAA000002
Key..... E1234567-F1234567-G1234567-H1234567
Licensed Number of Computers... 1
Status... valid
```

2. Product version (fixed term)

```
< EXPRESSCLUSTER X SingleServerSafe <PRODUCT> >

Seq... 1
Serial No..... AAAAAAAA000001
Key..... A1234567-B1234567-C1234567-D1234567
Start date..... 2018/01/01
End date..... 2018/01/31
Status.......... valid

Seq... 2
Serial No..... AAAAAAAA000002
Key..... E1234567-F1234567-G1234567-H1234567
Status.......... inactive
```

3. Trial version

```
< EXPRESSCLUSTER X SingleServerSafe <TRIAL> >

Seq... 1
Key..... A1234567-B1234567-C1234567-D1234567
User name... NEC
Start date..... 2018/01/01
End date..... 2018/02/28
Status.......... valid
```

- **for deleting the license**

```
# clplcnsc -d AAAAAAAA000001 -q
```

- **for deleting the license**

```
# clplcnsc -d -t -q
```

- **for deleting the license**

```
# clplcnsc -d -a
```

Deletion confirmation

```
Are you sure to remove the license? [y/n] ...
```

Notes

Run this command as the root user.

Furthermore, when you use -d option and -a option together, all the trial version licenses and product version licenses will be deleted. To delete only the trial license, also specify the -t option. If the licenses including the product license have been deleted, register the product license again.
When you refer to a license which includes multiple licenses, all included licenses information are displayed.

Error Message

Message	Cause/Solution
Processed license num (success : %d, error : %d).	The number of processed licenses (success:%d, error:%d) If error is not 0, check if the license information is correct.
Command succeeded.	The command ran successfully.
Command failed.	The command did not run successfully.
Log in as root.	You are not authorized to run this command. Log on as the root user.
Invalid cluster configuration data. Check the cluster configuration information.	The cluster configuration data is invalid. Check the cluster configuration data by using the Cluster WebUI.
Initialization error. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.
The command is already run.	The command is already running. Check the running status by using a command such as the ps command.
The license is not registered.	The license has not been registered yet.
Could not open the license file. Check if the license file exists on the specified path.	Input/Output cannot be done to the license file. Check to see if the license file exists in the specified path.
Could not read the license file. Check if the license file exists on the specified path.	Input/Output cannot be done to the license file. Check to see if the license file exists in the specified path.

Continued on next page

Table 2.21 – continued from previous page

Message	Cause/Solution
The field format of the license file is invalid. The license file may be corrupted. Check the destination from where the file is sent.	The field format of the license file is invalid. The license file may be corrupted. Check it with the file sender.
The cluster configuration data may be invalid or not registered.	The cluster configuration data may be invalid or not registered. Check the configuration data.
Failed to terminate the library. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.
Failed to register the license. Check if the entered license information is correct.	Check to see if the entered license information is correct.
Failed to open the license. Check if the entered license information is correct.	Check to see if the entered license information is correct.
Failed to remove the license.	License deletion failed. Parameter error may have occurred or resources (memory or OS) may not be sufficient.
This license is already registered.	This license has already been registered. Check the registered license.
This license is already activated.	This license has already been used. Check the registered license.
This license is unavailable for this product.	This license cannot be used for this product. Check the license.
The maximum number of licenses was reached.	The maximum number of registered licenses has been reached. Delete invalid licenses.
Internal error. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.

2.12 Outputting messages (clplogcmd command)

Registers the specified message with syslog and alert logs, or reports the message by mail.

Command line

clplogcmd -m *message* [--syslog] [--alert] [--mail] [-i *eventID*] [-l *level*]

Note: Generally, it is not necessary to run this command to set up or operate a server. You need to write the command in the EXEC resource script.

Description

Write this command in the EXEC resource script and output messages you want to send to the destination.

Option

-m message

Specifies a message. This option cannot be omitted. The maximum size of message is 511 bytes. (When syslog is specified as an output destination, the maximum size is 485 bytes.) The message exceeding the maximum size will not be shown.
You may use alphabets, numbers, and symbols[3] .

--syslog

--alert

--mail

--trap

Specify the output destination from syslog, alert, mail and trap. (You can specify multiple destinations.)
This parameter can be omitted. The syslog and alert will be the output destinations when the parameter is omitted.

-i eventID

Specify an event ID. Specify event ID. The maximum value of event ID is 10,000.

[3] Notes on using symbols in the message:

- The symbols below must be enclosed in double quotes (""):

  # & ' ( ) ~ | ; : * < > , .
  (For example, if you specify "#" in the message, # is produced.)

- The symbols below must have a backslash \ in the beginning:

  \ ! " & ' ( ) ~ | ; : * < > , .
  (For example, if you specify \\ in the message, \ is produced.)

- The symbol that must be enclosed in double quotes ("") and have a backslash \ in the beginning:

  `
  (For example, if you specify "\" in the message, ` is produced.)

- When there is a space in the **message**, it must be placed in enclosed in double quotes ("").
- The symbol % cannot be used in the **message**.

This parameter can be omitted. The default value 1 is set when the parameter is omitted.

-l level

Level of alert to output.
Select a level of alert output from ERR, WARN, or INFO. The icon on the alert logs of the Cluster WebUI is determined according to the level you select here.

This parameter can be omitted. The default value INFO is set to level when the parameter is omitted.
For details, see the online manual.

Return Value

0	Success
Other than 0	Failure

Notes

This command must be executed by a user with the root privilege.
When mail is specified as the output destination, you need to make the settings to send mails by using the mail command.

Examples

Example 1: When specifying only message (output destinations are syslog and alert):
When the following is written in the EXEC resource script, the **message** is produced in syslog and alert.

```
clplogcmd -m test1
```

The following log is the log output in syslog:

```
Sep 1 14:00:00 server1 clusterpro: <type: logcmd><event: 1> test1
```

Example 2: When specifying message, output destination, event ID, and level (output destination is mail):
When the following is written in the EXEC resource script, the message is sent to the mail address set in the Cluster Properties of the Cluster WebUI.

```
clplogcmd -m test2 --mail -i 100 -l ERR
```

The following information is sent to the mail destination:

```
Message:test2
Type: logcmd
ID: 100
```

(continues on next page)

(continued from previous page)

```
Host: server1
Date: 2018/09/01 14:00:00
```

Example 3: When specifying a message, output destination, event ID, and level (output destination is trap):

When the following is written in the exec resource script, the message is set to the SNMP trap destination set in **Cluster Properties** of the Cluster WebUI. For more information on the SNMP trap destination settings, see "Cluster properties - Alert Service tab" in "Details of other settings" in "EXPRESSCLUSTER X SingleServerSafe Configuration Guide".

```
clplogcmd -m test3 --trap -i 200 -l ERR
```

The following information is sent to the SNMP trap destination:

Trap OID: clusterEventError
Attached data 1: clusterEventMessage = test3
Attached data 2: clusterEventID = 200
Attached data 3: clusterEventDateTime = 2011/08/01 09:00:00
Attached data 4: clusterEventServerName = server1
Attached data 5: clusterEventModuleName = logcmd

2.13 Controlling monitor resources (clpmonctrl command)

Controls the monitor resources.

Command line

clpmonctrl -s [-m *resource_name*] [-w *wait_time*]
clpmonctrl -r [-m *resource_name*] [-w *wait_time*]
clpmonctrl -c [-m *resource_name*]
clpmonctrl -v [-m *resource_name*]
clpmonctrl -e -m *resource_name*
clpmonctrl -n [-m *resource_name*]

Description

Suspends and/or resumes monitor resources.

Option

-s

Suspends monitoring.

-r

Resumes monitoring.

-c

Resets the times counter of the recovery action.

-v

Displays the times counter of the recovery action.

-e

Enables the Dummy Failure. Be sure to specify a monitor resource name with the -m option.

-n

Disables the Dummy Failure. When a monitor resource name is specified with the -m option, the function is disabled only for the resource. When the -m option is omitted, the function is disabled for all monitor resources.

-m `resource_name`

Specifies a monitor resource to be controlled.
This option can be omitted. All monitor resources are controlled when the option is omitted.

-w `wait_time`

Waits for control monitoring on a monitor resource basis. (in seconds)
This option can be omitted. The default value 5 is set when the option is omitted.

Return Value

0	Completed successfully.
1	Privilege for execution is invalid
2	The option is invalid
3	Initialization error
4	The configuration data is invalid.
5	Monitor resource is not registered.
6	The specified monitor resource is invalid
10	EXPRESSCLUSTER is not running.
11	The cluster daemon is suspended
90	Monitoring control wait timeout
128	Duplicated activation
255	Other internal error

Examples

Example 1: When suspending all monitor resources:

```
# clpmonctrl -s
Command succeeded.
```

Example 2: When resuming all monitor resources:

```
# clpmonctrl -r
Command succeeded.
```

Remarks

If you suspend an already suspended monitor resource or resume an already started one, this command abends without changing the status of the monitor resource.

Notes

This command must be executed by a user with the root privilege.

Check the status of monitor resource by using the status display command or Cluster WebUI.

Before you run this command, use the clpstat command or Cluster WebUI to verify that the status of monitor resources is in either "Online" or "Suspend."

When the recovery action of monitor resource uses one of the following settings, "Final Action Count" (which is displayed in the -v option) indicates the number of times to execute a script before the final action.

- Execute Script Before Final Action: Enable
- Final action: No Operation

Error Messages

Message	Causes/Solution
Command succeeded.	The command ran successfully.
Log in as root.	You are not authorized to run this command. Log on as root user.
Initialization error. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.
Invalid cluster configuration data. Check the cluster configuration information.	The cluster configuration data is invalid. Check the cluster configuration data by using the Cluster WebUI.

Continued on next page

Table 2.22 – continued from previous page

Message	Causes/Solution
Monitor resource is not registered.	The monitor resource is not registered.
Specified monitor resource is not registered. Check the cluster configuration information.	The specified monitor resource is not registered. Check the cluster configuration data by using the Cluster WebUI.
The cluster has been stopped. Check the active status of the cluster daemon by using the command such as ps command.	The cluster has been stopped. Check the activation status of the cluster daemon by using a command such as ps command.
The cluster has been suspended. The cluster daemon has been suspended. Check activation status of the cluster daemon by using a command such as the ps command.	The cluster daemon has been suspended. Check the activation status of the cluster daemon by using a command such as ps command.
Waiting for synchronization of the cluster. The cluster is waiting for synchronization. Wait for a while and try again.	Synchronization of the cluster is awaited. Try again after cluster synchronization is completed.
Monitor %1 was unregistered, ignored. The specified monitor resources %1 is not registered, but continue processing. Check the cluster configuration data.	There is an unregistered monitor resource in the specified monitor resources but it is ignored and the process is continued. Check the cluster configuration data by using the Cluster WebUI. %1: Monitor resource name
Monitor %1 denied control permission, ignored. but continue processing.	The specified monitor resources contain the monitor resource which cannot be controlled, but it does not affect the process. %1: Monitor resource name
This command is already run.	The command is already running. Check the running status by using a command such as ps command.
Internal error. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.

Monitor resource types that can be specified for the -m option

Type	Suspending/resuming monitoring	Resetting the times counter of the recovery action	Enabling/disabling Dummy Failure
diskw	✓	✓	✓
ipw	✓	✓	✓

Continued on next page

Table 2.23 – continued from previous page

Type	Suspending/resuming monitoring	Resetting the times counter of the recovery action	Enabling/disabling Dummy Failure
miiw	✓	✓	✓
mtw	✓	✓	✓
pidw	✓	✓	✓
volmgrw	✓	✓	✓
userw	✓	✓	n/a
mrw	✓	✓	n/a
genw	✓	✓	✓
oraclew	✓	✓	✓
db2w	✓	✓	✓
psqlw	✓	✓	✓
mysqlw	✓	✓	✓
odbcw	✓	✓	✓
sqlserverw	✓	✓	✓
sambaw	✓	✓	✓
nfsw	✓	✓	✓
httpw	✓	✓	✓
ftpw	✓	✓	✓
smtpw	✓	✓	✓
pop3w	✓	✓	✓
imap4w	✓	✓	✓
tuxw	✓	✓	✓
wlsw	✓	✓	✓
wasw	✓	✓	✓
otxw	✓	✓	✓
jraw	✓	✓	✓
sraw	✓	✓	✓
psrw	✓	✓	✓
psw	✓	✓	✓

2.14 Controlling group resources (clprsc command)

Controls group resources.

Command line

clprsc -s *resource_name* [-f] [--apito *timeout*]
clprsc -t *resource_name* [-f] [--apito *timeout*]

Description
Starts and stops group resources.

Option

-s
Starts group resources.

-t
Stops group resources.

-f

When the group resource is online, all group resources that the specified group resource depends starts up.
When the group resource is offline, all group resources that the specified group resource depends stop.

--apito timeout

Specify the interval (internal communication timeout) to wait for the group resource start or stop in seconds. A value from 1 to 9999 can be specified.
If the --apito option is not specified, waiting for the group resource start or stop is performed according to the value set to the internal communication timeout of the cluster properties.

Return Value

0	Completed successfully.
Other than 0	Terminated due to a failure.

Examples
Group resource configuration

```
# clpstat
========== CLUSTER STATUS  ==========
Cluster : cluster
<server>
    server1     : Online
      lanhb1    : Normal
      lanhb2    : Normal
<group>
    ManagementGroup : Online
      current   : server1
      ManagementIP : Online
    failover1   : Online
      current   : server1
      exec1     : Online
```

```
<monitor>
    ipw1        : Normal
==================================
```

Example 1: When stopping the resource (exec1) of the group (failover1)

```
# clprsc -t exec1
Command succeeded.

# clpstat

========== CLUSTER STATUS ==========
<Abbreviation>
<group>
ManagementGroup: Online
Current: server1
ManagementIP: Online
failover1: Online
current: server1
exec1: Offline
<Abbreviation>
```

Example 2: When starting the resource (fip1) of the group(failover 1)

```
# clprsc -s exec1
Command succeeded.

# clpstat
========== CLUSTER STATUS ==========
<Abbreviation>
<group>
ManagementGroup: Online
Current: server1
ManagementIP: Online
failover1: Online
current: server1
exec1: Online
<Abbreviation>
```

Notes

This command must be executed by a user with the root privilege.

Check the status of the group resources by the status display or the Cluster WebUI.

Error Messages

Message	Causes/Solution
Log in as Administrator.	Run this command as a user with Administrator privileges.
Invalid cluster configuration data. Check the cluster configuration information.	The cluster construction information is not correct. Check the cluster construction information by Cluster WebUI.
Invalid option.	Specify a correct option.
Could not connect server. Check if the cluster service is active.	Check if the EXPRESSCLUSTER is activated.

Continued on next page

Table 2.24 – continued from previous page

Message	Causes/Solution
Invalid server status. Check if the cluster service is active.	Check if the EXPRESSCLUSTER is activated.
Server is not active. Check if the cluster service is active.	Check if the EXPRESSCLUSTER is activated.
Invalid server name. Specify a valid server name in the cluster.	Specify a correct server name in the cluster.
Connection was lost. Check if there is a server where the cluster service is stopped in the cluster.	Check if there is any server with EXPRESSCLUSTER service stopped in the cluster.
Internal communication timeout has occurred in the cluster server. If it occurs frequently, set the longer timeout. The group resource is busy. Try again later.	Timeout has occurred in internal communication in the EXPRESSCLUSTER. Set the internal communication timeout longer if this error occurs frequently. Because the group resource is in the process of starting or stopping, wait for a while and try again.
An error occurred on group resource. Check the status of group resource.	Check the group resource status by using the Cluster WebUI or the clpstat command.
Could not start the group resource. Try it again after the other server is started, or after the Wait Synchronization time is timed out.	Wait until the other server starts or the wait time times out, and then start the group resources.
No operable group resource exists in the server.	Check there is a processable group resource on the specified server.
The group resource has already been started on the local server.	Check the group resource status by using the Cluster WebUI or clpstat command.
The group resource has already been started on the other server.	Check the group resource status by using the Cluster WebUI or clpstat command. Stop the group to start the group resources on the local server.
The group resource has already been stopped.	Check the group resource status by using the Cluster WebUI or clpstat command.
Failed to start group resource. Check the status of group resource.	Check the group resource status by using the Cluster WebUI or clpstat command.
Failed to stop resource. Check the status of group resource.	Check the group resource status by using the Cluster WebUI or clpstat command.
Depended resource is not offline. Check the status of resource.	Because the status of the depended group resource is not offline, the group resource cannot be stopped. Stop the depended group resource or specify the -f option.
Depending resource is not online. Check the status of resource.	Because the status of the depended group is not online, the group resource cannot be started. Start the depended group resource or specify the -f option.
Invalid group resource name. Specify a valid group resource name in the cluster.	The group resource is not registered.

Continued on next page

Table 2.24 – continued from previous page

Message	Causes/Solution
Server is not in a condition to start resource or any critical monitor error is detected.	Check the group resource status by using the Cluster WebUI or clpstat command. An error is detected in a critical monitor on the server on which an attempt to start a group resource was made.
Internal error. Check if memory or OS resources are sufficient.	Memory or OS resources may be insufficient. Check them.

2.15 Requesting processing to cluster servers (clprexec command)

Issues a processing execution request to another server on which EXPRESSCLUSTER is installed.

Command line

clprexec --failover [*group_name*] -h *IP* [-r *resource_name*] [-w *timeout*] [-p *port_number*] [-o *logfile_path*]
clprexec --script script_file -h IP [-p *port_number*] [-w *timeout*] [-o *logfile_path*]
clprexec --notice [*mrw_name*] -h IP [-k *category*[.*keyword*]] [-p *port_number*] [-w *timeout*] [-o *logfile_path*]
clprexec --clear [*mrw_name*] -h IP [-k *category*[.*keyword*]] [-p *port_number*] [-w *timeout*] [-o *logfile_path*]

Description

The command issues the request to execute specified process to the server in another cluster.

Option

--failover

Requests group failover. Specify a group name for *group_name*.
When not specifying the group name, specify the name of a resource that belongs to the group by using the -r option.

--script script_name

Requests script execution.
For *script_name*, specify the file name of the script to execute (such as a shell script or executable file).
The script must be created in the work/rexec folder, which is in the folder where EXPRESSCLUSTER is installed, on each server specified using -h.

--notice

Sends an error message to the EXPRESSCLUSTER server.
Specify a message reception monitor resource name for *mrw_name*.
When not specifying the monitor resource name, specify the category and keyword of the message reception monitor resource by using the -k option.

--clear

Requests changing the status of the message reception monitor resource from "Abnormal" to "Normal."
Specify a message reception monitor resource name for *mrw_name*.
When not specifying the monitor resource name, specify the category and keyword of the message reception monitor resource by using the -k option.

-h IP Address

Specify the IP addresses of EXPRESSCLUSTER servers that receive the processing request.
Up to 32 IP addresses can be specified by separating them with commas.
* If this option is omitted, the processing request is issued to the local server.

-r resource_name
Specify the name of a resource that belongs to the target group for the processing request when the --failover option is specified.

-k category[.keyword]

For *category*, specify the category specified for the message receive monitor when the --notice or --clear option is specified.
To specify the keyword of the message receive monitor resource, specify them by separating them with dot after *category*.

-p port_number

Specify the port number.
For *port_number*, specify the data transfer port number specified for the server that receives the processing request.
The default value, 29002, is used if this option is omitted.

-o logfile_path

In *logfile_path*, specify the path of the file to which to output the detailed log of this command.
The file contains the log of one command execution.
* If this option is not specified on a server where EXPRESSCLUSTER is not installed, the log is always output to the standard output.

-w timeout

Specify the command timeout time. The default, 180 seconds, is used if this option is not specified.
A value from 5 to MAXINT can be specified.

Return Value

0	Completed successfully.
Other than 0	Terminated due to a failure.

Notes

When issuing error messages by using the clprexec command, the message reception monitor resources for which executing an action when an error occurs is specified in EXPRESSCLUSTER server must be registered and started.

The server that has the IP address specified for the -h option must satisfy the following conditions:

= EXPRESSCLUSTER X 3.0 or later must be installed.

= EXPRESSCLUSTER must be running.

(When an option other than --script is used)
= mrw must be set up and running.

(When the --notice or --clear option is used)

When using the **Limiting the access by using client IP addresses** function, add the IP address of the device in which the **clprexec** command is executed to the **IP Addresses of the Accessible Clients** list.

For details of the **Limiting the access by using client IP addresses** function, see "WebManager tab" of "Cluster properties" in "Details of other settings" in the EXPRESSCLUSTER X SingleServerSafe Configuration Guide.

Examples

Example 1: This example shows how to issue a request to fail over the group failover1 to EXPRESSCLUSTER server 1 (10.0.0.1):

```
# clprexec --failover failover1 -h 10.0.0.1 -p 29002
```

Example 2: This example shows how to issue a request to fail over the group to which the group resource (exec1) belongs to EXPRESSCLUSTER server 1 (10.0.0.1):

```
# clprexec --failover -r exec1 -h 10.0.0.1
```

Example 3: This example shows how to issue a request to execute the script (script1.sh) on EXPRESSCLUSTER server 1 (10.0.0.1):

```
# clprexec --script script1.sh -h 10.0.0.1
```

Example 4: This example shows how to issue an error message to EXPRESSCLUSTER server 1 (10.0.0.1):

* mrw1 set, category: earthquake, keyword: scale3

- This example shows how to specify a message receive monitor resource name:

```
# clprexec --notice mrw1 -h 10.0.0.1 -w 30 -p /tmp/clprexec/␣
↪lprexec.log
```

- This example shows how to specify the category and keyword specified for the message receive monitor resource:

```
# clprexec --notice -h 10.0.0.1 -k earthquake.scale3 -w 30 -p /tmp/
↪clprexec/clprexec.log
```

Example 5: This example shows how to issue a request to change the monitor status of mrw1 to EXPRESSCLUSTER server 1 (10.0.0.1):

* mrw1 set, category: earthquake, keyword: scale3

- This example shows how to specify a message receive monitor resource name:

```
# clprexec --clear mrw1 -h 10.0.0.1
```

- This example shows how to specify the category and keyword specified for the message receive monitor resource:

```
# clprexec --clear -h 10.0.0.1 -k earthquake.scale3
```

Error Messages

Message	Cause/solution
rexec_ver:%s	-
%s %s : %s succeeded.	-
%s %s : %s will be executed from now.	Check the processing result on the server that received the request.

Continued on next page

Table 2.25 – continued from previous page

Message	Cause/solution
%s %s : Group Failover did not execute because Group(%s) is offline.	-
%s %s : Group migration did not execute because Group(%s) is offline.	-
Invalid option.	Check the command argument.
Could not connect to the data transfer servers. Check if the servers have started up.	Check whether the specified IP address is correct and whether the server that has the IP address is running.
Command timeout.	Check whether the processing is complete on the server that has the specified IP address.
All servers are busy.Check if this command is already run.	This command might already be running. Check whether this is so.
%s %s : This server is not permitted to execute clprexec.	Check whether the IP address of the server that executes the command is registered in the list of client IP addresses that are not allowed to connect to the Cluster WebUI.
%s %s : Specified monitor resource(%s) does not exist.	Check the command argument.
%s failed in execute.	Check the status of the EXPRESSCLUSTER server that received the request.

2.16 Controlling reboot count (clpregctrl command)

Controls reboot count limitation.

Command line

clpregctrl --get
clpregctrl -g
clpregctrl --clear -t *type* -r *registry*
clpregctrl -c -t *type* -r *registry*

Description

Displays or initializes the reboot count on a server.

Option

-g, --get
Displays reboot count information.

-c, --clear
Initializes reboot count.

-t type
Specifies the type to initialize the reboot count. The type that can be specified is *rc* or *rm*.

-r registry
Specifies the registry name. The registry name that can be specified is haltcount.

Return Value

0	Completed successfully.
1	Privilege for execution is invalid
2	Duplicated activation
3	The option is invalid
4	The configuration data is invalid.
10 to 17	Internal Error
20 to 22	Obtaining reboot count information has failed.
90	Allocating memory has failed.
91	Changing the work directory as failed.

Examples

Display of reboot count information

```
# clpregctrl -g
*****************************
-------------------------
type : rc
registry : haltcount
comment : halt count
kind : int
value : 0
default : 0
-------------------------
type : rm
registry : haltcount
```

```
comment : halt count
kind : int
value : 3
default : 0
*****************************
Command succeeded.(code:0)
#
```

The reboot count is initialized in the following examples.

Example1: When initializing the count of reboots caused by group resource error:

```
# clpregctrl -c -t rc -r haltcount
Command succeeded.(code:0)
#
```

Example2: When initializing the count of reboots caused by monitor resource error:

```
# clpregctrl -c -t rm -r haltcount
Command succeeded.(code:0)
#
```

Notes

This command must be executed by a user with the root privilege.

Error Messages

Message	Causes/Solution
Command succeeded.	The command ran successfully.
Log in as root.	You are not authorized to run this command. Log on as root user.
The command is already executed. Check the execution state by using the "ps" command or some other command.	The command is already running. Check the running status by using a command such as ps command.
Invalid option.	Specify a valid option.
Internal error. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.

2.17 Checking the process health (clphealthchk command)

Checks the process health.

Command line

clphealthchk [-t pm | -t rc | -t rm | -t nm | -h]

Note: This command must be run on the server whose process health is to be checked because this command checks the process health of a single server.

Description

This command checks the process health of a single server.

Option

None

Checks the health of all of pm, rc, rm, and nm.

-t <process>

process

pm Checks the health of pm.

rc Checks the health of rc.

rm Checks the health of rm.

nm Checks the health of nm.

-h

Displays the usage.

Return Value

0	Normal termination
1	Privilege for execution is invalid
2	Duplicated activation
3	Initialization error
4	The option is invalid
10	The process stall monitoring function has not been enabled.
11	The cluster is not activated (waiting for the cluster to start or the cluster has been stopped.)
12	The cluster daemon is suspended
100	There is a process whose health information has not been updated within a certain period. If the -t option is specified, the health information of the specified process is not updated within a certain period.
255	Other internal error

Examples

Example 1: When the processes are healthy

```
# clphealthchk
pm OK
rc OK
rm OK
nm OK
```

Example 2: When clprc is stalled

```
# clphealthchk
pm OK
rc NG
rm OK
nm OK

# clphealthchk -t rc
rc NG
```

Example 3: When the cluster has been stopped

```
# clphealthchk
The cluster has been stopped
```

Remarks

If the cluster has been stopped or suspended, the process is also stopped.

Notes

Run this command as the root user.

Error Messages

Message	Cause/Solution
Log in as root.	You are not authorized to run this command. Log on as the root user.
Initialization error. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.
Invalid option.	Specify a valid option.
The function of process stall monitor is disabled.	The process stall monitoring function has not been enabled.
The cluster has been stopped.	The cluster has been stopped.
The cluster has been suspended.	The cluster has been suspended.
This command is already run.	The command has already been started. Check the running status by using a command such as ps command.
Internal error. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.

2.18 Displaying the cluster statistics information (clpperfc command)

the clpperfc command displays the cluster statistics information.

Command line

clpperfc --starttime -g *group_name*
clpperfc --stoptime -g *group_name*
clpperfc -g [*group_name*]
clpperfc -m *monitor_name*

Description

This command displays the median values (millisecond) of the group start time and group stop time.

This command displays the monitoring processing time (millisecond) of the monitor resource.

Option

--starttime -g group_name
Displays the median value of the group start time.

--stoptime -g group_name
Displays the median value of the group stop time.

-g [group_name]
Displays the each median value of the group start time and group stop time.

If groupname is omitted, it displays the each median value of the start time and stop time of all the groups.

-m monitor_name
Displays the last monitor processing time of the monitor resource.

Return value

0	Normal termination
1	Invalid command option
2	User authentication error
3	Configuration information load error
4	Configuration information load error
5	Initialization error
6	Internal error
7	Internal communication initialization error
8	Internal communication connection error
9	Internal communication processing error
10	Target group check error
12	Timeout error

Example of Execution
(when displaying the median value of the group start time)

```
# clpperfc --starttime -g failover1
200
```

Example of Execution
(when displaying each median value of the start time and stop time of the specific group)

```
# clpperfc -g failover1
            start time    stop time
failover1          200          150
```

Example of Execution
(when displaying the monitor processing time of the monitor resource)

```
# clpperfc -m monitor1
100
```

Remarks

The time is output in millisecond by this commands.

If the valid start time or stop time of the group was not obtained, - is displayed.

If the valid monitoring time of the monitor resource was not obtained, 0 is displayed.

Notes

Execute this command as a root user.

Error Messages

Message	Cause/Solution
Log in as root.	Run this command as the root user.
Invalid option.	The command option is invalid. Check the command option.
Command timeout.	Command execution timed out .
Internal error.	Check if memory or OS resources are sufficient.

2.19 Checking the cluster configuration information (clpcfchk command)

This command checks the cluster configuration information.

Command line

clpcfchk -o *path* [-i *conf_path*]

Description

This command checks the validness of the setting values based on the cluster configuration information.

Option

-o path
Specifies the directory to store the check results.

-i conf_path
Specifies the directory which stored the configuration information to check.

If this option is omitted, the applied configuration information is checked.

Return Value

0	Normal termination
Other	than 0 Termination with an error

Example of Execution (when checking the applied configuration information)

```
# clpcfchk -o /tmp
server1 : PASS
```

Example of Execution (when checking the stored configuration information)

```
# clpcfchk -o /tmp -i /tmp/config
server1 : PASS
```

Execution Result

For this command, the following check results (total results) are displayed.

Check Results (Total Results)	Description
PASS	No error found.
FAIL	An error found. Check the check results.

Remarks

Only the total results of each server are displayed.

Notes

Run this command as a root user.

When checking the configuration information exported through Cluster WebUI, decompress it in advance.

Error Messages

Message	Cause/Solution
Log in as root.	Log in as a root user.
Invalid option.	Specify a valid option.
Could not opened the configuration file. Check if the configuration file exists on the specified path.	The specified path does not exist. Specify a valid path.
Server is busy. Check if this command is already run.	This command has been already activated.
Failed to obtain properties.	Failed to obtain the properties.
Failed to check validation.	Failed to check the cluster configuration.
Internal error. Check if memory or OS resources are sufficient.	The amount of memory or OS resources may be insufficient. Check for any insufficiency.

2.20 Adding a firewall rule (clpfwctrl command)

Adds or deletes a firewall rule on servers for EXPRESSCLUSTER.

Command line

clpfwctrl.sh --add [--zone=<ZONE>]
clpfwctrl.sh --remove
clpfwctrl.sh --help

Description

Note: Before executing this command, start up the server firewall service.

Note: This command adds a rule to or deletes it from a firewall zone on a single server.

Note: Execute this command immediately after installing EXPRESSCLUSTER and directly after applying configuration data.

Note: This command supports only environments where the firewall-cmd and firewall-offline-cmd commands can be used.

A rule can be added to a firewall zone for accessing port numbers for EXPRESSCLUSTER, and the added rule can be deleted from the zone.
For more information on port numbers to be specified with this command, and for that on protocols, see "EXPRESSCLUSTER X SingleServerSafe Installation Guide" -> "About EXPRESSCLUSTER X SingleServerSafe" -> "Preparing and verifying the server environment before installation" -> "Verifying the firewall settings (Required)".
Add a rule with the following name to a firewall zone. If the rule name is already used, first delete it, then add it again. Do not change the rule name.

- Rule name
  - clusterpro

Option

--add [--zone=<ZONE>]
Adds a firewall rule, to a zone (if specified). If no zone is specified, the rule is added to the default zone.

--remove
Deletes the added firewall rule.

--help
Displays the usage.

Return value

0	Success
Other than 0	Failure

Notes

Execute this command as root.

This command does not add an outbound firewall rule. Adding it requires a separate procedure.

Once a JVM monitor resource is registered, this command always allows the port number for managing the resource.

Executing this command discards the firewall configuration that is temporarily set on the memory.

Example of Execution

Adding a rule to the default zone:

```
# clpfwctrl.sh --add
Command succeeded.
```

Example of Execution

Adding a rule to the home zone:

```
# clpfwctrl.sh --add --zone=home
Command succeeded.
```

Example of Execution

Deleting the added rule:

```
# clpfwctrl.sh --remove
Command succeeded.
```

Error Messages

Message	Cause/Solution
Log in as root.	Log in as a user with root privileges.
Invalid option.	Specify the right option.
Failed to register rule(CLUSTERPRO). Invalid port.	Check the configuration data, which includes an invalid port number.
Failed to register rule(CLUSTERPRO). Invalid zone.	Check the zone name, which is invalid.
Unsupported environment.	The OS is unsupported.
Could not read xmlpath. Check if xmlpath exists on the specified path. (%1)	Check if the xml path exists in the configuration data. %1: xml path
Could not opened the configuration file. Check if the configuration file exists on the specified path. (%1)	Check if the policy file exists. %1: xml path
Could not read type. Check if type exists on the policy file. (%1)	Check if the policy file exists. %1: xml path

Continued on next page

Table 2.31 – continued from previous page

Message	Cause/Solution
not exist xmlpath. (%1)	Check if the xml path exists in the configuration data. %1: xml path
Failed to obtain properties. (%1)	Check if the xml path exists in the configuration data. %1: xml path
Not exist java install path. (%1)	Check if the Java installation path exists. %1: Java installation path
Internal error. Check if memory or OS resources are sufficient. (%1)	The possible cause is insufficient memory or insufficient OS resources. Check if these two are sufficient. %1: xml path

CHAPTER

THREE

NOTES AND RESTRICTIONS

This chapter provides information on known problems and how to troubleshoot the problems.

This chapter covers:

3.1 After starting operating EXPRESSCLUSTER X SingleServerSafe

This section provides notes on situations you might encounter after starting to operate EXPRESSCLUSTER.

3.1.1 Messages displayed when the driver is loaded

When the clpka driver is loaded, the following message may be displayed in the console or syslog. This symptom is not an error.

```
kernel: clpka: no version for "struct_module" found: kernel tainted.
kernel: clpka: module license 'unspecified' taints kernel.
```

3.1.2 ipmi messages

If IPMI is used as the user-mode monitor resource, the following many kernel module warning logs are output to syslog:

```
modprobe: modprobe: Can't locate module char-major-10-173
```

To avoid this log output, rename /dev/ipmikcs.

3.1.3 Restrictions during recovery operation

When you have configured a group resource (EXEC resource) as a recovery target in the settings of error detection by a monitor resource, and the monitor resource detects an error, do not perform the following commands or the controls of servers or groups by the Cluster WebUI while recovery (reactivation -> final action) is ongoing.

- Stopping or suspending a server
- Starting or stopping a group

If you perform the above-mentioned operations while recovery caused by detection of an error by a monitor resource is in progress, other group resources of the group with an error may not stop.
However, you can perform them when the final action is completed.

3.1.4 Executable files and script files not described in the Command Reference

The installation directory contains executable files and script files that are not described in "2. *EXPRESSCLUSTER X SingleServerSafe command reference*" in this guide. Do not execute these files by using any program other than EXPRESSCLUSTER X SingleServerSafe.

Any problems caused by not using EXPRESSCLUSTER will not be supported.

3.1.5 Messages displayed when logs are collected

When you collect logs, you may find the following message on the console. This does not mean failure. The logs are collected normally.

```
hd#: bad special flag: 0x03
ip_tables: (C) 2000-2002 Netfilter core team
```

(The name of the IDE device that exists on the server is stored in hd#.)

```
kernel: Warning: /proc/ide/hd?/settings interface is obsolete, and will be␣
↪removed soon!
```

3.1.6 Service start/stop scripts

For an init.d environment, the service start and stop scripts output an error in the following cases. An error is not output for a systemd environment.

- Immediately after the EXPRESSCLUSTER Server is installed (for SUSE Linux)
  When the OS is shut down, the service stop scripts below output an error. This error is output because services are not running and does not indicate an actual problem.
  - clusterpro_alertsync
  - clusterpro_webmgr
  - clusterpro
  - clusterpro_api
  - clusterpro_ib
  - clusterpro_trn
  - clusterpro_evt
- OS shutdown after manually stopping a service (for SUSE Linux)
  After a service is stopped using the clpcl command or the Cluster WebUI, the stop script for the service that stopped when the OS shut down outputs an error. This error is output because the service stopped and does not indicate an actual problem.
  - clusterpro

In the following case, the service stop scripts are executed in the incorrect order:

- OS shutdown after all services are disabled by executing **chkconfig --del name**
  After the EXPRESSCLUSTER services are disabled, they are stopped in the incorrect order when the OS shuts down. This occurs because the EXPRESSCLUSTER services disabled when the OS shut down are not stopped.
  If the server is shut down by the Cluster WebUI or by an EXPRESSCLUSTER command such as the clpstdn command, the EXPRESSCLUSTER services stopping in the incorrect order does not cause a problem.

3.1.7 Checking the service status when systemd is used

For a systemd environment, the status of services output by the systemctl command may not reflect the actual status of the cluster.

Use the clpstat command and Cluster WebUI to check the cluster status.

3.1.8 Script files used in EXEC resources

The script files used in the EXEC resources are stored in the following directory on the server:

/installation path/scripts/*group-name*/EXEC *resource-name*/

If the following changes are made in configuration change, the pre-change script files are not deleted from the server.

- When the EXEC resource is deleted or renamed
- When a group that belongs to the EXEC resource is deleted or renamed

Old EXEC resource scripts can be deleted when unnecessary.

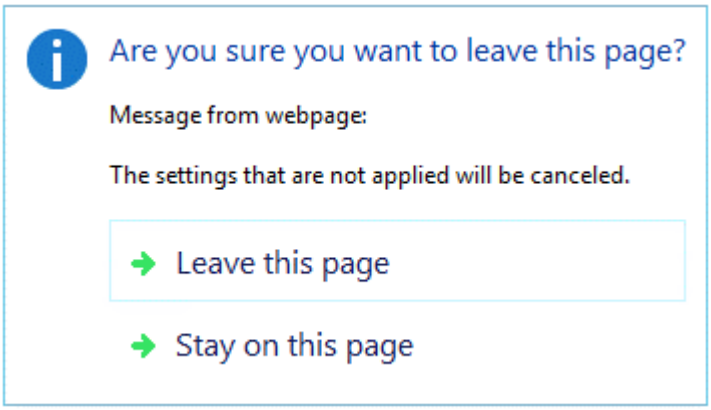
3.1.9 Monitor resources that monitor active resources

When monitor resources that monitoring timing is "Active" have suspended and resumed, the following restriction apply:

- In case stopping target resource after suspending monitor resource, monitor resource becomes suspended. As a result, monitoring restart cannot be executed.
- In case stopping or starting target resource after suspending monitor resource, monitoring by monitor resource starts when target resource starts.

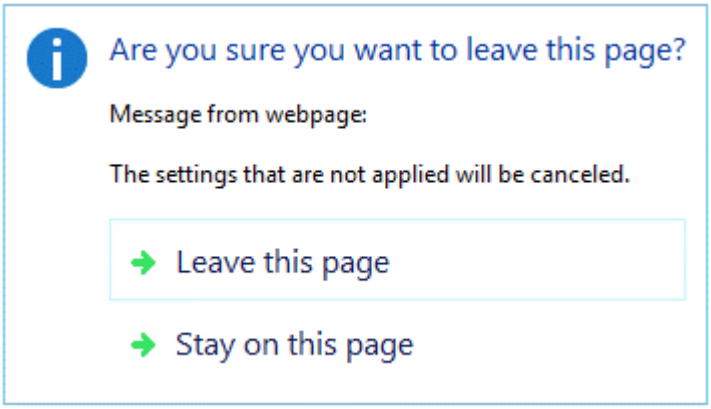
3.1.10 Notes on the Cluster WebUI

- If the Cluster WebUI is operated in the state that it cannot communicate with the connection destination, it may take a while until the control returns.
- When going through the proxy server, make the settings for the proxy server be able to relay the port number of the Cluster WebUI.
- When going through the reverse proxy server, the Cluster WebUI will not operate properly.
- When updating EXPRESSCLUSTER X SingleServerSafe, close all running browsers. Clear the browser cache and restart the browser.
- Cluster configuration data created using a later version of this product cannot be used with this product.
- Closing the Web browser (by clicking **Exit** from the menu), the dialog box to confirm to save may be displayed.



When you continue to edit, click the **Stay on this page** button.

- Reloading the Web browser (by selecting **Refresh button** from the menu or tool bar), the dialog box to confirm to save may be displayed.



When you continue to edit, click the **Stay on this page** button.

- For notes and restrictions of Cluster WebUI other than the above, see the online manual.

3.1.11 System monitor resources,Process resource monitor resource

- To change a setting, the cluster must be suspended.
- System monitor resources do not support a delay warning for monitor resources.
- If the date or time of the OS has been changed while System Resource Agent is running, resource monitoring may operate incorrectly as described below since the timing of analysis which is normally done at 10 minute intervals may differ the first time after the date or time is changed. If either of the following occur, suspend and resume cluster.
  - No error is detected even after the specified duration for detecting errors has passed.
  - An error is detected before the specified duration for detecting errors has elapsed.
- Up to 64 disks that can be monitored by the disk resource monitoring function of System monitor resources.

3.1.12 JVM monitor resources

- When restarting the monitoring-target Java VM, suspend or shut down the cluster before restarting the Java VM.
- To change a setting, the cluster must be suspended.
- JVM monitor resources do not support a delay warning for monitor resources.
- When changing the language (for example, from Japanese to Chinese) set to the Cluster WebUI (**Cluster Properties** - **Info** tab - **Language**) after JVM monitor resource registration, delete the registered JVM monitor resource, and then register it again.

3.1.13 HTTP monitor resource

- The HTTP monitor resource uses any of the following OpenSSL shared library symbolic links:
  - libssl.so
  - libssl.so.1.1 (OpenSSL 1.1.1 shared library)
  - libssl.so.10 (OpenSSL 1.0 shared library)
  - libssl.so.6 (OpenSSL 0.9 shared library)

The above symbolic links may not exist depending on the OS distribution or version, or the package installation status.
If the above symbolic links cannot be found, the following error occurs in the HTTP monitor resource.

```
Detected an error in monitoring<Module Resource Name>. (1 :Can not found␣
↪library. (libpath=libssl.so, errno=2))
```

For this reason, if the above error occurred, be sure to check whether the above symbolic links exit in /usr/lib or /usr/lib64.
If the above symbolic links do not exit, create the symbolic link libssl.so, as in the command example below.

Command example:

```
cd /usr/lib64 # Move to /usr/lib64.
ln -s libssl.so.1.0.1e libssl.so # Create a symbolic link.
```

CHAPTER

FOUR

ERROR MESSAGES

This chapter provides information on error messages you might encounter when operating EXPRESSCLUSTER X SingleServerSafe.

This chapter covers:

4.1 Messages reported by syslog, alert, mail, SNMP trap, and Message Topic

If the "o" mark is shown in the alert column or the syslog column, the message on that row is output to the Alert logs of Cluster WebUI or syslog of OS, respectively.

If the "o" mark is shown in the mail column, the message on that row is reported when E-mail report function of Alert Service is enabled.

If the "o" mark is shown in the SNMP Trap column, the message on that row is reported when SNMP trap sending function of Alert Service is enabled.

For mail reporting and SNMP Trap transmission, refer to the Reference Guide.

If the "o" mark is shown in the Message Topic column, the message on that row is reported when Amazon SNS linkage function is enabled.

For details of Amazon SNS linkage function, see "EXPRESSCLUSTER X SingleServerSafe Configuration Guide" - "Details of other settings" - "Cluster properties" - "Cloud tab".

The table below lists EXPRESSCLUSTER X SingleServerSafe messages.

Note: Alert mail reporting messages are output to syslog with facility = daemon(0x00000018), identity = "expresscls". *Event Type* in the table below is equivalent to a syslog log level.

In the table below, each number indicates the following:

[1]alert, [2]syslog, [3]Mail Report, [4]SNMP Trap, [5]Message Topic

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
sss	Error	8	Failed to update config file.	The configuration file could not be updated.	Check the configuration data.	o	o			
sss	Info	10	Updated config file successfully.	The configuration file has been updated.	-		o			
sss	Error	12	Information in config file is invalid.	The content of the configuration file is invalid.	Check the configuration data.		o			
sss	Error	14	Failed to obtain server name.	The server name could not be acquired.	Memory or OS resources may not be sufficient. Check them.		o			
sss	Info	16	Server name is updated.	The server name has been updated.	-	o	o			
pm	Info	1	Starting the cluster daemon...	The EXPRESSCLUSTER daemon has been successfully started.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
pm	Info	2	Shutting down the cluster daemon...	The EXPRESSCLUSTER daemon is now being shut down.	-	o	o			
pm	Info	3	Shutdown monitoring is started...	Shutdown monitoring has been started.	-	o	o			
pm	Error	10	The cluster daemon has already started.	The EXPRESSCLUSTER daemon has already been already started.	Check the EXPRESSCLUSTER daemon status.	o	o			
pm	Error	11	A critical error occurred in the cluster daemon.	A critical error occurred in the EXPRESSCLUSTER daemon.	The user executing the operation does not have root privileges, or there is an insufficiency of memory or OS resources. Check them.	o	o	o	o	o
pm	Error	12	A problem was detected in XML library.	A problem was detected in the XML library.	Memory or OS resources may not be sufficient. Check them.	o	o			
pm	Error	13	A problem was detected in cluster configuration data.	A problem was detected in configuration data.	Check the configuration data by using the Cluster WebUI.	o	o	o	o	o
pm	Error	14	No cluster configuration data is found.	The configuration data does not exist.	Create a server configuration by using the Cluster WebUI and upload it to the server.	o	o			
pm	Error	15	No information about this server is found in the cluster configuration data.	This server was not found in the configuration data.	Check the configuration data by using the Cluster WebUI.	o	o			
pm	Warning	16	The recovery action is configured to change from an OS stop to an OS restart.	Checking the configuration of cluster properties.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
pm	Error	20	Process %1 was terminated abnormally.	Process %1 terminated abnormally.	Memory or OS resources may not be sufficient. Check them. The abend of the nm process, which does not affect the business operation, prevents you from stopping the cluster. To recover from it, restart the OS by using Cluster WebUI or the clpdown command.	o	o	o	o	o
pm	Error	21	The system will be stopped because the cluster daemon process terminated abnormally.	The system will now stop because the EXPRESSCLUSTER daemon process terminated abnormally.	Deactivation of group resources may be failed. Troubleshoot by following the group resource message.	o	o			
pm	Error	22	An error occurred when initializing process %1.(return code:%2)	An initialization error occurred in process %1.	The event process might not be running.	o	o	o	o	o
pm	Info	23	The system will be stopped.	The system will now stop.	-	o	o			
pm	Info	24	The cluster daemon will be stopped.	Stops the cluster daemon.	-	o	o			
pm	Info	25	The system will be rebooted.	System will be rebooted.	-	o	o			
pm	Info	26	Process %1 will be restarted.	Process %1 will now be restart.	-	o	o			
pm	Info	30	Received a request to stop the system from %1.	A request to stop the system was received from %1.	-	o	o			
pm	Info	31	Received a request to stop the cluster daemon from %1.	A request to stop the EXPRESSCLUSTER daemon was received from %1.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
pm	Info	32	Received a request to reboot the system from %1.	A request to reboot the system was received from %1.	-	o	o			
pm	Info	33	Received a request to restart the cluster daemon from %1.	A request to reboot the EXPRESSCLUSTER daemon was received from %1.	-	o	o			
pm	Info	34	Received a request to resume the cluster daemon from %1.	A request to resume the server was received from %1.	-	o	o			
pm	Info	35	Received a request to suspend the cluster daemon from %1.	A request to suspend the server was received from %1.	-	o	o			
pm	Info	36	Received a request to panic by sysrq from %1.	A request for a panic by sysrq was received from %1.	-	o	o			
pm	Info	37	Received a request to reset by keepalive driver from %1.	A request for a reset by the keepalive driver was received from %1.	-	o	o			
pm	Info	38	Received a request to panic by keepalive driver from %1.	A request for a panic by the keepalive driver was received from %1.	-	o	o			
pm	Info	39	Received a request to reset by BMC from %1.	A request for a reset by BMC was received from %1.	-	o	o			
pm	Info	40	Received a request to power down by BMC from %1.	A request for a power down by BMC was received from %1.	-	o	o			
pm	Info	41	Received a request to power cycle by BMC from %1.	A request for a power cycle by BMC was received from %1.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
pm	Info	42	Received a request to send NMI by BMC from %1.	A request for NMI transmission by BMC was received from %1.	-	o	o			
pm	Info	43	Waiting for resource %1 to stop has canceled. However, resource stop continues.	Waiting for resource %1 to stop has canceled. However, resource stop continues.	-		o			
pm	Error	66	An attempt to panic by sysrq from %1 failed.	An attempt to perform a panic by sysrq from %1 failed.	Check whether the system is set up so that it can be used by sysrq.	o	o			
pm	Error	67	An attempt to reset by keepalive driver from %1 failed.	An attempt to perform a reset by the keepalive driver from %1 failed.	Check whether the keepalive driver can be used in this environment.	o	o			
pm	Error	68	An attempt to panic by keepalive driver from %1 failed.	An attempt to perform a panic by the keepalive driver from %1 failed.	Check whether the keepalive driver can be used in this environment.	o	o			
pm	Error	69	An attempt to reset by BMC from %1 failed.	An attempt to perform a reset by BMC from %1 failed.	Check whether the ipmitool command can be used.	o	o			
pm	Error	70	An attempt to power down by BMC from %1 failed.	An attempt to perform a power down by BMC from %1 failed.	Check whether the ipmitool command can be used.	o	o			
pm	Error	71	An attempt to power cycle by BMC from %1 failed.	An attempt to perform a power cycle by BMC from %1 failed.	Check whether the ipmitool command can be used.	o	o			
pm	Error	72	An attempt to send NMI by BMC from %1 failed.	An attempt to send NMI by BMC from %1 failed.	Check whether the ipmitool command can be used.	o	o			
nm	Info	1	Server %1 has started.	Server %1 has started.	-	o	o			
nm	Info	2	Server %1 has been stopped.	Server %1 has stopped.	-	o	o	o	o	o
nm	Info	3	Resource %1 of server %2 has started.	Resource %1 of server %2 has started.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
nm	Info	4	Resource %1 of server %2 has stopped.	Resource %1 of server %2 has stopped.	-	o	o			
nm	Info	5	Waiting for all servers to start.	Waiting for the server to start has started.	-	o	o			
nm	Info	6	All servers have started.	The server has started.	-	o	o			
nm	Info	7	Timeout occurred during the wait for startup of all servers.	Waiting for all servers to start resulted in a timeout.	-	o	o			
nm	Error	8	Timeout occurred during the wait for startup of all servers. (Cannot communicate with some servers.)	Waiting for all servers to start resulted in a timeout. (Internal communication with some servers is not possible.)	Check that there is no error in the network adapter and the network is correctly connected.	o	o			
nm	Info	9	Waiting for startup of all servers has been canceled.	Waiting for all servers to start has been canceled.	-	o	o			
nm	Error	10	Status of resource %1 of server %2 is unknown.	Resource %1 of Server %2 is unknown.	Check whether the cable or network settings related to resource %1 are correct.	o	o	o	o	o
nm	Warning	11	NP resolution process at the cluster startup is disabled.	The NP resolution process at the cluster startup is disabled.	The NP resolution process at the cluster startup is disabled.	o	o			
nm	Error	20	Process %1 was terminated abnormally.	Process %1 terminated abnormally.	Memory or OS resources may not be sufficient. Check them.	o	o	o	o	o
nm	Info	21	The system will be stopped.	The system will now stop.	-	o	o			
nm	Info	22	The cluster daemon will be stopped.	Stops the cluster daemon.	-	o	o			
nm	Info	23	The system will be rebooted.	System will be rebooted.	-	o	o			
nm	Info	24	Process %1 will be restarted.	%1 process will be restarted.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
nm	Error	30	Network partition was detected. Shut down the server %1 to protect data.	Network partition was detected. Shut down server %1 to protect data.	All heartbeat resources cannot be used. Check that there is no error in the network adapter and the network is correctly connected. If DISKHB is being used, check the shared disk status.	o	o			
nm	Error	31	An error occurred while confirming the network partition. Shut down the server %1.	An error occurred in confirming the network partition. Shut down the server %1.	Check whether an error occurred in the network partition resolution resource.	o	o			
nm	Error	32	Shut down the server %1. (reason:%2)	Shut down server %1. (Reason: %2)	No heartbeat can be used. Check that there is no error in the network adapter and the network is correctly connected. If DISKHB is being used, check the shared disk status.	o	o			
nm	Error	33	Cluster service will be stopped. (reason:%1)	Stop the service. (reason: %1)	Check the cause following the message.	o	o			
nm	Error	34	The combination of the network partition resources is invalid. (server name:%1)	The combination of the network partition resources is invalid. (Server name: %1)	Check the configuration data.	o	o			
nm	Error	35	Failed to start the resource %1. Server name:%2	Starting resource %1 failed. (Server name: %2)	Check whether an error occurred in the network partition resolution resource.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
nm	Info	36	The network partition %1 of the server %2 has been recovered to the normal status.	Network partition %1 of server %2 has been recovered to the normal status.	-	o	o			
nm	Error	37	The network partition %1 of the server %2 has an error.	The network partition %1 of the server %2 has an error.	Check whether an error occurred in the network partition resolution resource.	o	o			
nm	Error	38	The resource %1 of the server %2 is unknown.	The resource %1 of the server %2 is unknown.	Check the configuration data.	o	o			
nm	Info	39	The server %1 canceled the pending failover.	The server %1 canceled the pending failover.	-	o	o			
nm	Error	80	Cannot communicate with server %1.	Internal communication with server %1 is not possible.	Check that there is no error in the network adapter and the network is correctly connected.	o	o			
nm	Info	81	Recovered from internal communication error with server %1.	Internal communication with server %1 has recovered from the abnormal status.	-	o	o			
rc	Info	10	Activating group %1 has started.	The activation processing of group %1 has started.	-	o	o			
rc	Info	11	Activating group %1 has completed.	The activation processing of group %1 has terminated.	-	o	o			
rc	Error	12	Activating group %1 has failed.	The activation processing of group %1 has failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	15	Waiting for group %1 to start has started.	Waiting for the group to start has started.	-	o	o			
rc	Info	16	Waiting for group %1 to start has been completed.	Waiting for the group to start has been normally completed.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rc	Error	17	Group start was canceled because waiting for group %1 to start was timed out.	Waiting for the group to start has timed out.	Check the status of the group waiting to start. If the group has not yet been started, re-perform the group operation after starting that group.	o	o			
rc	Warning	18	Waiting for group %1 to start has timed out. However, group start continues.	Waiting for the group to start has timed out. However, group start continues.	-	o	o			
rc	Info	20	Stopping group %1 has started.	The stop processing of group %1 has started.	-	o	o			
rc	Info	21	Stopping group %1 has completed.	The stop processing of group %1 has terminated.	-	o	o			
rc	Error	22	Stopping group %1 has failed.	The stop processing of group %1 has failed.	Troubleshoot according to the group resource message.	o	o			
rc	Warning	23	Server %1 is not in a condition to start group %2.	Server %1 cannot currently start group %2.	The server where a complete exclusion group is already active cannot start the group. Stop the complete exclusion group, and then re-execute the operation.	o	o			
rc	Info	25	Waiting for group %1 to stop has started.	Waiting for the group to stop has started.	-	o	o			
rc	Info	26	Waiting for group %1 to stop has been completed.	Waiting for the dependent group to stop has been normally completed.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rc	Error	27	Group stop has been canceled because waiting for group %1 to stop has timed out.	Waiting for the group to stop has timed out.	Check the status of the group waiting to stop. If the group has not yet been stopped, re-perform the group operation after stopping that group.	o	o			
rc	Warning	28	Waiting for group %1 to stop has timed out. However, group stop continues.	Stop waiting has timed out. However, group stop continues.	-	o	o			
rc	Info	30	Activating %1 resource has started.	The activation processing of resource %1 has started.	-		o			
rc	Info	31	Activating %1 resource has completed.	The activation processing of resource %1 has terminated.	-		o			
rc	Error	32	Activating %1 resource has failed.(%2 : %3)	The activation processing of resource %1 has failed.	See "Detailed information on activating and deactivating group resources".	o	o	o	o	o
rc	Info	40	Stopping %1 resource has started.	The stop processing of resource %1 has started.	-		o			
rc	Info	41	Stopping %1 resource has completed.	The stop processing of resource %1 has terminated.	-		o			
rc	Error	42	Stopping %1 resource has failed.(%2 : %3)	The stop processing of resource %1 has failed.	See "Detailed information on activating and deactivating group resources".	o	o	o	o	o
rc	Info	50	Moving group %1 has started.	The movement processing of group %1 has started.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rc	Info	51	Moving group %1 has completed.	The movement processing of group %1 has terminated.	-	o	o			
rc	Error	52	Moving group %1 has failed.	The movement processing of group %1 has failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	55	Migrating group %1 has started.	The migration processing of group %1 has started.	-	o	o			
rc	Info	56	Migrating group %1 has completed.	The migration processing of group %1 has terminated.	-	o	o			
rc	Error	57	Migrating group %1 has failed.	The migration processing of group %1 has failed.	Troubleshoot according to the group resource message.	o	o			
rc	Warning	58	Server %1 is not in a condition to migrate group %2	The server %1 is not ready for the migration of the group %2.	Check the status of the migration destination server. No server name is output for %1 if there is no migration destination server.	o	o			
rc	Info	60	Failover group %1 has started.	The failover processing of group %1 has started.	-	o	o			
rc	Info	61	Failover group %1 has completed.	The failover processing of group %1 has terminated.	-	o	o			
rc	Error	62	Failover group %1 has failed.	The failover processing of group %1 has failed.	Troubleshoot according to the group resource message.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rc	Warning	63	Server %1 is not in a condition to move group %2.	Server %1 cannot currently move group %2.	Check the status of the movement destination server. If the movement destination server does not exist, the server name is not output to %1.	o	o			
rc	Info	64	Server %1 has been set as the destination for the group %2 (reason: %3).	Server %1 has been set as the destination for the group %2 (reason: %3).	-	o	o			
rc	Error	65	There is no appropriate destination for the group %1 (reason: %2).	There is no appropriate destination for the group %1 (reason: %2).	Check if any monitor resources detects an error on the other servers.	o	o			
rc	Warning	66	Server %1 is not in a condition to start group %2 (reason: %3).	Server %1 is not in a condition to start group %2 (reason: %3).	Check if any monitor resource detects an error on the server.	o	o			
rc	Info	67	Server %1 in the same server group (%2) has been set as the destination for the group %3.	The destination found in the same server group.	-	o	o			
rc	Info	68	Server %1 not in the same server group (%2) has been set as the destination for the group %3.	The destination found in the other server group.	-	o	o			
rc	Warning	69	Can not failover the group %1 because there is no appropriate destination in the same server group %2.	The destination not found in the same server group.	Check if other servers in the same server group are stopped.	o	o			
rc	Info	70	Restarting group %1 has started.	The restart processing of group %1 has started.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rc	Info	71	Restarting group %1 has completed.	The restart processing of group %1 has terminated.	-	o	o			
rc	Error	72	Restarting group %1 has failed.	The restart processing of group %1 has failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	74	Failback group %1 has started.	Failback group %1 has started.	-	o	o			
rc	Info	75	Failback group %1 has completed.	Failback group %1 has been completed.	-	o	o			
rc	Error	76	Failback group %1 has failed.	Failback group %1 has failed.	Take appropriate action according to the group resource message.	o	o			
rc	Info	80	Restarting resource %1 has started.	The restart processing of resource %1 has started.	-	o	o			
rc	Info	81	Restarting resource %1 has completed.	The restart processing of resource %1 has terminated.	-	o	o			
rc	Error	82	Restarting resource %1 has failed.	The restart processing of resource %1 has failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	83	Starting a single resource %1.	Resource %1 is being started alone.	-	o	o			
rc	Info	84	A single resource %1 has been started.	Starting resource %1 alone has been completed.	-	o	o			
rc	Error	85	Failed to start a single resource %1.	Starting resource %1 alone has failed.	Troubleshoot according to the group resource message.	o	o			
rc	Warning	86	Server %1 is not in a condition to start a single resource %2.	Server %1 cannot currently start resource %2 alone.	Check the server and group status.	o	o			
rc	Info	87	Stopping a single resource %1.	Resource %1 is being stopped alone.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rc	Info	88	A single resource %1 has been stopped.	Stopping resource %1 alone has been completed.	-	o	o			
rc	Error	89	Failed to stop a single resource %1.	Stopping resource %1 alone has failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	90	All the servers in the cluster were shut down.	All the servers have been shut down.	-	o	o			
rc	Info	91	The server was shut down.	All the servers have been shut down.	-	o	o			
rc	Warning	100	Restart count exceeded the maximum value %1. Final action of resource %2 will not be executed.	The restart count exceeded the maximum value %1. The final action of resource %2 will not be taken.	Troubleshoot according to the group resource message.	o	o			
rc	Info	160	Script before final action upon activation failure in resource %1 started.	The script executed before the final action when an activation failure occurs for resource %1 has been started.	-	o	o			
rc	Info	161	Script before final action upon activation failure in resource %1 completed.	The script executed before the final action when an activation failure occurs for resource %1 has been completed.	-	o	o			
rc	Info	162	Script before final action upon deactivation failure in resource %1 started.	The script before the final action at deactivation failure in resource (%1) has started.	-	o	o			
rc	Info	163	Script before final action upon deactivation failure in resource %1 completed.	The script before the final action at deactivation failure in resource (%1) has been completed.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rc	Error	180	Script before final action upon activation failure in resource %1 failed.	The script executed before the final action when an activation failure occurs for resource %1 has failed.	Check the cause of the script failure and take measures.	o	o			
rc	Error	181	Script before final action upon deactivation failure in resource %1 failed.	The script executed before the final action when a deactivation failure occurs for resource %1 has failed.	Same as above	o	o			
rc	Info	200	Resource(%1) will be reactivated since activating resource(%2) failed.	Resource %2 will now be reactivated because the activation processing of resource %2 failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	201	Group(%1) will be moved to server(%2) since activating resource(%3) failed.	Group %1 will now be moved to server %2 because resource %3 could not be activated.	Troubleshoot according to the group resource message.	o	o			
rc	Info	202	Group(%1) will be stopped since activating resource(%2) failed.	Group %1 will now be stopped because resource %2 could not be activated.	Troubleshoot according to the group resource message.	o	o			
rc	Info	203	Cluster daemon will be stopped since activating resource(%1) failed.	The EXPRESSCLUSTER server daemon will now be stopped because resource %1 could not be activated.	Troubleshoot according to the group resource message.	o	o			
rc	Info	204	System will be halted since activating resource(%1) failed.	The OS will now be shut down because resource %1 could not be activated.	Troubleshoot according to the group resource message.	o	o			
rc	Info	205	System will be rebooted since activating resource(%1) failed.	The OS will now be rebooted because resource %1 could not be activated.	Troubleshoot according to the group resource message.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rc	Info	206	Activating group(%1) will be continued since failover process failed.	The activation processing of group %1 will now be continued because the failover processing failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	220	Resource(%1) will be stopping again since stopping resource(%2) failed.	Resource %1 deactivation will now be retried because the deactivation processing of resource %2 failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	222	Group(%1) will be stopped since stopping resource(%2) failed.	Group %1 will now be stopped because resource %2 could not be deactivated.	Troubleshoot according to the group resource message.	o	o			
rc	Info	223	Cluster daemon will be stopped since stopping resource(%1) failed.	The server daemon will now be stopped because resource %1 could not be deactivated.	Troubleshoot according to the group resource message.	o	o			
rc	Info	224	System will be halted since stopping resource(%1) failed.	The OS will now be shut down because resource %1 could not be deactivated.	Troubleshoot according to the group resource message.	o	o			
rc	Info	225	System will be rebooted since stopping resource(%1) failed.	The OS will now be rebooted because resource %1 could not be deactivated.	Troubleshoot according to the group resource message.	o	o			
rc	Info	240	System panic by sysrq is requested since activating resource(%1) failed.	A system panic by sysrq has been requested because resource %1 activation failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	241	System reset by keepalive driver is requested since activating resource(%1) failed.	A system reset by the keepalive driver has been requested because resource %1 activation failed.	Troubleshoot according to the group resource message.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rc	Info	242	System panic by keepalive driver is requested since activating resource(%1) failed.	A system panic by the keepalive driver has been requested because resource %1 activation failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	243	System reset by BMC is requested since activating resource(%1) failed.	A system reset by BMC has been requested because resource %1 activation failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	244	System power down by BMC is requested since activating resource(%1) failed.	A system power down by BMC has been requested because resource %1 activation failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	245	System power cycle by BMC is requested since activating resource(%1) failed.	A system power cycle by BMC has been requested because resource %1 activation failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	246	NMI send by BMC is requested since activating resource(%1) failed.	NMI transmission by BMC has been requested because resource %1 activation failed.	Troubleshoot according to the group resource message.	o	o			
rc	Error	260	An attempt to panic system by sysrq due to failure of resource(%1) activation failed.	An attempt to panic the system was made by sysrq because resource %1 could not be activated, but this attempt failed.	Check whether the system is set up so that it can be used by sysrq.	o	o			
rc	Error	261	An attempt to reset system by keepalive driver due to failure of resource(%1) activation failed.	An attempt to reset the system was made by the keepalive driver because resource %1 could not be activated, but this attempt failed.	Check whether the keepalive driver can be used in this environment.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rc	Error	262	An attempt to panic system by keepalive driver due to failure of resource(%1) activation failed.	An attempt to panic the system was made by the keepalive driver because resource %1 could not be activated, but this attempt failed.	Check whether the keepalive driver can be used in this environment.	o	o			
rc	Error	263	An attempt to reset system by BMC due to failure of resource(%1) activation failed.	An attempt to reset the system was made by BMC because resource %1 could not be activated, but this attempt failed.	Check whether the ipmitool command can be used.	o	o			
rc	Error	264	An attempt to power down system by BMC due to failure of resource(%1) activation failed.	An attempt to power down the system was made by BMC because resource %1 could not be activated, but this attempt failed.	Check whether the ipmitool command can be used.	o	o			
rc	Error	265	An attempt to power cycle system by BMC due to failure of resource(%1) activation failed.	An attempt to power cycle the system was made by BMC because resource %1 could not be activated, but this attempt failed.	Check whether the ipmitool command can be used.	o	o			
rc	Error	266	An attempt to send NMI by BMC due to failure of resource(%1) activation failed.	An attempt to send NMI was made by BMC because resource %1 could not be activated, but this attempt failed.	Check whether the ipmitool command can be used.	o	o			
rc	Info	280	System panic by sysrq is requested since deactivating resource(%1) failed.	A system panic by sysrq has been requested because resource %1 deactivation failed.	Troubleshoot according to the group resource message.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rc	Info	281	System reset by keepalive driver is requested since deactivating resource(%1) failed.	A system reset by the keepalive driver has been requested because resource %1 deactivation failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	282	System panic by keepalive driver is requested since deactivating resource(%1) failed.	A system panic by the keepalive driver has been requested because resource %1 deactivation failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	283	System reset by BMC is requested since deactivating resource(%1) failed.	A system reset by BMC has been requested because resource %1 deactivation failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	284	System power down by BMC is requested since deactivating resource(%1) failed.	A system power down by BMC has been requested because resource %1 deactivation failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	285	System power cycle by BMC is requested since deactivating resource(%1) failed.	A system power cycle by BMC has been requested because resource %1 deactivation failed.	Troubleshoot according to the group resource message.	o	o			
rc	Info	286	Sending NMI by BMC is requested since deactivating resource(%1) failed.	NMI transmission by BMC has been requested because resource %1 deactivation failed.	Troubleshoot according to the group resource message.	o	o			
rc	Error	300	An attempt to panic system by sysrq due to failure of resource(%1) deactivation failed.	An attempt to panic the system was made by sysrq because resource %1 could not be deactivated, but this attempt failed.	Check whether the system is set up so that it can be used by sysrq.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rc	Error	301	An attempt to reset system by keepalive driver due to failure of resource(%1) deactivation failed.	An attempt to reset the system was made by the keepalive driver because resource %1 could not be deactivated, but this attempt failed.	Check whether the keepalive driver can be used in this environment.	o	o			
rc	Error	302	An attempt to panic system by keepalive driver due to failure of resource(%1) deactivation failed.	An attempt to panic the system was made by the keepalive driver because resource %1 could not be deactivated, but this attempt failed.	Check whether the keepalive driver can be used in this environment.	o	o			
rc	Error	303	An attempt to reset system by BMC due to failure of resource(%1) deactivation failed.	An attempt to reset the system was made by BMC because resource %1 could not be deactivated, but this attempt failed.	Check whether the ipmitool command can be used.	o	o			
rc	Error	304	An attempt to power down system by BMC due to failure of resource(%1) deactivation failed.	An attempt to power down the system was made by BMC because resource %1 could not be deactivated, but this attempt failed.	Check whether the ipmitool command can be used.	o	o			
rc	Error	305	An attempt to power cycle system by BMC due to failure of resource(%1) deactivation failed.	An attempt to power cycle the system was made by BMC because resource %1 could not be deactivated, but this attempt failed.	Check whether the ipmitool command can be used.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rc	Error	306	An attempt to send NMI by BMC due to failure of resource(%1) deactivation failed.	An attempt to send NMI was made by BMC because resource %1 could not be deactivated, but this attempt failed.	Check whether the ipmitool command can be used.	o	o			
rc	Error	340	Group start has been canceled because waiting for group %1 to start has failed.	An error has occurred while waiting for the group to start.	Check the following possible causes: memory shortage or OS resource insufficiency.	o	o			
rc	Info	400	The status of the regular check for a forced stop returned to normal.	The status of the regular check for a forced stop returned to normal.	-	o	o			
rc	Error	401	The regular check for a forced stop detected an abnormality.	The regular check for a forced stop detected an abnormality.	The forced-stop function may not be working normally. Identify the cause.	o	o			
rc	Error	402	The request for forcibly stopping the server has been timed out.	The request for forcibly stopping the server has been timed out.	Identify the cause of the timeout and take measures.	o	o			
rc	Info	403	The request for forcibly stopping the server will be retried.	The request for forcibly stopping the server will be retried.	-	o	o			
rc	Error	404	The check of forcibly stopping the server has been timed out.	The check of forcibly stopping the server has been timed out.	Identify the cause of the timeout and take measures.	o	o			
rc	Info	405	The check of forcibly stopping the server will be retried.	The check of forcibly stopping the server will be retried.	-	o	o			
rc	Warning	441	Waiting for group %1 to stop has failed. However, group stop continues.	An error has occurred while waiting for the group to stop.	Check the following possible causes: memory shortage or OS resource insufficiency.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rc	Warning	500	Since there is no other normally running server, the final action for an activation error of group resource %1 was suppressed.	Suppression of final action for activation error.	-	o	o			
rc	Warning	501	Since there is no other normally running server, the final action for a deactivation error of group resource %1 was suppressed.	Suppression of final action for deactivation error.	-	o	o			
rc	Warning	510	Cluster action is disabled.	The cluster action is disabled.	-	o	o			
rc	Warning	511	Ignored the automatic start of groups because automatic group startup is disabled.	Being disabled, automatic group startup is ignored.	-	o	o			
rc	Warning	512	Ignored the recovery action in resource activation because recovery action caused by group resource activation error is disabled.	Being disabled, the resource recovery action is ignored when a group resource activation error occurs.	-	o	o			
rc	Warning	513	Ignored the recovery action in resource deactivation because recovery action caused by group resource deactivation error is disabled.	Being disabled, the resource recovery action is ignored when a group resource deactivation error occurs.	-	o	o			
rc	Warning	514	Cluster action is set disabled.	The cluster action is disabled.	-	o	o			
rc	Warning	515	Cluster action is set enabled.	The cluster action is enabled.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rc	Warning	516	Ignored the group failover because failover for a server failure is disabled.	The group failover was ignored because failover for a server failure has been disabled.	-	o	o			
rm	Info	1	Monitoring %1 has started.	%1 monitoring has started.	-	o	o			
rm	Info	2	Monitoring %1 has stopped.	%1 monitoring has stopped.	-	o	o			
rm	Info	3	%1 is not monitored by this server.	%1 is not monitored by this server.	-	o	o			
rm	Warning	4	Warn monitoring %1. (%2 : %3)	There is a warning about %1 monitoring.	See "Details about monitor resource errors". If a monitor resource is preparing for monitoring, the following message may be set in (). No action is required for this message. (100 : not ready for monitoring.)	o	o			
rm	Warning	5	The maximum number of monitor resources has been exceeded. (registered resource is %1)	The maximum number of monitor resources has been exceeded.	Check the configuration data by using the Cluster WebUI.	o	o			
rm	Warning	6	Monitor configuration of %1 is invalid. (%2 : %3)	The monitor configuration of %1 is invalid.	Check the configuration data by using the Cluster WebUI.	o	o			
rm	Error	7	Failed to start monitoring %1.	%1 monitoring could not be started.	Memory or OS resources may not be sufficient. Check them.	o	o	o	o	o
rm	Error	8	Failed to stop monitoring %1.	%1 monitoring could not be stopped.	Memory or OS resources may not be sufficient. Check them.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rm	Error	9	Detected an error in monitoring %1. (%2 : %3)	An error was detected during %1 monitoring.	See "Details about monitor resource errors". If a monitoring timeout is detected, the following message is specified in the parentheses: (99 : Monitor was timeout.) If Dummy Failure is enabled, the following message is set in (). No action is needed in the latter case. (201 : Monitor failed for failure verification.) If no response is returned from a monitor resource for a certain period of time, the following message is set in (). (202: couldn't receive reply from monitor resource in time.)	o	o	o	o	o
rm	Info	10	%1 is not monitored.	%1 is not being monitored.	-	o	o			
rm / mm	Info	12	Recovery target %1 has stopped because an error was detected in monitoring %2.	Recovery target %1 has been stopped because an error was detected during %2 monitoring.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rm / mm	Info	13	Recovery target %1 has restarted because an error was detected in monitoring %2.	Recovery target %1 has been restarted because an error was detected during %2 monitoring.	-	o	o			
rm / mm	Info	14	Recovery target %1 failed over because an error was detected in monitoring %2.	Recovery target %1 has been failed over because an error was detected during %2 monitoring.	-	o	o			
rm / mm	Info	15	Stopping the cluster has been required because an error was detected in monitoring %1.	Stopping the server has been requested because an error was detected during %1 monitoring.	-	o	o			
rm / mm	Info	16	Stopping the system has been required because an error was detected in monitoring %1.	Stopping the system has been requested because an error was detected during %1 monitoring.	-	o	o			
rm / mm	Info	17	Rebooting the system has been required because an error was detected in monitoring %1.	Rebooting the system has been requested because an error was detected during %1 monitoring.	-	o	o			
rm / mm	Error	18	Attempted to stop the recovery target %1 due to the error detected in monitoring %2, but failed.	An attempt to stop recovery target %1 was made because an error was detected during %2 monitoring, but this attempt failed.	Check the status of resource %1.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rm / mm	Error	19	Attempted to restart the recovery target %1 due to the error detected in monitoring %2, but failed.	An attempt to restart recovery target %1 was made because an error was detected during %2 monitoring, but this attempt failed.	Check the status of resource %1.	o	o			
rm / mm	Error	20	Attempted to fail over %1 due to the error detected in monitoring %2, but failed.	An attempt to fail over recovery target %1 was made because an error was detected during %2 monitoring, but this attempt failed.	Check the status of resource %1.	o	o			
rm / mm	Error	21	Attempted to stop the cluster due to the error detected in monitoring %1, but failed.	An attempt to stop the server was made because an error was detected during %1 monitoring, but this attempt failed.	Memory or OS resources may not be sufficient. Check them.	o	o			
rm / mm	Error	22	Attempted to stop the system due to the error detected in monitoring %1, but failed.	An attempt to stop the system was made because an error was detected during %1 monitoring, but this attempt failed.	Memory or OS resources may not be sufficient. Check them.	o	o			
rm / mm	Error	23	Attempted to reboot the system due to the error detected in monitoring %1, but failed.	An attempt to reboot the system was made because an error was detected during %1 monitoring, but this attempt failed.	Memory or OS resources may not be sufficient. Check them.	o	o			
rm	Error	24	The group of %1 resource is unknown.	The group of resource %1 is unknown.	The configuration data may be incorrect. Check them.	o	o			
rm / mm	Warning	25	Recovery will not be executed since the recovery target %1 is not active.	Recovery will not be performed because recovery target %1 is inactive.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rm / mm	Info	26	%1 status changed from error to normal.	%1 monitoring has changed from "error" to "normal".	-	o	o			
rm / mm	Info	27	%1 status changed from error or normal to unknown.	%1 monitoring has changed from "error" or "normal" to "unknown".	Memory or OS resources may not be sufficient. Check them.	o	o			
rm	Error	28	Initialization error of monitor process. (%1 : %2)	A monitor process initialization error occurred.	Memory or OS resources may not be sufficient. Check them.	o	o			
rm	Info	29	Monitoring %1 was suspended.	%1 monitoring has been suspended.	-	o	o			
rm	Info	30	Monitoring %1 was resumed.	%1 monitoring has been resumed.	-	o	o			
rm	Info	31	All monitors were suspended.	All monitors were suspended.	-	o	o			
rm	Info	32	All monitors were resumed.	All monitors were resumed.	-	o	o			
rm / mm	Info	35	System panic by sysrq has been required because an error was detected in monitoring %1.	A system panic by sysrq has been requested because an error was detected during %1 monitoring.	-	o	o			
rm / mm	Error	36	Attempted to panic system by sysrq due to the error detected in monitoring %1, but failed.	An attempt to panic the system was made by sysrq because an error was detected during %1 monitoring, but this attempt failed.	Check whether the system is set up so that it can be used by sysrq.	o	o			
rm / mm	Info	37	System reset by keepalive driver has been required because an error was detected in monitoring %1.	A system reset by the keepalive driver has been requested because an error was detected during %1 monitoring.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rm / mm	Error	38	Attempted to reset system by keepalive driver due to the error detected in monitoring %1, but failed.	An attempt to reset the system was made by the keepalive driver because an error was detected during %1 monitoring, but this attempt failed.	Check whether the keepalive driver can be used in this environment.	o	o			
rm / mm	Info	39	System panic by keepalive driver has been required because an error was detected in monitoring %1.	A system panic by the keepalive driver has been requested because an error was detected during %1 monitoring.	-	o	o			
rm / mm	Error	40	Attempted to panic system by keepalive driver due to the error detected in monitoring %1, but failed.	An attempt to panic the system was made by the keepalive driver because an error was detected during %1 monitoring, but this attempt failed.	Check whether the keepalive driver can be used in this environment.	o	o			
rm / mm	Info	41	System reset by BMC has been required because an error was detected in monitoring %1.	A system reset by BMC has been requested because an error was detected during %1 monitoring.	-	o	o			
rm / mm	Error	42	Attempted to reset system by BMC due to the error detected in monitoring %1, but failed.	An attempt to reset the system was made by BMC because an error was detected during %1 monitoring, but this attempt failed.	Check whether the ipmitool command can be used.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rm / mm	Info	43	System power down by BMC has been required because an error was detected in monitoring %1.	A system power down by BMC has been requested because an error was detected during %1 monitoring.	-	o	o			
rm / mm	Error	44	Attempted to power down system by BMC due to the error detected in monitoring %1, but failed.	An attempt to power down the system was made by BMC because an error was detected during %1 monitoring, but this attempt failed.	Check whether the ipmitool command can be used.	o	o			
rm / mm	Info	45	System power cycle by BMC has been required because an error was detected in monitoring %1.	A system power cycle by BMC has been requested because an error was detected during %1 monitoring.	-	o	o			
rm / mm	Error	46	Attempted to power cycle system by BMC due to the error detected in monitoring %1, but failed.	An attempt to power cycle the system was made by BMC because an error was detected during %1 monitoring, but this attempt failed.	Check whether the ipmitool command can be used.	o	o			
rm / mm	Info	47	NMI send by BMC has been required because an error was detected in monitoring %1.	NMI of the system by BMC has been required because an error was detected in monitoring %1.	-	o	o			
rm / mm	Error	48	Attempted to send NMI by BMC due to the error detected in monitoring %1, but failed.	Attempted to NMI of the system by BMC due to the error detected in monitoring %1, but failed.	Check if the ipmitool command can be used.	o	o			
rm	Info	49	%1 status changed from warning to normal.	%1 monitoring has changed from "warning" to "normal".	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rm	Error	57	Stopping the cluster is required since license (%1) is invalid.	Stopping the server has been requested because the license is invalid.	Register a valid license.	o	o	o	o	o
rm	Error	58	Stopping the cluster due to invalid license (%1) failed.	The server could not be stopped because the license is invalid.	Register a valid license.	o	o			
rm	Warning	71	Detected a monitor delay in monitoring %1. (timeout=%2 actual-time=%3 delay warning rate=%4)	A monitoring delay was detected during %1 monitoring. The current timeout value is %2 (tick count). The actual measurement value at delay detection has reached %3 (tick count), exceeding the delay warning rate %4 (%).	Check the load on the server where monitoring delay was detected and reduce the load. If monitoring timeouts are detected, the monitoring timeout time must be extended.	o	o			
rm	Warning	72	%1 could not Monitoring.	%1 could not perform monitoring.	Check the following possible causes: memory shortage or OS resource insufficiency.	o	o			
rm / mm	Info	81	Script before %1 upon failure in monitor resource %2 started.	The script before %1 in monitor resource %2 has been started.	-	o	o			
rm / mm	Info	82	Script before %1 upon failure in monitor resource %2 completed.	The script before %1 in monitor resource %2 has been complete.	-	o	o			
rm / mm	Error	83	Script before %1 upon failure in monitor resource %2 failed.	The script before %1 in monitor resource %2 has failed.	Check the cause of the script failure and take measures.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rm	Warning	100	Restart count exceeded the maximum of %1. Final action of monitoring %2 will not be executed.	The final action of %2 has not been executed because restart count exceeded the maximum value %1.	-	o	o			
rm	Warning	120	The virtual machine (%1) has been migrated by an external operation.	The virtual machine managed by the resource %1 has been migrated by an external operation.	-	o	o			
rm	Warning	121	The virtual machine (%1) has been started by an external operation.	The virtual machine managed by the resource %1 has been started by an external operation.	-	o	o			
rm	Info	130	Collecting detailed information was triggered by error detection when monitoring monitor resource $1.	Collecting detailed information was triggered by error detection when monitoring monitor resource $1. The timeout time is %2 seconds.	-	o	o			
rm	Info	131	The collection of detailed information triggered by error detection when monitoring monitor resource $1 has completed.	The collection of detailed information triggered by error detection when monitoring monitor resource $1 has completed.	-	o	o			
rm	Warning	132	The collection of detailed information triggered by error detection when monitoring monitor resource $1 has failed.	The collection of detailed information triggered by error detection when monitoring monitor resource $1 has failed.	-	o	o			
rm	Info	140	Process %1 has started.	Process %1 has started.	-	o	o			
rm	Warning	141	Process %1 has restarted.	Process %1 has restarted.	-	o	o			
rm	Warning	142	Process %1 does not exist.	Process %1 does not exist.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rm	Error	143	Process %1 was restarted %2 times, but terminated abnormally.	Process %1 was restarted %2 times, but terminated abnormally.	Check the following possible causes: memory shortage or OS resource insufficiency.	o	o			
rm	Error	150	The cluster is stopped since process %1 was terminated abnormally.	The cluster is stopped since process %1 was terminated abnormally.	Check the following possible causes: memory shortage or OS resource insufficiency.	o	o			
rm	Error	151	The server is shut down since process %1 was terminated abnormally.	The server is shut down since process %1 was terminated abnormally.	Check the following possible causes: memory shortage or OS resource insufficiency.	o	o			
rm	Error	152	The server is restarted since process %1 was terminated abnormally.	The server is restarted since process %1 was terminated abnormally.	Check the following possible causes: memory shortage or OS resource insufficiency.	o	o			
rm	Error	160	Monitor resource %1 cannot be controlled since the license is invalid.	Monitor resource %1 cannot be controlled since the license is invalid.	Register a valid license.	o	o			
rm	Info	170	Recovery script has been executed since an error was detected in monitoring %1.	Recovery script has been executed since an error was detected in monitoring %1.	-	o	o			
rm	Error	171	An attempt was made to execute the recovery script due to a %1 monitoring failure, but failed.	An attempt was made to execute the recovery script due to a %1 monitoring failure, but failed.	Check the cause of the recovery script failure and take appropriate action.	o	o			
rm	Info	180	Dummy Failure of monitor resource %1 is enabled.	Dummy Failure of monitor resource %1 is enabled.	-	o	o			
rm	Info	181	Dummy Failure of monitor resource %1 is disabled.	Dummy Failure of monitor resource %1 is disabled.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rm	Info	182	Dummy Failure of all monitor will be enabled.	Dummy Failure of all monitor will be enabled.	-	o	o			
rm	Info	183	Dummy Failure of all monitor will be disabled.	Dummy Failure of all monitor will be disabled.	-	o	o			
rm	Warning	184	An attempt was made to enable Dummy Failure of monitor resource %1, but failed.	An attempt was made to enable Dummy Failure of monitor resource %1, but failed.	Check whether monitor resource %1 corresponds to Dummy Failure.	o	o			
rm	Warning	185	An attempt was made to disable Dummy Failure of monitor resource %1, but failed.	An attempt was made to disable Dummy Failure of monitor resource %1, but failed.	Check whether monitor resource %1 corresponds to Dummy Failure.	o	o			
rm	Info	190	Recovery action caused by monitor resource error is disabled.	Recovery action caused by monitor resource error is disabled.	-	o	o			
rm	Info	191	Recovery action caused by monitor resource error is enabled.	Recovery action caused by monitor resource error is enabled.	-	o	o			
rm	Warning	192	Ignored the recovery action in monitoring %1 because recovery action caused by monitor resource error is disabled.	Ignored the recovery action in monitoring %1 because recovery action caused by monitor resource error is disabled.	-	o	o			
rm	Warning	193		Recovery action at timeout occurrence was disabled, so the recovery action of monitor %1 was not executed.		o	o			
rm	Warning	200	Since there is no other normally running server, the final action(%1) for the error detection of monitor resource %2 was suppressed.	Suppression of final action for error detection.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
rm	Warning	220	Recovery will not be executed since any recovery target is not active.	Recovery will not be executed since any recovery target is not active.	-	o	o			
rm	Warning	221	Recovery will not be executed because the group that is set for the recovery target is not active.	Recovery will not be executed because the group that is set for the recovery target is not active.	-	o	o			
mm	Info	901	Message monitor has been started.	Message monitor (external linkage monitor module) has been started.	-	o	o			
mm	Error	902	Failed to initialize message monitor. (%1 : %2)	Message monitor (external linkage monitor module) could not be initialized.	Check the following possible causes: memory shortage or OS resource insufficiency.	o	o			
mm	Warning	903	An error of %1 type and %2 device has been detected. (%3)	External error %3 of category %1 and keyword %2 has been received.	-	o	o			
mm	Error	905	An error has been detected in monitoring %1. (%2)	An error was detected in monitor resource %1 monitoring.	Take appropriate action according to the %2 message.	o	o	o	o	o
mm	Error	906	Message monitor was terminated abnormally.	Message monitor (external linkage monitor module) has been terminated abnormally.	Check the following possible causes: memory shortage or OS resource insufficiency.	o	o			
mm	Error	907	Failed to execute action. (%1)	Executing recovery action has failed.	Check the following possible causes: memory shortage or OS resource insufficiency.	o	o			
mm	Info	908	The system will be stopped.	The OS will be shut down.	-	o	o			
mm	Info	909	The cluster daemon will be stopped.	The cluster will be stopped.	-	o	o			
mm	Info	910	The system will be rebooted.	The OS will be rebooted.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
mm	Info	911	Message monitor will be restarted.	Message monitor (external linkage monitor module) will be restarted.	-	o	o			
mm	Info	912	Received a message by SNMP Trap from external. (%1 : %2)	Received a message by SNMP Trap from external.	-	o	o			
trnsv	Error	1	There was a notification from external (IP=%1), but it was denied.	The notification from %1 was received, but it was denied.	-	o	o			
trnsv	Info	10	There was a notification (%1) from external (IP=%2).	The notification (%1) from %2 was received.	-	o	o			
trnsv	Info	20	Recovery action (%1) of monitoring %2 has been executed because a notification arrived from external.	Recovery action when an error is detected (%1) of the monitor resource %2 has been executed due to an notification from external arrived.	-	o	o			
trnsv	Info	21	Recovery action (%1) of monitoring %2 has been completed.	Execution of recovery action when an error is detected (%1) of the monitor resource %2 succeeded.	-	o	o			
trnsv	Error	22	Attempted to recovery action (%1) of monitoring %2, but it failed.	Executed recovery action when an error is detected (%1) of the monitor resource %2, but it failed.	Check if recovery action when an error is detected is executable.	o	o			
trnsv	Info	30	Action (%1) has been completed.	Execution of action (%1) succeeded.	-	o	o			
trnsv	Error	31	Attempted to execute action (%1), but it failed.	Executed action (%1), but it failed.	Check if recovery action when an error is detected is executable.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
trnsv	Info	40	Script before action of monitoring %1 has been executed.	Script before action when an error is detected of the monitor resource (%1) has been executed.	-	o				
trnsv	Info	41	Script before action of monitoring %1 has been completed.	Execution of script before action when an error is detected of the monitor resource (%1) succeeded.	-	o				
trnsv	Error	42	Attempted to execute script before action of monitoring %1, but it failed.	Executed script before action when an error is detected of the monitor resource (%1), but it failed.	Check if script before action when an error is detected is executable.	o				
trnsv	Info	60	The log storage destination (%1) is not found.	The log storage destination (%1) is not found.	Check if the specified log storage destination exists.	o	o			
trnsv	Info	61	A path under the installation path is specified for the log storage destination.	A path under the installation path is specified for the log storage destination.	For the log storage destination, avoid specifying a path under the installation path.	o	o			
lanhb	Warning	71	Heartbeats sent from HB resource %1 of server %2 are delayed.(timeout=%3*%4 actual-time=%5 delay warning rate=%6)	A delay occurred in the heartbeat from HB resource %1 of server %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	Check the load on server %2 and reduce the load. If an HB timeout occurs, the HB timeout time must be extended.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
lanhb	Warning	72	Heartbeats sent from HB resource %1 are delayed.(server=%2 timeout=%3*%4 actual-time=%5 delay warning rate=%6)	A delay occurred during the heartbeat transmission of HB resource %1. The transmission destination server is %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	Check the load on the server to which the delay warning was issued and reduce the load. If an HB timeout occurs, the HB timeout time must be extended.					
lanhb	Warning	73	Heartbeats received by HB resource %1 are delayed.(server=%2 timeout=%3*%4 actual-time=%5 delay warning rate=%6)	A delay occurred during the heartbeat reception of HB resource %1. The transmission source server is %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	Check the load on the server to which the delay warning was issued and reduce the load. If an HB timeout occurs, the HB timeout time must be extended.					

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
lankhb	Warning	71	Heartbeats sent from HB resource %1 of server %2 are delayed.(timeout=%3*%4 actual-time=%5 delay warning rate=%6)	A delay occurred in the heartbeat from HB resource %1 of server %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	Check the load on server %2 and reduce the load. If an HB timeout occurs, the HB timeout time must be extended.	o	o			
lankhb	Warning	73	Heartbeats received from HB resource %1 is delayed.(timeout=%2*%3 actual-time=%4 delay warning rate=%5)	A delay occurred during the heartbeat reception of HB resource %1. The transmission source server is %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	Check the load on the server to which the delay warning was issued and reduce the load. If an HB timeout occurs, the HB timeout time must be extended.					
diskhb	Error	10	Device(%1) of resource(%2) does not exist.	The specified device does not exist.	Check the configuration data.	o	o			
diskhb	Error	11	Device(%1) of resource(%2) is not a block device.	The specified device does not exist.	Check the configuration data.	o	o			
diskhb	Error	12	Raw device(%1) of resource(%2) does not exist.	The specified device does not exist.	Check the configuration data.	o	o			
diskhb	Error	13	Binding device(%1) of resource(%2) to raw device(%3) failed.	The specified device does not exist.	Check the configuration data.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
diskhb	Error	14	Raw device(%1) of resource(%2) has already been bound to other device.	Raw device %1 of resource %2 is bound to another device.	Specify an unused raw device.	o	o			
diskhb	Error	15	File system exists on device(%1) of resource(%2).	A file system exists in device %1 of resource %2.	To use device %1, delete the file system.	o	o			
diskhb	Info	20	Resource %1 recovered from initialization error.	Resource %1 has recovered from the initialization error.	-	o	o			
diskhb	Warning	71	Heartbeats sent from HB resource %1 of server %2 are delayed.(timeout=%3*%4 actual-time=%5 delay warning rate=%6)	A delay occurred in the heartbeat from HB resource %1 of server %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	Check the load on server %2 and reduce the load. If an HB timeout occurs, the HB timeout time must be extended.	o	o			
diskhb	Warning	72	Heartbeat write of HB resource %1 is delayed.(server=%2 timeout=%3*%4 actual-time=%5 delay warning rate=%6).	A delay occurred during the heartbeat write of HB resource %1. The write destination server is %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	Check the load on the server to which the delay warning was issued and reduce the load. If an HB timeout occurs, the HB timeout time must be extended.					

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
diskhb	Warning	73	Heartbeat read of HB resource %1 is delayed.(server=%2 timeout=%3*%4 actual-time=%5 delay warning rate=%6)	A delay occurred during the heartbeat read of HB resource %1. The read source server is %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	Check the load on the server to which the delay warning was issued and reduce the load. If an HB timeout occurs, the HB timeout time must be extended.					
monp	Error	1	An error occurred when initializing monitored process %1. (status=%2)	An initialization error occurred in monitored process %1.	Memory or OS resources might not be sufficient, or the configuration data might be inconsistent. Check them. If the configuration data is not registered, the process message below is output. This message output, however, does not indicate a problem. + mdagent + webmgr + webalert	o	o			
monp	Error	2	Monitor target process %1 terminated abnormally. (status=%2)	Monitor target process %1 terminated abnormally.	Memory or OS resources may not be sufficient. Check them.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
monp	Info	3	Monitor target process %1 will be restarted.	Monitor target process %1 will now be restarted.	-	o	o			
monp	Info	4	The cluster daemon will be stopped since the monitor target process %1 terminated abnormally.	The server will now be stopped because monitor target process %1 terminated abnormally.	-	o	o			
monp	Error	5	Attempted to stop the cluster daemon, but failed.	Stopping the server has failed.	The server might not be running or memory or OS resources might not be sufficient. Check them.	o	o			
monp	Info	6	The system will be stopped since the monitor target process %1 terminated abnormally.	The system will now stop because monitor target process %1 terminated abnormally.	-	o	o			
monp	Error	7	Attempted to stop the system, but failed. (status=%#x)	Stopping the system has failed.	The server might not be running or memory or OS resources might not be sufficient. Check them.	o	o			
monp	Info	8	System will be rebooted since monitor target process %1 terminated abnormally.	The system will now be rebooted because monitor target process %1 terminated abnormally.	-	o	o			
monp	Error	9	Attempted to reboot the system, but failed. (status=%#x)	Rebooting the system has failed.	The server might not be running or memory or OS resources might not be sufficient. Check them.	o	o			
cl	Info	1	There was a request to start %1 from the %2.	A request to start %1 has been issued from %2.	-	o	o			
cl	Info	2	There was a request to stop %1 from the %2.	A request to stop %1 has been issued from %2.	-	o	o			
cl	Info	3	There was a request to suspend %1 from the %2.	A request to suspend %1 has been issued from %2.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
cl	Info	4	There was a request to resume %s from the %s.	A request to resume %1 has been issued from %2.	-	o	o			
cl	Error	11	A request to start %1 failed(%2).	A request to start %1 has failed.	Check the server status.	o	o			
cl	Error	12	A request to stop %1 failed(%2).	A request to stop %1 has failed.	Check the server status.	o	o			
cl	Error	13	A request to suspend %1 failed(%2).	A request to suspend %1 has failed.	Check the server status.	o	o			
cl	Error	14	A request to resume %1 failed(%2).	A request to resume %1 has failed.	Check the server status.	o	o			
cl	Error	15	A request to %1 cluster failed on some servers(%2).	Request %1 has failed on some servers.	Check the server statuses.	o	o			
cl	Error	16	A request to start %1 failed on some servers(%2).	Starting %1 failed on some servers.	Check the status of %1.	o	o			
cl	Error	17	A request to stop %1 failed on some servers(%2).	Stopping %1 failed on some servers.	Check the status of %1.	o	o			
cl	Warning	18	Automatic start is suspended because the cluster service was not stopped according to the normal procedure.	Automatic start has been suspended since Automatic startup after the system down was not set.	To start the cluster service, use the Cluster WebUI or clpcl command.	o	o			
cl	Warning	20	A request to start %1 failed because cluster is running(%2).	Starting %1 has failed since the cluster is running.	Check the status of the cluster.	o	o			
cl	Warning	21	A request to stop %1 failed because cluster is running(%2).	Stopping %1 has failed since the cluster is running.	Check the status of the cluster.	o	o			
mail	Error	1	The license is not registered. (%1)	Purchase and register the license.	-	o	o			
mail	Error	2	The trial license has expired in %1. (%2)	Register a valid license.	-	o	o			
mail	Error	3	The registered license is invalid. (%1)	Register a valid license.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
mail	Error	4	The registered license is unknown. (%1)	Register a valid license.	-	o	o			
mail	Error	5	mail failed(%s).(SMTP server: %s)	Mail reporting has failed.	Check if an error has occurred on the SMTP server, or a trouble occurred in communicating with the SMTP server.	o	o			
mail	Info	6	mail successed.(SMTP server: %s)	mail succeed.	-	o	o			
userw	Warning	1	Detected a monitor delay in monitoring %1. (timeout=%2*%3 actual-time=%4 delay warning rate=%5)	A monitoring delay was detected during %1 monitoring. The current timeout value is "%2 (seconds) x %3 (ticks per second)". The actual measurement value when the delay was detected became %4 (ticks), exceeding the delay warning percentage %5 (%).	-	o	o			
vipw	Warning	1	Detected a monitor delay in monitoring %1. (timeout=%2*%3 actual-time=%4 delay warning rate=%5)	A monitoring delay was detected during %1 monitoring. The current timeout value is "%2 (seconds) x %3 (ticks per second)". The actual measurement value when the delay was detected became %4 (ticks), exceeding the delay warning percentage %5 (%).	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
ddnsw	Warning	1	Detected a monitor delay in monitoring %1. (timeout=%2*%3 actual-time=%4 delay warning rate=%5)	A monitoring delay was detected during %1 monitoring. The current timeout value is "%2 (seconds) x %3 (ticks per second)". The actual measurement value when the delay was detected became %4 (ticks), exceeding the delay warning percentage %5 (%).	-	o	o			
apisv	Info	1	There was a request to stop cluster from the %1(IP=%2).	A request to stop the server has been issued from %1.	-	o	o			
apisv	Info	2	There was a request to shutdown cluster from the %1(IP=%2).	A request to shut down the server has been issued from %1.	-	o	o			
apisv	Info	3	There was a request to reboot cluster from the %1(IP=%2).	A request to reboot the server has been issued from %1.	-	o	o			
apisv	Info	4	There was a request to suspend cluster from the %1(IP=%2).	A request to suspend the server has been issued from %1.	-	o	o			
apisv	Info	10	There was a request to stop server from the %1(IP=%2).	A request to stop the server has been issued from %1.	-	o	o			
apisv	Info	11	There was a request to shutdown server from the %1(IP=%2).	A request to shut down the server has been issued from %1.	-	o	o			
apisv	Info	12	There was a request to reboot server from the %1(IP=%2).	A request to reboot the server has been issued from %1.	-	o	o			
apisv	Info	30	There was a request to start group(%1) from the %2(IP=%3).	A request to start group %1 has been issued from %2.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
apisv	Info	31	There was a request to start all groups from the %1(IP=%2).	A request to start all groups has been issued from %1.	-	o	o			
apisv	Info	32	There was a request to stop group(%1) from the %2(IP=%3).	A request to stop group %1 has been issued from %2.	-	o	o			
apisv	Info	33	There was a request to stop all groups from the %1(IP=%2).	A request to stop all groups has been issued from %1.	-	o	o			
apisv	Info	34	There was a request to restart group(%1) from the %2(IP=%3).	A request to restart group %1 has been issued from %2.	-	o	o			
apisv	Info	35	There was a request to restart all groups from the %1(IP=%2).	A request to restart all groups has been issued from %1.	-	o	o			
apisv	Info	36	There was a request to move group(%1) from the %2(IP=%3).	A request to move group %1 has been issued from %2.	-	o	o			
apisv	Info	37	There was a request to move group from the %1(IP=%2).	A request to move a group has been issued from %1.	-	o	o			
apisv	Info	38	There was a request to failover group(%1) from the %2(IP=%3).	A request to fail over group %1 has been issued from %2.	-	o	o			
apisv	Info	39	There was a request to failover group from the %1(IP=%2).	A request to fail over a group has been issued from %1.	-	o	o			
apisv	Info	40	There was a request to migrate group(%1) from the %2(IP=%3).	A request to migrate group %1 has been issued from %2.	-	o	o			
apisv	Info	41	There was a request to migrate group from the %1(IP=%2).	A request to migrate a group has been issued from %2.	-	o	o			
apisv	Info	42	There was a request to failover all groups from the %1(IP=%2).	A request to provide failover for all groups was issued from %2.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
apisv	Info	43	There was a request to cancel waiting for the dependence destination group of group the %1 was issued from %2.	A request to cancel waiting for the dependence destination group of group %1 was issued from %2.	-	o	o			
apisv	Info	50	There was a request to start resource(%1) from the %2(IP=%3).	A request to start resource %1 has been issued from %2.	-	o	o			
apisv	Info	51	There was a request to start all resources from the %1(IP=%2).	A request to start all resources has been issued from %1.	-	o	o			
apisv	Info	52	There was a request to stop resource(%1) from the %2(IP=%3).	A request to stop resource %1 has been issued from %2.	-	o	o			
apisv	Info	53	There was a request to stop all resources from the %1(IP=%2).	A request to stop all resources has been issued from %1.	-	o	o			
apisv	Info	54	There was a request to restart resource(%1) from the %2(IP=%3).	A request to restart resource %1 has been issued from %2.	-	o	o			
apisv	Info	55	There was a request to restart all resources from the %1(IP=%2).	A request to restart all resources has been issued from %1.	-	o	o			
apisv	Info	60	There was a request to suspend monitor resources from the %1(IP=%2).	A request to suspend monitor resources has been issued from %1.	-	o	o			
apisv	Info	61	There was a request to resume monitor resources from the %1(IP=%2).	A request to resume monitor resources has been issued from %1.	-	o	o			
apisv	Info	62	There was a request to enable Dummy Failure of monitor resources from the %1(IP=%2).	A request to enable Dummy Failure of monitor resource was issued from %1.	-	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
apisv	Info	63	There was a request to disable Dummy Failure of monitor resources from the %1(IP=%2).	A request to disable Dummy Failure of monitor resource was issued from %1.	-	o	o			
apisv	Error	101	A request to stop cluster was failed(0x%08x).	A request to stop the server has failed.	Check the server status.	o	o			
apisv	Error	102	A request to shutdown cluster was failed(0x%08x).	A request to shut down the server has failed.	Check the server status.	o	o			
apisv	Error	103	A request to reboot cluster was failed(0x%08x).	A request to reboot the server has failed.	Check the server status.	o	o			
apisv	Error	104	A request to suspend cluster was failed(0x%08x).	A request to suspend the server has failed.	Check the server status.	o	o			
apisv	Error	110	A request to stop server was failed(0x%08x).	A request to stop the server has failed.	Check the status of the server.	o	o			
apisv	Error	111	A request to shutdown server was failed(0x%08x).	A request to shut down the server has failed.	Check the status of the server.	o	o			
apisv	Error	112	A request to reboot server was failed(0x%08x).	A request to reboot the server has failed.	Check the status of the server.	o	o			
apisv	Error	113	A request to server panic was failed(0x%08x).	Server panic has failed.	Check the status of the server.	o	o			
apisv	Error	114	A request to server reset was failed(0x%08x).	Server reset has failed.	Check the status of the server.	o	o			
apisv	Error	115	A request to server sysrq was failed(0x%08x).	SYSRQ panic has failed.	Check the status of the server.	o	o			
apisv	Error	116	A request to KA RESET was failed(0x%08x).	Keepalive reset has failed.	Check the status of the server.	o	o			
apisv	Error	117	A request to KA PANIC was failed(0x%08x).	Keepalive panic has failed.	Check the status of the server.	o	o			
apisv	Error	118	A request to BMC RESET was failed(0x%08x).	BMC reset has failed.	Check the status of the server.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
apisv	Error	119	A request to BMC PowerOff was failed(0x%08x).	BMC power-off has failed.	Check the status of the server.	o	o			
apisv	Error	120	A request to BMC PowerCycle was failed(0x%08x).	BMC power cycle has failed.	Check the status of the server.	o	o			
apisv	Error	121	A request to BMC NMI was failed(0x%08x).	BMC NMI has failed.	Check the status of the server.	o	o			
apisv	Error	130	A request to start group(%1) was failed(0x%08x).	A request to start group %1 has failed.	Take appropriate action according to the message output by rc indicating the unsuccessful group start.	o	o			
apisv	Error	131	A request to start all groups was failed(0x%08x).	A request to start all groups has failed.	Same as above	o	o			
apisv	Error	132	A request to stop group(%1) was failed(0x%08x).	A request to stop group %1 has failed.	Take appropriate action according to the message output by rc indicating the unsuccessful group stop.	o	o			
apisv	Error	133	A request to stop all groups was failed(0x%08x).	A request to stop all groups has failed.	Same as above	o	o			
apisv	Error	134	A request to restart group(%1) was failed(0x%08x).	Restarting group (%1) has failed.	Take appropriate action according to the group stop failure message issued by rc.	o	o			
apisv	Error	135	A request to restart all groups was failed(0x%08x).	Restarting all groups has failed.	Same as above.	o	o			
apisv	Error	136	A request to move group(%1) was failed(0x%08x).	A request to move group %1 has failed.	Take appropriate action according to the message output by rc indicating the unsuccessful group movement.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
apisv	Error	137	A request to move all groups was failed(0x%08x).	Moving all groups has failed.	Same as above.	o	o			
apisv	Error	138	A request to failover group(%1) was failed(0x%08x).	A request to fail over group %1 has failed.	Take appropriate action according to the message output by rc indicating the unsuccessful group failover.	o	o			
apisv	Error	139	A request to failover group was failed(0x%08x).	A request to fail over all groups has failed.	Same as above	o	o			
apisv	Error	140	A request to migrate group(%1) was failed(0x%08x).	Migration of group (%1) has failed.	Take appropriate action according to the group failover failure message issued by rc.	o	o			
apisv	Error	141	A request to migrate all groups was failed(0x%08x).	Migration of all groups has failed.	Same as above.	o	o			
apisv	Error	142	A request to failover all groups was failed(0x%08x).	Failover for all groups has failed.	Same as above.	o	o			
apisv	Error	143	A request to cancel waiting for the dependency destination group of group %1 has failed(0x%08x).	Canceling waiting for the dependency destination group of group %1 has failed.	Same as above.	o	o			
apisv	Error	150	A request to start resource(%1) was failed(0x%08x).	A request to start resource %1 has failed.	Take appropriate action according to the message output by rc indicating the unsuccessful resource start.	o	o			
apisv	Error	152	A request to stop resource(%1) was failed(0x%08x).	A request to stop resource %1 has failed.	Take appropriate action according to the message output by rc indicating the unsuccessful resource stop.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
apisv	Error	154	A request to restart resource(%1) was failed(0x%08x).	A request to restart resource %1 has failed.	Take appropriate action according to the message output by rc indicating the unsuccessful resource restart.	o	o			
apisv	Error	155	A request to restart all resources was failed(0x%08x).	A request to start all resources has failed.	Same as above	o	o			
apisv	Error	160	A request to suspend monitor resource was failed(0x%08x).	A request to suspend the monitor resources has failed.	Check the status of the monitor resources.	o	o			
apisv	Error	161	A request to resume monitor resource was failed(0x%08x).	A request to resume the monitor resources has failed.	Same as above	o	o			
apisv	Error	162	A request to enable Dummy Failure of monitor resource was failed(0x%08x).	The monitor resource failed to start Dummy Failure.	Check the status of the monitor resource.	o	o			
apisv	Error	163	A request to disable Dummy Failure of monitor resource was failed(0x%08x).	The monitor resource failed to stop Dummy Failure.	Same as above.	o	o			
cfmgr	Info	1	The cluster configuration data has been uploaded by %1.	The configuration data has been uploaded.	-	o	o			
sra	Error	1	system monitor closed because reading the SG file failed.	An error occurred in reading the SG file.	Check the message separately issued.		o			
sra	Error	2	Opening an ignore file failed. file name = %1, errno = %2. %1:File name %2:errno	The SG file (%1) failed to be opened.	Restart the cluster, or execute the suspend and resume.		o			
sra	Error	3	Reading a configuration file failed.	An error occurred in reading the SG file.	Check the message separately issued.		o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
sra	Error	4	Trace log initialization failed.	The internal log file could not be initialized.	Restart the cluster, or execute the suspend and resume.		o			
sra	Error	5	Creating a daemon process failed.	An external error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.		o			
sra	Error	6	Reading a service configuration file failed.	An error occurred in reading the SG file.	Check the message separately issued.		o			
sra	Error	7	mlock() failed.	An external error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.		o			
sra	Error	8	A daemon process could not be created.	SystemResourceAgent has failed to start (turning the process into a daemon).	Check the following possible causes: memory shortage or OS resource insufficiency.		o			
sra	Error	9	stdio and stderr could not be closed.	SystemResourceAgent has failed to start (closing the standard I/O).	Check the following possible causes: memory shortage or OS resource insufficiency.		o			
sra	Error	10	A signal mask could not be set up.	SystemResourceAgent has failed to start (setting the signal mask).	Check the following possible causes: memory shortage or OS resource insufficiency.		o			
sra	Error	11	A configuration file error occurred. (1) [line = %1, %2] %1:Line %2:Setting value	SystemResourceAgent has failed to start (reading the SG file).	Restart the cluster, or execute the suspend and resume.		o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
sra	Error	12	A configuration file error occurred. (2) [line=%1, %2] %1:Line %2:Setting value	SystemResourceAgent has failed to start (reading the SG file).	Restart the cluster, or execute the suspend and resume.		o			
sra	Error	13	A plugin event configuration file error occurred. The DLL pointer was not found. [line = %1, %2] %1:Line %2:Setting value	SystemResourceAgent has failed to start (registering the plugin event).	Restart the cluster, or execute the suspend and resume.		o			
sra	Error	14	malloc failed. [event structure]	SystemResourceAgent has failed to start (registering the plugin event).	Restart the cluster, or execute the suspend and resume.		o			
sra	Error	15	A service configuration file error occurred due to an invalid event. [%1] %1:Setting value	SystemResourceAgent has failed to start (reading the service file).	Restart the cluster, or execute the suspend and resume.		o			
sra	Error	16	A plugin event configuration file error occurred due to %1. %1:Cause of error	SystemResourceAgent has failed to start (reading the plugin event file).	Restart the cluster, or execute the suspend and resume.		o			
sra	Error	17	Internal error occurred.	A shared memory access error has occurred.	-		o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
sra	Warning	101	Opening an SG file failed. file name = %1, errno = %2 %1:File name %2:errno	The SG file (%1) failed to be opened.	Recreate the SG file and restart the cluster, or execute the suspend and resume.		o			
sra	Warning	102	malloc(3) fail(1) . [%1] %1:Function name	An external error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.		o			
sra	Warning	103	malloc(3) fail(2). [%1] %1:Function name	An external error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.		o			
sra	Warning	104	An internal error occurred. rename(2) error (errno = %1) %1:errno	This product has terminated abnormally.	See the most recently issued system log message.		o			
sra	Warning	105	realloc(3) fail. [%1]. %1:Function name	An external error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.		o			
sra	Warning	106	A script timed out. (%1 %2) %1:Script file name %2:Argument	An external error has occurred.	Check the load status of the server and remove the load.		o			
sra	Warning	107	[%1] execvp(2) fail (%2). %1:Script file name %2:errno	An external error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.		o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
sra	Warning	108	[%1] fork fail (%2). Suspended. %1:Script file name %2:errno	An external error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.		o			
sra	Warning	109	malloc(3) fail. [%1] %1:Function name	An external error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.		o			
sra	Info	201	A script was executed. (%1) %1:Script name	Script (%1) has been executed.	-		o			
sra	Info	202	Running a script finished. (%1) %1:Script name	Script has ended normally.	-		o			
sra	Info	203	An %1 event succeeded. %1:Executed event type	The operation management command has been executed. The executed event type (boot, shutdown, stop, start, or flush) is output.	-		o			
sra	Error	301	A process resource error was detected. (%1, type = cpu, pid = %2, %3) %1:Monitor resource name %2:Process ID %3:Process name	An error was detected in monitoring the CPU usage rates of specific processes.	Check the possible causes of the monitoring failure.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
sra	Error	301	A process resource error was detected. (%1, type = memory leak, pid = %2, %3) %1:Monitor resource name %2:Process ID %3:Process name	An error was detected in monitoring the memory usage of specific processes.	Check the possible causes of the monitoring failure.	o	o			
sra	Error	301	A process resource error was detected. (%1, type = file leak, pid = %2, %3) %1:Monitor resource name %2:Process ID %3:Process name	An error was detected in monitoring the number (maximum) of open files of specific processes.	Check the possible causes of the monitoring failure.	o	o			
sra	Error	301	A process resource error was detected. (%1, type = open file, pid = %2, %3) %1:Monitor resource name %2:Process ID %3:Process name	An error was detected in monitoring the number (upper kernel limit) of open files of specific processes.	Check the possible causes of the monitoring failure.	o	o			
sra	Error	301	A process resource error was detected. (%1, type = thread leak, pid = %2, %3) %1:Monitor resource name %2:Process ID %3:Process name	An error was detected in monitoring the number of threads of specific processes.	Check the possible causes of the monitoring failure.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
sra	Error	301	A process resource error was detected. (%1, type = defunct, pid = %2, %3) %1:Monitor resource name %2:Process ID %3:Process name	An error was detected in monitoring the zombie processes.	Check the possible causes of the monitoring failure.	o	o			
sra	Error	301	A process resource error was detected. (%1, type = same name process, pid = %2, %3) %1:Monitor resource name %2:Process ID %3:Process name	An error was detected in monitoring the same-name processes.	Check the possible causes of the monitoring failure.	o	o			
sra	Error	302	A system resource error was detected. (%1, type = cpu) %1:Monitor resource name	An error was detected in monitoring the CPU usage rates of the system.	Check the possible causes of the monitoring failure.	o	o			
sra	Error	302	A system resource error was detected. (%1, type = memory) %1:Monitor resource name	An error was detected in monitoring the total usage of memory of the system.	Check the possible causes of the monitoring failure.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
sra	Error	302	A system resource error was detected. (%1, type = swap) %1:Monitor resource name	An error was detected in monitoring the total usage of virtual memory of the system.	Check the possible causes of the monitoring failure.	o	o			
sra	Error	302	A system resource error was detected. (%1, type = file) %1:Monitor resource name	An error was detected in monitoring the total number of open files of the system.	Check the possible causes of the monitoring failure.	o	o			
sra	Error	302	A system resource error was detected. (%1, type = thread) %1:Monitor resource name	An error was detected in monitoring the total number of threads of the system.	Check the possible causes of the monitoring failure.	o	o			
sra	Error	303	A system resource error was detected. (%1, type = number of process, user name = %2) %1:Monitor resource name %2:User name	An error was detected in monitoring the number of running processes for each user of the system.	Check the possible causes of the monitoring failure.	o	o			
sra	Error	304	A disk resource error was detected. (%1, type = used rate, level = NOTICE, %2) %1:Monitor resource name %2:mount point	A notice level error was detected in monitoring the disk usage rates.	Check the possible causes of the monitoring failure.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
sra	Error	304	A disk resource error was detected. (%1, type = used rate, level = WARNING, %2) %1:Monitor resource name %2:mount point	A warning level error was detected in monitoring the disk usage rates.	Check the possible causes of the monitoring failure.	o	o			
sra	Error	304	A disk resource error was detected. (%1, type = free space, level = NOTICE, %2) %1:Monitor resource name %2:mount point	A notice level error was detected in monitoring the free disk space.	Check the possible causes of the monitoring failure.	o	o			
sra	Error	304	A disk resource error was detected. (%1, type = free space, level = WARNING, %2) %1:Monitor resource name %2:mount point	A warning level error was detected in monitoring the free disk space.	Check the possible causes of the monitoring failure.	o	o			
sra	Error	304	A disk resource error was detected. (%1, type = inode used rate, level = NOTICE, %2) %1:Monitor resource name %2:mount point	A notice level error was detected in monitoring the inode usage rates.	Check the possible causes of the monitoring failure.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
sra	Error	304	A disk resource error was detected. (%1, type = inode used rate, level = WARNING, %2) %1:Monitor resource name %2:mount point	A warning level error was detected in monitoring the inode usage rates.	Check the possible causes of the monitoring failure.	o	o			
sra	Warning	401	zip/unzip package is not installed.	The compression of statistical information collected by System Resource Agent failed.	Check if a zip (unzip) package has been installed in the system.	o	o			
lcns	Info	1	The number of licenses is %1. (Product name:%2)	The number of cluster licenses is %1. %1: Number of licenses %2: Product name	-	o	o			
lcns	Info	2	The trial license is valid until %1. (Product name:%2)	The trial license is effective until %1. %1: Trial end date %2: Product name	-	o	o			
lcns	Warning	3	The number of licenses is insufficient. The number of insufficient licenses is %1. (Product name:%2)	The number of licenses is insufficient. The number of insufficient licenses is %1. %1: Required number of licenses %2: Product name	Purchase the required number of licenses and then register them.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
lcns	Error	4	The license is not registered. (Product name:%1)	The license is not registered. %1: Product name	Purchase the license and then register it.	o	o			
lcns	Error	5	The trial license has expired in %1. (Product name:%2)	The validity term of the trial license has expired. %1: Trial end date %2: Product name	Register a valid license.	o	o			
lcns	Error	6	The registered license is invalid. (Product name:%1, Serial No:%2)	The registered license is invalid. %1: Product name %2: Serial number	Register a valid license.	o	o			
lcns	Error	7	The registered license is unknown. (Product name:%1)	The registered license is unknown. %1: Product name	Register a valid license.	o	o			
lcns	Error	8	The trial license is valid from %1. (Product name:%2)	The validity term of the trial license is not reached. %1: Trial start date %2: Product name	Register a valid license.	o	o			

Continued on next page

Table 4.1 – continued from previous page

Module Type	Event Type	Event ID	Message	Explanation	Solution	1	2	3	4	5
lcns	Info	9	The fixed term license is valid until %1. (Product name:%2)	The validity term of the fixed-term license is effective until %1. %1:End date of validity term %2: Product name	-	o	o			
lcns	Error	10	The fixed term license has expired in %1. (Product name:%2)	The validity term of the fixed-term license has expired. %1: End date of validity term %2: Product name	Register a valid license.	o	o			
reg	Info	1	The number of reboots due to group resource errors has been reset.	The number of reboots due to group resource errors has been reset.	-	o	o			
reg	Info	2	The number of reboots due to monitor resource errors has been reset.	The number of reboots due to monitor resource errors has been reset.	-	o	o			
webmgr	Warning	21	HTTPS configuration isn't correct, HTTPS mode doesn't work. Please access WebManager by HTTP mode.	HTTPS configuration isn't correct, HTTPS mode doesn't work. Please access WebManager by HTTP mode.	-	o	o			

4.2 Driver syslog messages

4.2.1 Kernel mode LAN heartbeat driver

Module Type	Event type	Event ID	Message	Description	Solution
clpkhb	Info	101	Kernel Heartbeat was initialized successfully. (major=%1, minor=%2)	The clpkhb driver was successfully loaded.	-
clpkhb	Info	102	Kernel Heartbeat was released successfully.	The clpkhb driver was successfully unloaded.	-
clpkhb	Error	103	Can not register miscdev on minor=%1. (err=%2)	Failed to load the clpkhb driver.	-
clpkhb	Error	104	Can not deregister miscdev on minor=%1. (err=%2)	Failed to unload the clpkhb driver.	-
clpkhb	Info	105	Kernel Heartbeat was initialized by %1.	The clpkhb driver was successfully initialized by [%1] module.	-
clpkhb	Info	106	Kernel Heartbeat was terminated by %1.	The clpkhb driver was successfully terminated by [%1] module.	-
clpkhb	Error	107	Can not register Kernel Heartbeat proc file!	Failed to create proc file for the clpkhb driver.	-
clpkhb	Error	108	Version error.	The inside version information of the clpkhb driver is invalid.	Reinstall EXPRESSCLUSTER.
clpkhb	Info	110	The send thread has been created. (PID=%1)	The send thread of the clpkhb driver was successfully created. The process ID is [%1].	-
clpkhb	Info	110	The recv thread has been created. (PID=%1)	The receive thread of the clpkhb driver was successfully created. The process ID is [%1].	-
clpkhb	Error	111	Failed to create send thread. (err=%1)	Failed to create the send thread of the clpkhb driver due to the error [%1].	-
clpkhb	Error	111	Failed to create recv thread. (err=%1)	Failed to create the receive thread of the clpkhb driver due to the error [%1].	-
clpkhb	Info	112	Killed the send thread successfully.	The send thread of clpkhb driver was successfully stopped.	-

Continued on next page

Table 4.2 – continued from previous page

Module Type	Event type	Event ID	Message	Description	Solution
clpkhb	Info	112	Killed the recv thread successfully.	The receive thread of clpkhb driver was successfully stopped.	-
clpkhb	Info	113	Killed the recv thread successfully.	Killing the clpkhb driver.	-
clpkhb	Info	114	Killed the recv thread successfully.	Killing the clpkhb driver.	-
clpkhb	Info	115	Kernel Heartbeat has been stopped	The clpkhb driver successfully stopped.	-
clpkhb	Error	120	Failed to create socket to send %1 packet. (err=%2)	Failed to create the socket for sending the [%1] (HB/DOWN/KA) packet due to the error [%2].	-
clpkhb	Error	120	Failed to create socket to receive packet. (err=%2)	Failed to create the socket for receiving the packet due to the error [%2].	-
clpkhb	Error	121	Failed to create sending %1 socket address. (err=%2)	Failed to set the socket for sending the [%1] (HB/DOWN/KA) packet.	The physical memory may be running out. Add physical memories, or terminate unnecessary applications.
clpkhb	Error	122	Failed to create %1 socket address. (err=%2)	Failed to set the socket for sending the [%1] (HB/DOWN/KA) packet.	The physical memory may be running out. Add physical memories, or terminate unnecessary applications.
clpkhb	Error	123	Failed to bind %1 socket. (err=%2)	Failed to bind the socket for [%1] (HB/DOWN/KA).	Check the status of the operating system. The communication port for clpkhb may be used already by other applications or others. Check the usage status of the communication port. Check the cluster configuration information server property if the IP address set for the interconnect LAN I/F is correct.

Continued on next page

Table 4.2 – continued from previous page

Module Type	Event type	Event ID	Message	Description	Solution
clpkhb	Error	125	Failed to send %1 data to %2. (err=%3)	Failed to send [%1] (HB/DOWN/KA) data to [%2].	Check the status of the network for the clpkhb communication. Check the status of the remote server. Check that the setting information is correct.
clpkhb	Error	126	Failed to receive data. (err=%3)	Failed to receive data.	The remote server may be down. Check if the server is active. If the server is not down, check the status of the network for clpkhb.
clpkhb	Info	127	1. Received an invalid packet. Magic is not correct! 2. Received an invalid packet from %1. Magic(%2) is not correct!	1. Received an invalid packet. Ignore the packet. 2. An invalid packet [%2] has been received from %1, but will be ignored.	Other applications may be sending the data to the port for clpkhb. Check the usage status of the port.
clpkhb	Error	128	1. Received an invalid packet. %1 is not correct! 2. Received an invalid packet from %1. %2 is not correct!	1. Received an invalid packet. The invalid part of the packet is [%1] (Resource priority/Source ip address). 2. An invalid packet has been received from %1. The invalid part of the packet is %2 (Resource priority/Source ip address).	Same as above.

Continued on next page

Table 4.2 – continued from previous page

Module Type	Event type	Event ID	Message	Description	Solution
clpkhb	Info	129	Receiving operation was interrupted by ending signal!	The receive thread ends by termination signal.	-
clpkhb	Info	130	1. clpka: <server priority: %1> <reason: %2> <process name: %3> system reboot. 2. clpka: <server priority: %1> <source: %2> <exit code: %3> system reboot.	1. A reset message was received from another server. The priority [%1] server was reset because the reason [%2] problem occurred in the process [%3]. 2. A reset message was received from another server. The priority [%1] server was reset because %2 ended with the exit code [%3].	Check the status of the server where the reset occurred.
clpkhb	Info	131	1. clpka: <server priority: %1> <reason: %2> <process name: %3> system panic. 2. clpka: <server priority: %1> <source: %2> <exit code: %3> system panic.	1. A panic message was received from another server. The priority [%1] server panicked because the reason [%2] problem occurred in the process [%3]. 2. A panic message was received from another server. The priority [%1] server panicked because %2 ended with the exit code [%3].	Check the status of the server where the panic occurred.
clpkhb	Error	140	Reference an inaccessible memory area!	Failed to pass data to an application by ioctl().	Check the status of the operating system.
clpkhb	Error	141	Failed to allocate memory!	Failed to allocate memory.	The physical memory may be running out. Add physical memories, or terminate unnecessary applications.

Continued on next page

Table 4.2 – continued from previous page

Module Type	Event type	Event ID	Message	Description	Solution
clpkhb	Error	142	Invalid argument, %1!	The parameter passed to the clpkhb driver is not correct.	Check if the settings are correct.
clpkhb	Warning	143	Local node has nothing with current resource.	The heartbeat resource information passed to the clpkhb driver is not correct.	Same as above.

4.2.2 Keepalive driver

Module Type	Event type	Event ID	Message	Description	Solution
clpka	Info	101	Kernel Keepalive was initialized successfully. (major=%1, minor=%2)	The clpka driver was successfully loaded.	-
clpka	Info	102	Kernel Keepalive was released successfully.	The clpka driver was successfully unloaded.	-
clpka	Error	103	Can not register miscdev on minor=%1. (err=%2)	Failed to load the clpka driver.	Check the distribution and kernel support the kernel mode LAN heartbeat.
clpka	Info	105	Kernel Keepalive was Initialized by %1.	The clpka driver was successfully initialized.	-
clpka	Error	107	Can not register Kernel Keepalive proc file!	Failed to create proc file for the clpka driver.	The kernel may not be running normally because of lack of memory or other reasons. Add physical memories, or terminate unnecessary applications.
clpka	Error	108	Version error.	The version of the clpka driver is invalid.	Check if the installed clpka driver is legitimate.
clpka	Error	111	Failed to create notify thread. (err=%1)	Failed to create the thread of the clpka driver.	The kernel may not be running normally because of lack of memory or other reasons. Add physical memories, or terminate unnecessary applications.
clpka	Info	130	Reboot tried.	In keeping with the settings, the clpka driver tried to restart the machine.	-

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event type	Event ID	Message	Description	Solution
clpka	Info	132	Kernel do nothing.	In keeping with the settings, the clpka driver did nothing.	-
clpka	Error	140	Reference an inaccessible memory area!	Failed to pass the version information of the clpka driver to the cluster main body.	Check if the installed clpka driver is legitimate.
clpka	Error	141	Failed to allocate memory!	The size of physical memory is not sufficient.	The physical memory is running out. Add physical memories, or terminate unnecessary applications.
clpka	Error	142	Invalid argument, %1!	Invalid information was passed from the cluster main body to the clpka driver.	Check if the installed clpka driver is legitimate.
clpka	Error	144	Process (PID=%1) is not set.	A process other than cluster main body tried operation to the clpka driver.	Check if there is any application trying to access to the clpka driver erroneously.

4.3 Detailed information on activating and deactivating group resources

4.3.1 EXEC resources

Module Type	Type	Return Value	Message	Explanation	Solution
exec	Error	1	Termination code %1 was returned.	A termination code other than 0 has been returned as the execution result of a synchronous script or application.	If this message appears for a script, the contents of the script might be incorrect. Check whether the script is correctly specified. If this message appears for an application, the application might have terminated abnormally. Check the application operation.
exec	Error	1	Command was not completed within %1 seconds.	Execution of a synchronous script or application has not terminated within the specified time.	If this message appears for a script, the contents of the script might be incorrect. Check whether the script is correctly described. If this message appears for an application, the application might have stalled. Check the application operation. The cause of this error might be identifiable from the logs. For details about log output settings, refer to "Details of other settings" in the "EXPRESSCLUSTER X SingleServerSafe Configuration Guide".

Continued on next page

Table 4.4 – continued from previous page

Module Type	Type	Return Value	Message	Explanation	Solution
exec	Error	1	Command was aborted.	A synchronous script or application has been aborted.	If this message appears for an application, the application might have been aborted. Check the application operation. Memory or OS resources may not be sufficient. Check them.
exec	Error	1	Command was not found. (error=%1)	The application was not found.	The application path might be incorrect. Check the path of the application in the configuration data.
exec	Error	1	Command string was invalid.	The application path is invalid.	Check the path of the application in the configuration data.
exec	Error	1	Log string was invalid.	The path of the log output destination is incorrect.	Check the path of the data log output destination in the configuration data.
exec	Error	1	Internal error. (status=%1)	Another internal error occurred.	Memory or OS resources may not be sufficient. Check them.

4.4 Details about monitor resource errors

4.4.1 Software RAID monitor resources

Module Type	Type	Return Value	Message	Explanation	Solution
lmdw	Warning	101	Device=(%1): Bad disks(%2) are detected in mirror disk.	Some physical disks under the mirror disk are damaged and now have the [caution] status.	The mirror disk can be used but the damaged physical disks must be replaced.
lmdw	Warning	102 190	Internal error.err=%1	An internal error occurred.	There might not be enough memory space or OS resources. Check them.
lmdw	Warning	102 190	Config file error.(err=%1)	The contents of the configuration data are incorrect.	Check whether the configuration data is correct.
lmdw	Warning	190	Soft RAID module has a problem. (err=%1)	The kernel module related to software RAID is faulty.	-
lmdw	Warning	190	Options or parameters are invalid.	A command parameter error occurred.	Check whether the configuration data is correct.
lmdw	Warning	190	Failed to read config file.(err=%1)	The configuration file could not be read.	Check whether the configuration data is correct.
lmdw	Warning	191	Device=(%1): Mirror disk is in recovery process (%2).	The mirror disk is now in the [recovery] process.	-

4.4.2 IP monitor resources

Module Type	Type	Return Value	Message	Explanation	Solution
ipw	Error	5	Ping was failed by timeout. IP=%s...	The ping command has failed due to a timeout.	The system may be under high load, or memory or OS resources may not be sufficient. Check them.
ipw	Error	31	Ping cannot reach. (ret=%1) IP=%2...	The packet transmitted by the ping command has not arrived.	Check whether the ping command to the corresponding IP address succeeds. If the command fails, check the status of the device that has the IP address or status of the network interface.
ipw	Warning	102	Ping was failed. (ret=%1) IP=%2...	The ping command has failed.	Memory or OS resources may not be sufficient. Check them.

Continued on next page

Table 4.6 – continued from previous page

Module Type	Type	Return Value	Message	Explanation	Solution
ipw	Warning	106 108 to 121	Internal error. (status=%1)	Another internal error occurred.	Memory or OS resources may not be sufficient. Check them.
ipw	Warning	189	Internal error. (status=%1)	Monitoring of the IP monitor resource failed by time out.	Memory or OS resources may not be sufficient. Check them.

4.4.3 Disk monitor resources

Module Type	Type	Return Value	Message	Explanation	Solution
diskw	Error	12	Ioctl was failed. (err=%1) Device=%2	Failed to control the device.	Check if the monitoring target disk is connected properly, the disk is powered on, or no other errors are occurred on the disk.
diskw	Error	14	Open was failed. (err=%1) File=%2	The file could not be opened.	Check whether a directory that has the same name as the file exists, the monitoring target disk is connected properly, the disk is on, or other errors occurred on the disk. Memory or OS resources may not be sufficient. Check them.
diskw	Error	14	Open was failed. (err=%1) Device=%2	Opening the device failed.	Check whether a directory that has the same name as the file exists, the monitoring target disk is connected properly, the disk is on, or other errors occurred on the disk. Memory or OS resources may not be sufficient. Check them.

Continued on next page

Table 4.7 – continued from previous page

Module Type	Type	Return Value	Message	Explanation	Solution
diskw	Error	16	Read was failed. (err=%1) Device=%2	Reading from the device has failed.	Check if the monitoring target disk is connected properly, the disk is powered on, or no other errors are occurred on the disk. Memory or OS resources may not be sufficient. Check them.
diskw	Error	18	Write was failed. (err=%1) File=%2	Writing to the file has failed.	Check if the monitoring target disk is connected properly, the disk is powered on, or no other errors are occurred on the disk.
					Memory or OS resources may not be sufficient. Check them.
diskw	Error	41	SG_IO failed. (sg_io_hdr_t info:%1 SG_INFO_OK_MASK: %2)	SG_IO has failed.	Check if the monitoring target disk is connected properly, the disk is powered on, or no other errors are occurred on the disk.
diskw	Error	49	Already bound for other. Rawdevice=%1 Device=%2	The RAW device has already been bound by another real device.	The set RAW device has already been bound by another real device. Change the RAW device name on the Cluster WebUI.
diskw	Error	55	Bind was failed. Rawdevice=%1 Device=%2	Bind failed.	Bind failed. Check the RAW device name on the Cluster WebUI.
diskw	Error	56	Lseek was failed by timeout. Device=%1	Lseek failed.	The possible cause is the heavily loaded system, insufficient memory, or insufficient OS resources. Check if any of these exists.

Continued on next page

Table 4.7 – continued from previous page

Module Type	Type	Return Value	Message	Explanation	Solution
diskw	Error	57	Fdatasync was failed by timeout. Device=%1	Fdatasync failed.	Check if the disk as a monitoring target is appropriately connected, is turned on, or has anything abnormal. The possible cause is the heavily loaded system, insufficient memory, or insufficient OS resources. Check if any of these exists.
diskw	Warning	101	Ioctl was failed by timeout. Device=%1	The device control failed due to timeout.	Check the disk to be monitored is properly connected, powered on, or does not have any problem. The system may be heavily loaded, memory or OS resources may not be sufficient. Check them.
diskw	Warning	101	Open was failed by timeout. File=%1	Opening the file failed due to timeout.	Check the disk to be monitored is properly connected, powered on, or does not have any problem.
diskw	Warning	101	Open was failed by timeout. Device=%1	Opening the device failed due to timeout.	The system may be heavily loaded, memory or OS resources may not be sufficient. Check them.
diskw	Warning	101	Read was failed by timeout. Device=%1	Failed to read from the device due to timeout.	Check the disk to be monitored is properly connected, powered on, or does not have any problem.
					The system may be heavily loaded, memory or OS resources may not be sufficient. Check them.
diskw	Warning	101	Write was failed by timeout. File=%1	Writing to the file failed due to timeout.	Check the disk to be monitored is properly connected, powered on, or does not have any problem.

Continued on next page

Table 4.7 – continued from previous page

Module Type	Type	Return Value	Message	Explanation	Solution
					The system may be heavily loaded, memory or OS resources may not be sufficient. Check them.
diskw	Warning	101	Bind was failed. Rawdevice=%1 Device=%2	Bind failed.	Bind failed. Check the RAW device name on the Cluster WebUI.
diskw	Warning	101	Stat was failed. (err=%1) Device=%2	Stat failed.	Stat failed. Check the device name on the Cluster WebUI.
diskw	Warning	101	Popen was failed. (err=%1)	Popen failed.	Popen failed. Memory or OS resources may not be sufficient. Check them.
diskw	Warning	101 190	Option was invalid.	The option is invalid.	Check the cluster configuration data.
diskw	Warning	101 190	Internal error. (status=%1)	An error other than the errors mentioned above has occurred.	Memory or OS resources may not be sufficient. Check them.
diskw	Warning	190	Parameter was invalid. File=%1	The specified file name is invalid.	Do not specify the file whose name starts with /dev. Specify a normal file.
diskw	Warning	190	Device was invalid. Device=%1	The specified real device is invalid.	Check the device name of the disk monitor resource on the Cluster WebUI.
diskw	Warning	191	Ignored disk full error.	A disk full error has been ignored.	Check the usage of the device.

4.4.4 PID monitor resources

Module Type	Type	Return Value	Message	Explanation	Solution
pidw	Error	1	Process does not exist. (pid=%1)	The process does not exist.	Process of the monitoring target was cleared due to some error. Check them.
pidw	Warning	100	Resource %1 was not found.	The resource is not found.	Check the cluster configuration data by using the Cluster WebUI.
pidw	Warning	100	Internal error. (status=%1)	Another internal error occurred.	Memory or OS resources may not be sufficient. Check them.

4.4.5 User space monitor resources

Module Type	Type	Return Value	Message	Explanation	Solution
userw	Error	1	Initialize error. (%1)	An error was detected during process initialization.	Check if the driver depended on by the user mode monitor resources exists, or the rpm is installed. The driver or rpm differ depending on the monitor method.

4.4.6 Custom monitor resource

Module Type	Type	Return Value	Message	Explanation	Solution
genw	Error	1	Initialize error. (status=%d)	An error was detected while initialization.	Memory or OS resources may not be sufficient. Check them.
genw	Error	2	Termination code %d was returned.	An unexpected value was returned.	Check if the cluster configuration information is correct.
genw	Error	3	User was not superuser.	User was not root user.	Log in as root user.
genw	Error	4	Getting of config was failed.	Failed to get the cluster configuration information.	Check if the cluster configuration information exists.
genw	Error	5	Parameter was invalid.	The parameter is invalid.	Check if the cluster configuration information is correct.
genw	Error	6	Option was invalid.	The parameter is invalid.	Check if the cluster configuration information is correct.
genw	Error	7	Monitor Resource %s was not found.	The resource was not found.	Check if the cluster configuration information is correct.
genw	Error	8	Create process failed.	Create process failed.	Memory or OS resources may not be sufficient. Check them.
genw	Error	9	Process does not exist. (pid=%d)	The process did not exist.	Check if the process exists.
genw	Error	10	Process aborted. (pid=%d)	The process did not exist.	Check if the process exists.
genw	Error	11	Asynchronous process does not exist. (pid=%d)	The process did not exist.	Check if the process exists.
genw	Error	12	Asynchronous process aborted. (pid=%d)	The process did not exist.	Check if the process exists.

Continued on next page

Table 4.10 – continued from previous page

Module Type	Type	Return Value	Message	Explanation	Solution
genw	Error	13	Monitor path was invalid.	The path is invalid.	Check if the cluster configuration information is correct.
genw	Warning	110	Returned warning value (%d).	The synchronous type script returned a warning value.	Check the cause of the warning value returned by the script.
genw	Error	others	Internal error. (status=%d)	Another internal error occurred.	-

4.4.7 Multi target monitor resources

Module Type	Type	Return Value	Message	Explanation	Solution
mtw	Error	1	Option was invalid.	The parameter is invalid.	Check if the cluster configuration information is correct.
mtw	Error	2	User was not superuser.	User was not root user.	Log in as root user.
mtw	Error	3	Internal error. (status=%d)	Another internal error occurred.	-

4.4.8 JVM monitor resources

Module Type	Type	Return value	Message	Description	Solution
jraw	Error	11	An error was detected in accessing the monitor target.	Java VM to be monitored cannot be connected.	Check that the Java VM to be monitored is running.
jraw	Error	12	JVM status changed to abnormal. cause = %1.	An error was detected in monitoring Java VM. %1: Error generation cause GarbageCollection JavaMemoryPool Thread WorkManagerQueue WebOTXStall	Based on the message, check the Java application that is running on Java VM to be monitored.
jraw	Warning	189	Internal error occurred.	An internal error has occurred.	Execute cluster suspend and cluster resume.

4.4.9 System monitor resources

Module Type	Type	Return value	Message	Description	Solution
sraw	Error	11	Detected an error in monitoring system resource	An error was detected when monitoring system resources.	There may be an error with the resources. Check them.

4.4.10 Process resource monitor resource

Module Type	Type	Return value	Message	Description	Solution
psrw	Error	11	Detected an error in monitoring process resource	An error was detected when monitoring Process resources.	There may be an error with the resources. Check them.

4.4.11 NIC Link Up/Down monitor resources

Module Type	Type	Return Value	Message	Explanation	Solution
miiw	Error	20	NIC %1 link was down.	The NIC link has gone down.	Check whether the LAN cable is connected properly.
miiw	Warning	110	Get address information was failed. (err=%1)	The socket address of the IPv4 or IPv6 address family could not be obtained.	Check whether the kernel configuration supports TCP/IP networking (IPv4 or IPv6).
miiw	Warning	111	Socket creation was failed. (err=%1)	The socket could not be created.	Memory or OS resources may not be sufficient. Check them.
miiw	Warning	112	ioctl was failed. (err=%1) Device=%2 Request=%3	The control request to the network driver has failed.	Check whether the network driver supports control request %3. For details about the verified NIC and network driver, see "Monitor resource details" in the "EXPRESSCLUSTER X SingleServerSafe Configuration Guide".

Continued on next page

Table 4.15 – continued from previous page

Module Type	Type	Return Value	Message	Explanation	Solution
miiw	Warning	113	MII was not supported or no such device. Device=%1	MII is not supported by NIC or the monitored object does not exist.	For details about the verified NIC and network driver, see "Monitor resource details" in the "EXPRESSCLUSTER X SingleServerSafe Configuration Guide". If the monitored target does not exist, check the network interface name, such as by using ifconfig.
miiw	Warning	189	Internal error. (status=%d)	Another internal error occurred.	-
miiw	Warning	190	Option was invalid.	The option is invalid.	Check the configuration data by using the Cluster WebUI.
miiw	Warning	190	Config was invalid. (err=%1) %2	The configuration data is invalid.	Check the configuration data by using the Cluster WebUI.

4.4.12 Volume manager monitor resources

Module Type	Type	Return value	Message	Description	Solution
volmgrw	Error	21	Command was failed. (cmd=%1, ret=%2)	%1 command failed. The return value is %2.	The command failed. Check the action status of the volume manager.
volmgrw	Error	22 23	Internal error. (status=%1)	Another internal error occurred.	-
volmgrw	Warning	190	Option was invalid.	The option is invalid.	Check the cluster configuration information on the Cluster WebUI.
volmgrw	Warning	191	%1 %2 is %3 !	The status of the target (%2) of the volume manager (%1) transferred to %3.	Check the status of the volume manager target.
volmgrw	Warning	Others	Internal error. (status=%1)	Another internal error occurred.	-

4.4.13 Process name monitor resources

Module Type	Type	Return value	Message	Description	Solution
psw	Error	11	Process[%1 (pid=%2)] Down	Deletion of a monitored process has been detected.	Check whether the monitored process is running normally.
psw	Error	12	The number of processes is less than the specified minimum process count. %1/%2 (%3)	The number of started processes for the monitor target process is less than the specified minimum count.	Check whether the monitored process is running normally.
psw	Warning	100	Monitoring timeout	Monitoring has timed out.	The OS may be highly loaded. Check that.
psw	Warning	101 190	Internal error	An internal error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.
psw	Warning	190	Initialize error	An error has been detected during initialization.	Check the following possible causes: memory shortage or OS resource insufficiency.

4.4.14 Monitoring option monitor resources

The monitoring option monitor resources use common messages. Module types differ per monitoring option monitor resource.

Monitoring Option Monitor Resource	Module Type
DB2 monitor resource	db2w
FTP monitor resource	ftpw
HTTP monitor resource	httpw
IMAP4 monitor resource	imap4w
MySQL monitor resource	mysqlw
NFS monitor resource	nfsw
ODBC monitor resource	odbcw
Oracle monitor resource	oraclew
POP3 monitor resource	pop3w
PostgreSQL monitor resource	psqlw
Samba monitor resource	sambaw
SMTP monitor resource	smtpw
SQL Server monitor resource	sqlserverw
Tuxedo monitor resource	tuxw
WebLogic monitor resource	wlsw
WebSphere monitor resource	wasw
WebOTX monitor resource	otxw

Module Type	Type	Return Value	Message	Explanation	Solution
(see the list above)	Error	5	Failed to connect to %1 server. [ret=%2]	Connecting to the monitoring target has failed. The application name is displayed in place of %1.	Check the status of the monitoring target.
(see the list above)	Error	7	Failed to execute SQL statement (%1). [ret=%2]	The SQL statement could not be executed. The monitoring target is displayed in place of %1.	Check the configuration data by using the Cluster WebUI.
(see the list above)	Error	8	Failed to access with %1.	Data access with the monitoring target has failed. The monitoring target is displayed in place of %1.	Check the status of the monitoring target.
(see the list above)	Error	9	Detected error in %1.	The monitoring target is abnormal. The monitoring target is displayed in place of %1.	Check the status of the monitoring target.
(see the list above)	Warning	104	Detected function exception. [%1, ret=%2]	An error was detected. The monitoring target is displayed in place of %1.	Check the configuration data by using the Cluster WebUI. The OS might be heavily loaded. Check them.
(see the list above)	Warning	106	Detected authority error.	User authentication has failed.	Check the user name, password, and access permissions.
(see the list above)	Warning	106	Client authentication error.	Client authentication error.	Check if the private key and the client certificate are correctly set.
(see the list above)	Warning	111	Detected timeout error.	Communication with the monitoring target timed out.	The OS might be heavily loaded. Check them.
(see the list above)	Warning	112	Can not found install path. (install path=%1)	The install path could not be loaded from the specified location. The install path is displayed in place of %1.	Check the install path location.

Continued on next page

Table 4.19 – continued from previous page

Module Type	Type	Return Value	Message	Explanation	Solution
(see the list above)	Warning	113	Can not found library. (libpath=%1, errno=%2)	The library could not be loaded from the specified location. The library path is displayed in place of %1.	Check the library location.
(see the list above)	Warning	171	Detected a monitor delay in monitoring %1. (timeout=%2*%3 actual-time=%4 delay warning rate=%5)	A monitoring delay was detected in monitoring %1. The current timeout value is %2 (second) x %3 (tick count per second). The actual measurement value at delay detection is %4 (tick count) and exceeded the delay warning rate %5 (%).	Check the load status of the server on which a monitoring delay was detected and remove the load. If a monitoring timeout is detected, extend it.
(see the list above)	Info	181	The collecting of detailed information triggered by monitor resource %1 error has been started (timeout=%2).	Collecting of detailed information triggered by the detection of a monitor resource $1 monitoring error has started. The timeout is %2 seconds.	-
(see the list above)	Info	182	The collection of detailed information triggered by monitor resource %1 error has been completed.	Collecting of detailed information triggered by the detection of a monitor resource %1 monitoring error has been completed.	-
(see the list above)	Warning	183	The collection of detailed information triggered by monitor resource %1 error has been failed (%2).	Collecting of detailed information triggered by the detection of a monitor resource %1 monitoring error has failed. (%2)	-
(see the list above)	Warning	189	Internal error. (status=%1)	Internal error.	-
(see the list above)	Warning	190	Init error. [%1, ret=%2]	An error was detected during initialization. license, library, XML, share memory, or log is displayed where %1 is represented.	The OS might be heavily loaded. Check them.
(see the list above)	Warning	190	Get config information error. [ret=%1]	Failed to obtain the configuration data.	Check the configuration data by using the Cluster WebUI.

Continued on next page

Table 4.19 – continued from previous page

Module Type	Type	Return Value	Message	Explanation	Solution
(see the list above)	Warning	190	Invalid parameter.	The configuration data of the Config or Policy file is invalid. The command parameter is invalid.	Check the configuration data by using the Cluster WebUI.
(see the list above)	Warning	190	Init function error. [%1, ret=%2]	Initialize error occurred in the function. The executive function name is displayed in %1.	OS may be heavily loaded. Check the status of OS.
(see the list above)	Warning	190	User was not superuser.	The user does not have root privileges.	The user executing the operation might not have root privileges, or the memory or OS resources might be insufficient. Check them.
(see the list above)	Warning	190	The license is not registered.	The license is not registered.	Check whether the correct license is registered.
(see the list above)	Warning	190	The registration license overlaps.	The license you are attempting to register already exists.	Check whether the correct license is registered.
(see the list above)	Warning	190	The license is invalid.	The license is invalid.	Check whether the correct license is registered.
(see the list above)	Warning	190	The license of trial expired by %1.	The trial license has expired. The expiration date is displayed in place of %1.	-
(see the list above)	Warning	190	The license of trial effective from %1.	The date is not the starting date of the trial license. The starting date of the trial license is displayed in place of %1.	-
(see the list above)	Warning	190	Not supported algorithm(%1).	The algorithm is not supported. %1 represents the algorithm.	-

4.5 JVM monitor resource log output messages

The following messages belong to the JVM operation log files that are specific to the JVM monitor resources.

4.5.1 JVM operation log

Message	Cause of generation	Action
Failed to write the %1$s.stat.	Writing to the JVM statistics log has failed. %1$s.stat: JVM statistics log file name	Check whether there is sufficient free disk space.
%1$s: analyze finish[%4$s]. state = %2$s, cause = %3$s	(When the status of the Java VM to be monitored is abnormal) the resource use amount has exceeded the threshold in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Status of Java VM to be monitored (1=normal, 0=abnormal) %3$s: Error generation location at abnormality occurrence %4$s: Measurement thread name	Review the Java application that runs on the Java VM to be monitored.
thread stopped by UncaughtException.	The thread of the JVM monitor resource has stopped.	Execute cluster suspend/cluster resume and then restart the JVM monitor resource.
thread wait stopped by Exception.	The thread of the JVM monitor resource has stopped.	Execute cluster suspend/cluster resume and then restart the JVM monitor resource.
%1$s: monitor thread can't connect to JVM.	The Java VM to be monitored could not be connected. %1$s: Name of the Java VM to be monitored	Check that the Java VM to be monitored is running.
%1$s: monitor thread can't get the JVM state.	The resource use amount could not be acquired from Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check that the Java VM to be monitored is running.

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
%1$s: JVM state is changed [abnormal -> normal].	The status of the Java VM to be monitored has changed from abnormal to normal. %1$s: Name of the Java VM to be monitored	-
%1$s: JVM state is changed [normal -> abnormal].	The status of the Java VM to be monitored has changed from normal to abnormal. %1$s: Name of the Java VM to be monitored	Review the Java application that runs on the Java VM to be monitored.
%1$s: Failed to connect to JVM. retry = %2$s / %3$s.	The Java VM to be monitored could not be connected. %1$s: Name of the Java VM to be monitored %2$s: Number of times the connection consecutively failed %3$s: Retry Count * **retry = %2$s / %3$s** is not shown after the former value exceeds the latter.	Check that the Java VM to be monitored is running.
Failed to write exit code.	The JVM monitor resource failed to write data to the file for recording the exit code.	Check whether there is sufficient free disk space.
Failed to be started JVM Monitor.	Starting of the JVM monitor resource has failed.	Check the JVM operation log, remove the cause preventing the start, execute cluster suspend/cluster resume, and then restart the JVM monitor resource.
JVM Monitor already started.	The JVM monitor resource has already been started.	Execute cluster suspend/cluster resume and then restart the JVM monitor resource.
%1$s: GARBAGE_COLLECTOR _MXBEAN_DOMAIN_TYPE is invalid.	GC information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
%1$s: GarbageCollectorMXBean is invalid.	GC information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: Failed to measure the GC stat.	GC information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: GC stat is invalid. last.getCount = %2$s, last.getTime = %3$s, now.getCount = %4$s, now.getTime = %5$s.	The GC generation count and GC execution time could not be measured for the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: GC generation count at last measurement %3$s: Total GC execution time at last measurement %4$s: GC generation count at this measurement %5$s: Total GC execution time at this measurement	Check whether the operating environment of the Java VM to be monitored is correct.

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
%1$s: GC average time is too long. av = %6$s, last.getCount = %2$s, last.getTime = %3$s, now.getCount = %4$s, now.getTime = %5$s, error_count = %7$s / %8$s.	The average GC execution time has exceeded the threshold in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: GC generation count at last measurement %3$s: Total GC execution time at last measurement %4$s: GC generation count at this measurement %5$s: Total GC execution time at this measurement %6$s: Average of the GC execution time used from the last measurement to this measurement %7$s: Number of times the threshold was consecutively exceeded %8$s: Error Threshold * **error_count = %7$s / %8$s** is not shown after the former value exceeds the latter.	Review the Java application that runs on the Java VM to be monitored.

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
%1$s: GC average time is too long compared with the last connection. av = %6$s, last.getCount = %2$s, last.getTime = %3$s, now.getCount = %4$s, now.getTime = %5$s, error_count = %7$s / %8$s.	After the Java VM to be monitored was reconnected, the average of the GC execution time has exceeded the threshold in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: GC generation count at last measurement %3$s: Total GC execution time at last measurement %4$s: GC generation count at this measurement %5$s: Total GC execution time at this measurement %6$s: Average of the GC execution time used from the last measurement to this measurement %7$s: Number of times the threshold was consecutively exceeded %8$s: Error Threshold * **error_count = %7$s / %8$s** is not shown after the former value exceeds the latter.	Review the Java application that runs on the Java VM to be monitored.

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
%1$s: GC count is too frequently. count = %4$s last.getCount = %2$s, now.getCount = %3$s, error_count = %5$s / %6$s.	The GC generation count has exceeded the threshold in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: GC generation count at last measurement %3$s: GC generation count at this measurement %4$s: GC generation count from the last measurement to this measurement %5$s: Number of times the threshold was consecutively exceeded %6$s: Error Threshold * **error_count = %5$s / %6$s** is not shown after the former value exceeds the latter.	Review the Java application that runs on the Java VM to be monitored.
%1$s: GC count is too frequently compared with the last connection. count = %4$s last.getCount = %2$s, now.getCount = %3$s, error_count = %5$s / %6$s.	After the Java VM to be monitored was reconnected, the GC generation count has exceeded the threshold in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: GC generation count at last measurement %3$s: GC generation count at this measurement %4$s: GC generation count from the last measurement to this measurement %5$s: Number of times the threshold was consecutively exceeded %6$s: Error Threshold * **error_count = %5$s / %6$s** is not shown after the former value exceeds the latter.	Review the Java application that runs on the Java VM to be monitored.

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
%1$s: RuntimeMXBean is invalid.	Information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: Failed to measure the runtime stat.	Information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct. Check whether the processing load is high in the Java VM to be monitored.
%1$s: MEMORY_MXBEAN_NAME is invalid. %2$s, %3$s.	Memory information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Memory pool name %3$s: Memory name	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: MemoryMXBean is invalid.	Memory information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: Failed to measure the memory stat.	Memory information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct. Check whether the processing load is high in the Java VM to be monitored.
%1$s: MemoryPool name is undefined. memory_name = %2$s.	Memory information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Name of the Java memory pool to be measured	Check whether the operating environment of the Java VM to be monitored is correct.

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
%1$s: MemoryPool capacity is too little. memory_name = %2$s, used = %3$s, max = %4$s, ratio = %5$s%, error_count = %6$s / %7$s.	The Java memory pool free space has fallen below the threshold in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Name of the Java memory pool to be measured %3$s: Use amount of the Java memory pool %4$s: Maximum usable amount of the Java memory pool %5$s: Use rate of the Java memory pool %6$s: Number of times the threshold was consecutively exceeded %7$s: Error Threshold * **error_count = %6$s / %7$s** is not shown after the former value exceeds the latter.	Review the Java application that runs on the Java VM to be monitored.
%1$s: THREAD_MXBEAN_NAME is invalid.	Thread information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: ThreadMXBean is invalid.	Thread information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: Failed to measure the thread stat.	Thread information could not be acquired from Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
%1$s: Detect Deadlock. threads = %2$s.	Thread deadlock has occurred in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: ID of the deadlock thread	Review the Java application that runs on the Java VM to be monitored.
%1$s: Thread count is too much(%2$s). error_count = %3$s / %4$s.	The number of activated threads has exceeded the threshold in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of activated threads at measurement %3$s: Number of times the threshold was consecutively exceeded %4$s: Error Threshold * **error_count = %3$s / %4$s** is not shown after the former value exceeds the latter.	Review the Java application that runs on the Java VM to be monitored.
%1$s: ThreadInfo is null.Thread count = %2$s.	Thread information could not be acquired in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of activated threads at measurement	Check whether the operating environment of the version of the Java VM to be monitored is correct.
%1$s: Failed to disconnect.	Disconnection from the Java VM to be monitored has failed. %1$s: Name of the Java VM to be monitored	-
%1$s: Failed to connect to WebLogicServer.	WebLogic Server to be monitored could not be connected. %1$s: Name of the Java VM to be monitored	Review the Java application that runs on the WebLogic Server to be monitored.

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
%1$s: Failed to connect to Sun JVM.	Java VM and WebOTX to be monitored could not be connected. %1$s: Name of the Java VM to be monitored	Review the Java application that runs on the Java VM and WebOTX to be monitored.
Failed to open the %1$s.	The JVM statistics log could not be output. %1$s: Name of the HA/JVMSaverJVM statistics log file	Check whether the disk has sufficient free space or whether the number of open files has exceeded the upper limit.
%1$s: Can't find monitor file.	No monitoring %1$s: Name of the Java VM to be monitored	-
%1$s: Can't find monitor file, monitor stopped[thread:%2$s].	Monitoring stops. %1$s: Name of the Java VM to be monitored %2$s: Type of the measurement thread	-
%1$s: Failed to create monitor status file.	An internal file could not be created. %1$s: Name of the Java VM to be monitored	Check whether the disk free space and the maximum number of volume files are sufficient.
%1$s: Failed to delete monitor status file.	An internal file could not be deleted. %1$s: Name of the Java VM to be monitored	Check whether there is a problem with the hard disk.
%1$s: com.bea:Type=ServerRuntime is invalid.	Information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
%1$s: WorkManagerRuntimeMBean or ThreadPoolRuntimeMBean is invalid.	Information could not be acquired from the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the WebLogic Server to be monitored is correct.
%1$s: Failed to measure the WorkManager or ThreadPool stat.	Information could not be acquired from the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the WebLogic Server to be monitored is correct.
%1$s: ThreadPool stat is invalid. last.pending = %2$s, now.pending = %3$s.	The number of waiting requests could not be measured in the thread pool of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s:Number of waiting requests at last measurement %3$s:Number of waiting requests at this measurement	Check whether the operating environment of the version of the WebLogic Server to be monitored is correct.
%1$s: WorkManager stat is invalid. last.pending = %2$s, now.pending = %3$s.	The number of waiting requests could not be measured in the work manager of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of waiting requests at last measurement %3$s: Number of waiting requests at this measurement	Check whether the operating environment of the version of the WebLogic Server to be monitored is correct.

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
%1$s: PendingRequest count is too much. count = %2$s. error_count = %3$s / %4$s.	The number of waiting requests has exceeded the threshold in the thread pool of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of waiting requests at this measurement %3$s: Number of times the threshold was consecutively exceeded %4$s: Error Threshold * **error_count = %3$s / %4$s** is not shown after the former value exceeds the latter.	Review the Java application that runs on the WebLogic Server to be monitored.
%1$s: PendingRequest increment is too much. increment = %4$s%%, last.pending = %2$s, now.pending = %3$s, error_count = %5$s / %6$s.	The increment of the number of waiting requests has exceeded the threshold in the thread pool of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of waiting requests at last measurement %3$s: Number of waiting requests at this measurement %4$s: Increment of the number of waiting requests from the last measurement to this measurement %5$s: Number of times the threshold was consecutively exceeded %6$s: Error Threshold * **error_count = %5$s / %6$s** is not shown after the former value exceeds the latter.	Review the Java application that runs on the WebLogic Server to be monitored.

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
%1$s: PendingRequest increment is too much compared with the last connection. increment = %4$s, last.pending = %2$s, now.pending = %3$s, error_count = %5$s / %6$s.	After the WebLogic Server to be monitored was reconnected, the increment of the number of waiting requests has exceeded the threshold in the thread pool of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of waiting requests at last measurement %3$s: Number of waiting requests at this measurement %4$s: Increment of the number of waiting requests from the last measurement to this measurement %5$s: Number of times the threshold was consecutively exceeded %6$s: Error Threshold * **error_count = %5$s / %6$s** is not shown after the former value exceeds the latter.	Review the Java application that runs on the WebLogic Server to be monitored.
%1$s: Throughput count is too much. count = %2$s, error_count = %3$s / %4$s.	The number of requests executed per unit time has exceeded the threshold in the thread pool of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of requests executed per unit time at this measurement %3$s: Number of times the threshold was consecutively exceeded %4$s: Error Threshold * **error_count = %3$s / %4$s** is not shown after the former value exceeds the latter.	Review the Java application that runs on the WebLogic Server to be monitored.

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
%1$s: Throughput increment is too much. increment = %4$s, last.throughput = %2$s, now.throughput = %3$s, error_count = %5$s / %6$s.	The increment of the number of requests executed per unit time has exceeded the threshold in the thread pool of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of requests executed per unit time at last measurement %3$s: Number of requests executed per unit time at this measurement %4$s: Increment of the number of requests executed per unit time from the last measurement to this measurement %5$s: Number of times the threshold was consecutively exceeded %6$s: Error Threshold * **error_count = %5$s / %6$s** is not shown after the former value exceeds the latter.	Review the Java application that runs on the WebLogic Server to be monitored.

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
%1$s: Throughput increment is too much compared with the last connection. increment = %4$s, last.throughput = %2$s, now.throughput = %3$s, error_count = %5$s / %6$s.	After the WebLogic Server to be monitored was reconnected, the increment of the number of requests executed per unit time has exceeded the threshold in the thread pool of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of requests executed per unit time at last measurement %3$s: Number of requests executed per unit time at this measurement %4$s: Increment of the number of requests executed per unit time from the last measurement to this measurement %5$s: Number of times the threshold was consecutively exceeded %6$s: Error Threshold * **error_count = %5$s / %6$s** is not shown after the former value exceeds the latter.	Review the Java application that runs on the WebLogic Server to be monitored.
%1$s: PendingRequest count is too much. appName = %2$s, name = %3$s, count = %4$s, error_count = %5$s / %6$s.	The number of waiting requests has exceeded the threshold in the work manager of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Application name %3$s: Work manager name %4$s: Number of waiting requests %5$s: Number of times the threshold was consecutively exceeded %6$s: Error Threshold * **error_count = %5$s / %6$s** is not shown after the former value exceeds the latter.	Review the Java application that runs on the WebLogic Server to be monitored.

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
%1$s: PendingRequest increment is too much. appName = %2$s, name = %3$s, increment = %6$s%%, last.pending = %4$s, now.pending = %5$s, error_count = %7$s / %8$s.	The increment of the number of waiting requests has exceeded the threshold in the work manager of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Application name %3$s: Work manager name %4$s: Number of waiting requests at last measurement %5$s: Number of waiting requests at this measurement %6$s: Increment of the number of waiting requests from the last measurement to this measurement %7$s: Number of times the threshold was consecutively exceeded %8$s: Error Threshold * **error_count = %7$s / %8$s** is not shown after the former value exceeds the latter.	Review the Java application that runs on the WebLogic Server to be monitored.

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
%1$s: PendingRequest increment is too much compared with the last connection. AppName = %2$s, Name = %3$s, increment = %6$s, last.pending = %4$s, now.pending = %5$s, error_count = %7$s / %8$s.	After the WebLogic Server to be monitored was reconnected, the increment of the number of waiting requests has exceeded the threshold in the work manager of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Application name %3$s: Work manager name %4$s: Number of waiting requests at last measurement %5$s: Number of waiting requests at this measurement %6$s: Increment of the number of waiting requests from the last measurement to this measurement %7$s: Number of times the threshold was consecutively exceeded %8$s: Error Threshold * **error_count = %7$s / %8$s** is not shown after the former value exceeds the latter.	Review the Java application that runs on the WebLogic Server to be monitored.
%1$s: Can't find WorkManager. appName = %2$s, name = %3$s.	The work manager which was set could not be acquired from the WebLogic Server. %1$s: Name of the Java VM to be monitored %2$s: Application name %3$s: Work manager name	Review the setting of Target WebLogic Work Managers.
%1$s: analyze of average start[%2$s].	Analyzing of the average value has started. %1$s: Name of the Java VM to be monitored %2$s: Thread name	-

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
%1$s: analyze of average finish[%2$s].state = %3$s.	Analyzing of the average value has been completed. %1$s: Name of the Java VM to be monitored %2$s: Thread name %3$s: Status of the target to be monitored	-
%1$s: Average of PendingRequest count is too much. count = %2$s.	The average of the number of waiting requests has exceeded the threshold in the thread pool of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of waiting requests at this measurement	Review the Java application that runs on the WebLogic Server to be monitored.
%1$s: Average of Throughput count is too much. count = %2$s.	The average of the number of requests executed per unit time has exceeded the threshold in the thread pool of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of requests executed per unit time at this measurement	Review the Java application that runs on the WebLogic Server to be monitored.
%1$s: Average of PendingRequest count is too much. AppName = %2$s, Name = %3$s, count = %4$s.	The average of the number of waiting requests has exceeded the threshold in the work manager of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Application name %3$s: Work manager name %4$s: Number of waiting requests at this measurement	Review the Java application that runs on the WebLogic Server to be monitored.
Error: Failed to operate clpjra_bigip.[%1$s]	%1$s: Error code	Review the setting.

Continued on next page

Table 4.20 – continued from previous page

Message	Cause of generation	Action
action thread execution did not finish. action is alive = %1$s.	Execution of Command has timed out. %1$s: Executable file name specified by Command	Forcibly terminate Command. Review Command timeout. Remove the cause of the timeout, such as a high load.
%1$s: Failed to connect to Local JVM. cause = %2$s.	Failed to establish connection to JBoss. %1$s: Monitor target name %2$s: Detailed cause of the failure The detailed cause is one of the following. - Failed to find tools.jar, please set JDK's path for the Java installation path. - Load tools.jar exception - Get Local JVM url path exception - Failed to get process name - Failed to connect to JBoss JVM. - Failed to find management-agent.jar, please set JDK's path for the Java installation path	Review Java Installation Path and Process Name. Specify JDK, instead of JRE, as Java Installation Path. Check whether JBoss has started.

4.6 Details on checking cluster configuration data

4.6.1 Cluster Properties

Check item	ID	Message	Action
Number check on Port No. tab	1011	Failed.	Check if the sysctl command is available.
	1012	The port number %1 is within the range of automatically assigned port numbers.	Specify a port number which is not automatically assigned.
Number check on Port No.(Log) tab	1031	Failed.	Check if the sysctl command is available.
	1032	The port number %1 is within the range of automatically assigned port numbers.	Specify a port number which is not automatically assigned.

4.6.2 Heartbeat Resources

Check item	ID	Message	Action
Ping check on hb	4011	Failed.	Check if the ping (ping6) command is available.
	4012	Ping could not reach to %1.	Check if an IP address reachable with a ping is set.

4.6.3 Others

Check item	ID	Message	Action
Checking if SELinux is disabled	5021	Failed.	Check if the getenforce command is available.
	5022	SELinux has not been disabled.	For the procedure, see "Installation Guide" - "SELinux settings (Required)".
Checking if Secure Boot is disabled	5061	Failed.	Check if the mokutil or bootctl command is available.
	5062	Secure Boot is not disabled.	Disable Secure Boot.
Kernel check	5031	Unsupported kernel found. Please check the supported kernel version.	Check the supported kernel version.
Presence check for zip command	5051	Failed.	Check if the which command is available.
	5052	zip command is not found.	Install the zip command.

4.6.4 Unrecommended settings check

Check item	ID	Message	Action
Recovery action check for deactivation failure(%1)	6001	"No operation" is set for Recovery Operation at Deactivation Failure Detection. It is recommended to select any other value.	It is recommended to select a value other than "No operation" for the final action on deactivation failure detection.

CHAPTER

FIVE

LEGAL NOTICE

5.1 Disclaimer

Information in this document is subject to change without notice.

NEC Corporation is not liable for technical or editorial errors or omissions in the information in this document.

You are completely liable for all risks associated with installing or using the product as described in this manual to obtain expected results and the effects of such usage.

5.2 Trademark Information

- EXPRESSCLUSTER® is a registered trademark of NEC Corporation.
- Linux is a registered trademark of Linus Torvalds in the United States and other countries.
- Microsoft, Windows, Windows Server, Internet Explorer, Azure, and Hyper-V are registered trademarks of Microsoft Corporation in the United States and other countries.
- SUSE is a registered trademark of SUSE LLC in the United States and other countries.
- Ubuntu is a registered trademark of Canonical Ltd.
- VMware, vCenter Server, and vSphere is registered trademarks or trademarks of VMware, Inc. in the United States and/or other jurisdictions.
- JBoss is a registered trademark of Red Hat, Inc. or its subsidiaries in the United States and other countries.
- Oracle, Oracle Database, Solaris, MySQL, Tuxedo, WebLogic Server, Container, Java, and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle Corporation and/or its affiliates.
- IBM, DB2, and WebSphere are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both.
- PostgreSQL is a registered trademark of the PostgreSQL Global Development Group.
- RPM is a registered trademark of Red Hat, Inc. or its subsidiaries in the United States and other countries.
- F5, F5 Networks, BIG-IP, and iControl are trademarks or registered trademarks of F5 Networks, Inc. in the United States and other countries.
- WebOTX is a registered trademark of NEC Corporation.
- Other product names and slogans written in this manual are trademarks or registered trademarks of their respective companies.

CHAPTER

SIX

REVISION HISTORY

Edition	Revised Date	Description
1st	Apr 10, 2023	New manual