EXPRESSCLUSTER X SingleServerSafe 4.3 for Windows Operation Guide

Release 1

NEC Corporation

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TABLE OF CONTENTS:

CHAPTER

ONE

PREFACE

1.1 Who Should Use This Guide

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

1.2 How This Guide Is Organized

- 2. *EXPRESSCLUSTER X SingleServerSafe command reference*: Describes the usable commands in EXPRESSCLUSTER X SingleServerSafe.
- 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 manuals consist of the four 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.

EXPRESSCLUSTER X SingleServerSafe Legacy Feature Guide

> This guide is intended for system engineers who want to introduce systems using EXPRESSCLUSTER X SingleServerSafe and describes EXPRESSCLUSTER X SingleServerSafe 4.0 WebManager and Builder.

1.5 Conventions

In this guide, **Note**, **Important**, **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]`
Monospace	Indicates path names, commands, system output (message, prompt, etc), directory, file names, functions and parameters.	`c:\Program files\EXPRESSCLUSTER`
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.	`clpstat -s [-h host_name]`


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.

2.2 EXPRESSCLUSTER commands

- Commands for construction

Command	Explanation	Refer to
clpcfctrl.exe	Applies 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.exe	Manages the product or trial version license of this product.	2.11. *Managing licenses (clplcnsc command)*
clpcfchk.exe	Checks cluster configuration data.	2.23. *Checking the cluster configuration information (clpcfchk command)*

- Commands for showing status

Command	Explanation	Refer to
clpstat.exe	Displays the status and configuration data of EXPRESSCLUSTER X SingleServerSafe.	2.3. *Displaying the status (clpstat command)*
clphealthchk.exe	Check the process health.	2.20. *Checking the process health (clphealthchk command)*

- Commands for operation

Command	Explanation	Refer to
clpcl.exe	Starts, stops, suspends, or resumes the service.	2.4. *Operating the service (clpcl command)*
clpstdn.exe	Stops the service and shuts down a server.	2.5. *Shutting down the server (clpstdn command)*
clpgrp.exe	Starts and stops groups.	2.6. *Operating groups (clpgrp command)*
clptoratio.exe	Extends or displays the timeout values.	2.9. *Adjusting time-out temporarily (clptoratio command)*
clpmonctrl.exe	Suspends or resumes monitor resources.	2.13. *Controlling monitor resources (clpmonctrl command)*
clprsc.exe	Suspends or resumes group resources.	2.14. *Controlling group resources (clprsc command)*
clpcpufreq.exe	Controls CPU frequency.	2.15. *Controlling CPU frequency (clpcpufreq command)*
clprexec.exe	Requests a server to execute a process.	2.17. *Requesting processing to cluster servers (clprexec command)*
clpregctrl.exe	Controls the reboot count limitation.	2.18. *Controlling reboot count (clpregctrl command)*

- Commands for logs

Command	Explanation	Refer to
clplogcc.exe	Collects logs and OS information.	2.7. *Collecting logs (clplogcc command)*
clplogcf.exe	Changes and displays the log level and log output file size.	2.10. *Modifying the log level and size (clplogcf command)*
clpperfc.exe	Displays cluster statistical information on a group or a monitor resource.	2.22. *Displaying the cluster statistics information (clpperfc command)*

- Commands for scripts

Command	Explanation	Refer to
clplogcmd.exe	Write this command in the script 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.

- System monitor-related commands (when the System Resource Agent is used)

Command	Explanation	Refer to
clpprer.exe	Estimates the future value from the tendency of the given resource use amount data.	2.19. *Estimating the amount of resource usage (clpprer command)*

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 [<*grpname*>] [--detail]
clpstat --rsc [<*rscname*>] [--detail]
clpstat --mon [<*monname*>] [--detail]

Description

Displays the status and configuration data of EXPRESSCLUSTER X SingleServerSafe.

Option

-s

None
Displays the status.

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

-g
Displays groups.

-m
Displays the status of each monitor resource.

-i
Displays the overall configuration data.

--cl
Displays the configuration data.

--sv
Displays the server configuration information.

--grp [<grpname>]
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 [<rscname>]
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 [<monname>]
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
251	Double Activation
Other than the above	Failure

Remarks

According to the combination of options, configuration information shows information in various forms.

Notes

Run this command as a user with Administrator privileges .

The EXPRESSCLUSTER service must be activated on the server where you run this command.

When you run the clpstat command with the -s option or without any option, names such as a cluster or a resource will not be displayed halfway .

Error Messages

Message	Cause/Solution
Log in as administrator.	Log in as a user with Administrator privileges.
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 service is active	Check if the EXPRESSCLUSTER service is operating.
Invalid server status.	Check if the EXPRESSCLUSTER service is operating.
Server is not active. Check if the cluster service is active.	Check if the EXPRESSCLUSTER service is operating.
Invalid server name. Specify a valid server name in the cluster.	Specify the valid server name in the cluster.
Invalid heartbeat resource name. Specify a valid heartbeat resource name in the cluster.	Specify the valid heart beat resource name in the cluster.
Invalid network partition resource name. Specify a valid network partition resource name in the cluster.	Specify the valid network partition resolution resource name 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 service is stopped in the cluster.	Check if there is any server on which the EXPRESSCLUSTER service has stopped in the cluster.
Invalid parameter.	An invalid value may be specified to command argument.

Continued on next page

Table 2.7 – 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 if the memory or OS resource is sufficient.
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 service (clpcl command)

Operates the EXPRESSCLUSTER service.

Command line

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

Description

This command starts, stops, restarts, suspends, or resumes the EXPRESSCLUSTER service.

Option

-s
Starts the EXPRESSCLUSTER service.

-t
Stops the EXPRESSCLUSTER service.

-r
Restarts the EXPRESSCLUSTER service.

--return
Returns the EXPRESSCLUSTER service.

--suspend
Suspends the EXPRESSCLUSTER service.

--resume
Resumes the EXPRESSCLUSTER service.

-w <timeout>

When --t, --r, or --suspend option is used, specify the wait time in seconds that the clpcl command waits for the EXPRESSCLUSTER service to be completely stopped or suspended.
When *timeout* is not specified, it waits for unlimited time.
When "0" is specified for *timeout*, the command does not wait at all.
When the -w option is not specified (default), the command waits for twice the heartbeat timeout time (in seconds).

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

--apito timeout

Specify the time in seconds to wait for the EXPRESSCLUSTER service to be stopped, restarted, or suspended (internal communication timeout). A value between 1 to 9999 can be specified.
When the --apito option is not specified, the command waits according to the value set for the internal communication timeout in the cluster property.

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 administrator privilege.

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

Before you suspend the EXPRESSCLUSTER service, the service must be running.

Before you resume the EXPRESSCLUSTER service, use the clpstat command to make sure that the service is not running.

- Suspend and Resume

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

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

The following functions stop when the cluster is suspended because the EXPRESSCLUSTER service 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 administrator.	Log in as a user with Administrator privileges.
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 service.	The stopping process has been executed to the stopped EXPRESSCLUSTER service.
Performed startup processing to the active cluster service.	The startup process has been executed to the activated EXPRESSCLUSTER service.
Command timeout.	The command timed out.
Failed to return the server. Check the status of failed server.	Failed to return the server. Check the status of the failed server.
Could not connect to the server. Check if the cluster service is active.	Check if the EXPRESSCLUSTER service is activated.
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 service name.	Failed to obtain the service name.
Failed to operate the service.	Failed to operate the service.
Resumed the cluster service that is not suspended.	Resumed the EXPRESSCLUSTER service that is not suspended.
invalid server status.	Check if the EXPRESSCLUSTER service is activated.
Server is busy. Check if this command is already run.	This command may be run already. Check it.
Server is not active. Check if the cluster service is active.	Check if the EXPRESSCLUSTER service is activated.
There is one or more servers of which cluster service is active. If you want to perform resume, check if there is any server whose cluster service is active in the cluster.	When you execute the command to resume, check if there is no server in the cluster on which the EXPRESSCLUSTER service is activated.
All servers must be activated. When suspending the server, the cluster service need to be active on all servers in the cluster.	When you execute the command to suspend, the EXPRESSCLUSTER service must be activated 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 suspended.
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 service is stopped in the cluster.	Check if there is any server on which the EXPRESSCLUSTER service 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 timeout occurred in the EXPRESSCLUSTER internal communication. If time-out keeps occurring, set the internal communication time-out longer.

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Table 2.8 – continued from previous page

Message	Cause/Solution
Processing failed on some servers. Check the status of failed servers.	If stopping process is executed to all servers, there is one or more servers 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 if the memory or OS resource is sufficient.

2.5 Shutting down the server (clpstdn command)

Shuts down the server.

Command line
clpstdn [-r]

Description
This command stops the EXPRESSCLUSTER service of the server and shuts down all servers.

Option

None
Servers are shut down.

-r
Shuts down and then reboots servers.

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

Error messages
See "*Operating the service (clpcl command)*".

2.6 Operating groups (clpgrp command)

Operates groups.

Command line

clpgrp -s [<*grpname*>] [--apito *timeout*]
clpgrp -t [<*grpname*>] [--apito *timeout*]

Description

Starts and stops groups.

Option

-s [<grpname>]
When you specify the name of a group for *grpnam*, only the specified group starts up. If no group name is specified, all groups start up.

-t [<grpname>]
When you specify the name of a group for *grpname*, only the specified group stops. If no group name is specified, all groups stop.

--apito timeout

Specify the time in seconds to wait for groups to be started, stopped(internal communication timeout). A value between 1 to 9999 can be specified.
When the --apito option is not specified, the command waits according to the value set for the internal communication timeout in the cluster property.

Return Value

0	Success
Other than 0	Failure

Notes

This command must be executed by a user with the administrator privilege.
The EXPRESSCLUSTER service must be running.

Error messages

Message	Cause/Solution
Log in as administrator.	Log in as a user with Administrator privileges.
Invalid configuration data. Create valid cluster configuration data.	Create valid cluster configuration data using the Cluster WebUI.
Invalid option.	Specify a valid option.
Could not connect to the server. Check if the cluster service is active.	Check if the EXPRESSCLUSTER service is operating.
Invalid server status. Check if the cluster service is active.	Check if the EXPRESSCLUSTER service is operating.

Continued on next page

Table 2.9 – continued from previous page

Message	Cause/Solution
Server is not active. Check if the cluster service is active.	Check if the EXPRESSCLUSTER .service is operating.
Invalid server name. Specify a valid server name in the cluster.	Specify the valid 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 on which the EXPRESSCLUSTER service 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.	Server that starts and 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 timeout 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 stopped.	Check the status of the group by using the Cluster WebUI or the clpstat command.
Failed to start one or more resources. Check the status of group.	Check the status of group by using the Cluster WebUI or the clpstat command.
Failed to stop one or more resources. Check the status of group.	Check the status of group by using the Cluster WebUI or the clpstat command.
The group is busy. Try again later.	The group is now being started or stopped. Wait for a while and try again.
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 isolated.	The server has been suspended. The server is rebooted after it went down.
Some invalid status. Check the status of cluster.	The status is invalid. Check the status of the cluster.
Log in as administrator.	Check if the memory or OS resource is sufficient.

Continued on next page

Table 2.9 – continued from previous page

Message	Cause/Solution
Failed to migrate the group.	If the -l option is used, check whether the type of the specified group is "virtualmachine".
The specified group cannot be migrated.	Check the status of the group.
The specified group is not vm group.	Check if the type of the group is set to the virtual machine.
Migration resource does not exist.	Check if the virtual machine resource exists in the group.
Migration resource is not online.	Check if the virtual machine resource has already started.
Server is not in a condition to start group. Critical monitor error is detected.	Check the status of each server.
There is no appropriate destination for the group. Critical monitor error is detected.	Check the status of each server.

2.7 Collecting logs (clplogcc command)

Collects logs.

Command line
clplogcc [-t *collect_type*] [-o *path*] [--local] [--evt event_type ...]

Description
Collects logs and OS information.

Option

None
Logs are collected.

-t `collect_type`
Specifies a log collection pattern. When this option is omitted, a log collection pattern will be type 1.

-o `path`
Specifies the output destination of collector files. When this option is omitted, logs are output under tmp of the installation path.

--local
Collects logs on the local server without going through the data transfer server.

--evt `event_type`

Specifies the type of the event log to be collected.
When this option is skipped, application logs, system logs and security logs will be collected.
If you specify none, no event log is collected.
This option is enabled only when [--local] option is specified.
For details, see "2.7.3. *Specifying a event log type to collect (--evt option)*".

Return Value

0	Success
Other than 0	Failure

Remarks
Because log files are compressed in the zip format, decompress them by using an appropriate application.

Notes
Run this command as a user with Administrator privileges.

Execution Result
For this command, the following processes are displayed:

Steps in Process	Explanation
Preparing	Initializing
Connecting	Connecting to the server
Compressing	Compressing log files
Transmitting	Sending log files
Disconnecting	Disconnecting from the server
Completion	Finished collecting logs

The following results (server status) are displayed:

Result (server status)	Explanation
Normal	Completed successfully
Canceled	Canceled by the user
Invalid Parameters	Parameters are invalid
Compression Error	There was an error while compressing files.
Communication Error	There was a communication error.
Timeout	Timeout occurred.
Busy	The server is busy.
No Free Space	No free space on the disk.
File I/O Error	There was a file I/O error.
Unknown Error	Failure caused by other errors

Error messages

Message	Cause/Solution
Log in as administrator.	Log in as a user with Administrator privileges.
Invalid option.	Specify a valid option.
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.
Specifiable number of servers are the max number of servers that can constitute a cluster.	The number of servers you can specify is within the maximum number of servers for cluster configuration.
Failed to obtain properties.	Failed to obtain the properties.
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.
Invalid server name. Specify a valid server name in the cluster.	Specify the invalid server name in the cluster.
Failed to collect log.	Failed to collect logs.
Server is busy. Check if this command is already run.	This command may be run already. Check it.
Internal error. Check if memory or OS resources are sufficient.	Check if the memory or OS resource is sufficient.

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	Type5	Type6
(1) Default collection information	✓	✓	✓	n/a	n/a	n/a
(2) Event log	✓	✓	✓	✓	n/a	n/a

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Table 2.13 – continued from previous page

	Type1	Type2	Type3	Type4	Type5	Type6
(3) Windows Error Report	✓	✓	✓	✓	n/a	n/a
(4) User dump	✓	✓	n/a	n/a	n/a	n/a
(5) Diagnostics report	✓	✓	n/a	n/a	n/a	n/a
(6) Registry	✓	✓	✓	n/a	n/a	n/a
(7) Scripts	✓	✓	✓	n/a	n/a	n/a
(8) Logs of ESMPRO/AC and ESMPRO/UPSC	✓	✓	✓	n/a	n/a	n/a
(9) Logs of HA	n/a	✓	n/a	n/a	n/a	n/a
(10) Mirror Statistics	n/a	n/a	n/a	n/a	n/a	n/a
(11) Cluster Statistics	n/a	n/a	n/a	n/a	n/a	✓
(12) System statistics	✓	✓	✓	n/a	n/a	✓

Run this command from the command line as follows.
Example: When collecting logs using type 2

```
# clplogcc -t type2
```

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

Information to be collected by default

- Logs of each module in the EXPRESSCLUSTER Server
- Attribute information on each module (dir) in the EXPRESSCLUSTER Server
  - In bin
  - In `alert\bin` , In `webmgr\bin`
  - In `%SystemRoot%\system32\drivers`
- EXPRESSCLUSTER X SingleServerSafe version information
- OS information

- Update log
- License Information
- Configuration file
- Policy file
- Shared memory dump
- Local node status of EXPRESSCLUSTER (clpstat --local execution result)
- Host name and domain name information (hostname execution result)
- Network information (netstat execution result)
- IP routing table information (route print execution result)
- Process existing status (tasklist execution result)
- ipconfig (ipconfig execution result)
- Shared configuration of files (net share execution result)
- Session information (net session execution result)
- Windows firewall settings (netsh execution result)
- SNP (Scalable Networking Pack) setting (netsh execution result)
- Task schedule settings (schtasks execution result)

Event log

- Application log (AppEvent.Evt, Application.evtx, Application.txt)
- System log (SysEvent.Evt, System.evtx, System.txt)
- Security log (SecEvent.Evt, Security.evtx, Security.txt)

Windows Error Report

- `***.wer`

User dump

- `***.*dmp`

Diagnostics report

- The result of running msinfo32.exe

Registry

- Registry information of the EXPRESSCLUSTER Server
  - `HKLM\SOFTWARE\NEC\EXPRESSCLUSTER\Alert`
  - `HKLM\SOFTWARE\NEC\EXPRESSCLUSTER\MirrorList`
  - `HKLM\SOFTWARE\NEC\EXPRESSCLUSTER\RC`
  - `HKLM\SOFTWARE\NEC\EXPRESSCLUSTER\VCOM`
  - Registry information of diskfltr
- Registry information of OS
  - `HKLM\SYSTEM\CurrentControlSet\Services\Disk`
  - `HKLM\SYSTEM\CurrentControlSet\Control\Session Manager\DOS Devices`

  - HKLM\SYSTEM\MountedDevices
  - HKLM\SYSTEM\CurrentControlSet\Enum\SCSI
  - HKLM\SYSTEM\CurrentControlSet\Enum\STORAGE
  - HKLM\SYSTEM\CurrentControlSet\Services\symc8xx
  - HKLM\SYSTEM\CurrentControlSet\Control\FileSystem

Scripts

Start/stop script for a group that was created with the Cluster WebUI.
If you specify a user-defined script, it is not included in the log collection information. It must be collected separately.

ESMPRO/AC and ESMPRO/UPSC logs

Files collected by running the acupslog.exe command

HA logs

- System resource information
- JVM monitor log
- System monitor log

Mirror Statistics

This version does no collect.

Cluster Statistics

- Cluster Statistics
  - In perf\cluster

System statistics

- System statistics
  - In perf\system

2.7.2 Output paths of log files (-o option)

- Log file is named and be saved as *server_name*-log.zip.
- Because log files are compressed in the zip format, decompress them by using an appropriate application.

If not specifying -o option

Logs are output in tmp of installation path.

When the -o option is specified:

If you run the command as follows, logs are located in the specified c:\tmp directory.

```
# clplogcc -o C:\tmp
```

2.7.3 Specifying a event log type to collect (--evt option)

You can specify the type of the event log included in the information obtained at the log collection.
Specify one or more text strings that represent event log types as shown in the following table after [--evt] option.

Event log type	Character string to specify
Application log	app
System log	sys
Security log	sec
No event log to be collected	none

Example) Collecting the system log and the security log

```
# clplogcc --local --evt sys sec
```

- This option is enabled only when the [--local] option is specified.

2.7.4 Collecting information on emergency OS shutdown

The OS resource information is collected when the EXPRESSCLUSTER service fails due to termination by an internal status error or a similar problem.
Information to be collected is as follows:

- Server information
  - Some module logs in EXPRESSCLUSTER servers
- Information created by running a command
  - Host name and domain name information (hostname execution result)
  - Network information (netstat execution result)
  - Process existing status (tasklist execution result)
  - ipconfig (ipconfig execution result)
  - Shared configuration of files (net share execution result)
  - Session information (net session 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 [-w] [-x <*path*>] [-p <*portnumber*>] [--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.

-x

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

-w

Indicates that SJIS encoding is used for the configuration data file.
In general, it is not necessary to specify this option

-p

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

--nocheck

Omits the check on the operation necessary to apply changes.

Return Value

0	Success
Other than 0	Failure

Notes

Run this command as a user with Administrator privileges.
When the configuration data is applied, the current configuration data is compared with the configuration data to be applied.
If there is any change in the configuration data, the following message output. After operating the service or group by following the instructions in the message, execute the command again.

Message	Solution
Please stop EXPRESSCLUSTER Server.	Stop the server.
Please suspend EXPRESSCLUSTER Server.	Suspend the server.

Continued on next page

Table 2.15 – continued from previous page

Message	Solution
Please stop the following groups.	Stop the group for which the setting has been changed.
Reboot of a cluster is necessary to reflect setting.	Shut down and reboot the cluster to apply the change of settings.
To apply the changes you made, restart the EXPRESSCLUSTER Web Alert service.	Restart the Web Alert service to apply the change of settings.
To apply the changes you made, restart the EXPRESSCLUSTER Manager service.	Restart the EXPRESSCLUSTER Manager service to apply the change of settings.
Start of a cluster is necessary to reflect setting.	This is the message displayed at the initial cluster configuration. Start the cluster.

The --nocheck option is used only for special purposes including a maintenance procedure. Do not use the --nocheck option for normal operations.

Error messages

Message	Cause/Solution
Log in as administrator.	Log in as a user with Administrator privileges.
This command is already run.	This command has already been run.
invalid option.	This option is invalid. Check the option.
Invalid mode. Check if --push or --pull option is specified.	Check if --push is specified.
Invalid host name. Server specified by -h option is not included in the configuration	The server specified with -h is not included in configuration data. Check if the specified server name or IP address is correct.
Failed to initialize the xml library. Check if memory or OS resources are sufficient.	Check if the memory or OS resources are sufficient.
Failed to load the configuration file. Check if memory or OS resources are sufficient.	Check if the memory or OS resources are sufficient.
Failed to change the configuration file. Check if memory or OS resources are sufficient.	Check if the memory or OS resources are sufficient.
Failed to load the all.pol file. Reinstall the RPM cluster.	Reinstall the EXPRESSCLUSTER Server.
Failed to load the cfctrl.pol file. Reinstall the RPM cluster.	Reinstall the EXPRESSCLUSTER Server.
Failed to get the install path. Reinstall the RPM cluster.	Reinstall the EXPRESSCLUSTER Server.
Failed to initialize the trncl library. Check if memory or OS resources are sufficient.	Check if the memory or OS resources are sufficient.
Failed to connect to trnsv. Check if the other server is active.	Accessing the server has failed. Check if the other server has been started up.
Failed to get the list of node. Check if the server specified by -c is a cluster member of the cluster.	Check if the server specified by -c is a cluster member.
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.

Continued on next page

Table 2.16 – continued from previous page

Message	Cause/Solution
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.
Failed to upload the configuration file. 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
Canceled to deliver the configuration file since it failed to connect to one or more server. If you want to deliver the configuration file to servers that can be connected, run the command again with "-force" option.	Canceled the delivery of the configuration data. There are some servers that failed to connect. If you want to deliver the configuration data only to the server that can be connected, run the command again by using the --force option.
The directory "work" is not found. Reinstall the RPM.	Reinstall the EXPRESSCLUSTER Server.
Failed to make a working directory.	Check if the memory or OS resources are sufficient.
The directory does not exist.	Check if the memory or OS resources are sufficient.
This is not a directory.	Check if the memory or OS resources are sufficient.
The source file does not exist.	Check if the memory or OS resources are sufficient.
The source file is a directory.	Check if the memory or OS resources are sufficient.
The source directory does not exist.	Check if the memory or OS resources are sufficient.
The source file is not a directory.	Check if the memory or OS resources are sufficient.
Failed to change the character code set (EUC to SJIS).	Check if the memory or OS resources are sufficient.
Failed to change the character code set (SJIS to EUC).	Check if the memory or OS resources are sufficient.
Failed to allocate memory.	Check if the memory or OS resources are sufficient.
Failed to change the directory.	Check if the memory or OS resources are sufficient.
Failed to make a directory.	Check if the memory or OS resources are sufficient.
Failed to remove the directory.	Check if the memory or OS resources are sufficient.
Failed to remove the file.	Check if the memory or OS resources are sufficient.
Failed to open the file.	Check if the memory or OS resources are sufficient.
Failed to read the file.	Check if the memory or OS resources are sufficient.
Failed to copy the file.	Check if the memory or OS resources are sufficient.
Failed to create the mutex.	Check if the memory or OS resources are sufficient.
Internal error. Check if memory or OS resources are sufficient.	Check if the memory or OS resources are sufficient.
Failed to check server property. Check if the server name or ip addresses are correct.	Check if the server name and the IP address of the configuration information are correctly set.
Please stop the following resources.	Stop the resource of which the configuration has been changed.

2.8.2 Backing up configuration data (clpcfctrl --pull)

Backs up the configuration data.

Command line

clpcfctrl --pull [-w] [-x <*path*>] [-p <*portnumber*>]

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.

-x

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

-w

Save the configuration data with character encoding, SJIS.

-p

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

Return Value

0	Success
Other than 0	Failure

Notes

Run this command as a user with Administrator privileges.

Error messages

Message	Cause/Solution
Log in as administrator.	Log on as a user with Administrator privileges.
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 --pull is specified.
Failed to initialize the xml library. Check if memory or OS resources are sufficient.	Check if the memory or OS resources are sufficient.
Failed to load the configuration file. Check if memory or OS resources are sufficient.	Check if the memory or OS resources are sufficient.
Failed to change the configuration file. Check if memory or OS resources are sufficient.	Check if the memory or OS resources are sufficient.
Failed to load the all.pol file. Reinstall the cluster.	Reinstall the EXPRESSCLUSTER Server.
Failed to load the cfctrl.pol file. Reinstall the cluster.	Reinstall the EXPRESSCLUSTER Server.

Continued on next page

Table 2.17 – continued from previous page

Message	Cause/Solution
Failed to get the install path. Reinstall the cluster.	Reinstall the EXPRESSCLUSTER Server.
Failed to initialize the trncl library. Check if memory or OS resources are sufficient	Check if the memory or OS resources are sufficient.
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.
The directory "work" is not found. Reinstall the cluster.	Reinstall the EXPRESSCLUSTER Server.
Failed to make a working directory.	Check if the memory or OS resources are sufficient.
The directory does not exist.	Check if the memory or OS resources are sufficient.
This is not a directory.	Check if the memory or OS resources are sufficient.
The source file does not exist.	Check if the memory or OS resources are sufficient.
The source file is a directory.	Check if the memory or OS resources are sufficient.
The source directory does not exist.	Check if the memory or OS resources are sufficient.
The source file is not a directory.	Check if the memory or OS resources are sufficient.
Failed to change the character code set (EUC to SJIS).	Check if the memory or OS resources are sufficient.
Failed to change the character code set (SJIS to EUC).	Check if the memory or OS resources are sufficient.
Failed to allocate memory.	Check if the memory or OS resources are sufficient.
Failed to change the directory.	Check if the memory or OS resources are sufficient.
Failed to make a directory.	Check if the memory or OS resources are sufficient.
Failed to remove the directory.	Check if the memory or OS resources are sufficient.
Failed to remove the file.	Check if the memory or OS resources are sufficient.
Failed to open the file.	Check if the memory or OS resources are sufficient.
Failed to read he file.	Check if the memory or OS resources are sufficient.
Failed to write the file.	Check if the memory or OS resources are sufficient.
Failed to copy the file.	Check if the memory or OS resources are sufficient.
Failed to create the mutex.	Check if the memory or OS resources are sufficient.
Internal error. Check if memory or OS resources are sufficient.	Check if the memory or OS resources are sufficient.

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
- Alert synchronous service
- WebManager service

The current timeout ratio is displayed.

Option

-r ratio

Specifies the timeout ratio. Use 1 or larger integer. The maximum timeout ratio is 10,000.
If you specify "1," you can restore the original ratio as when 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 specified becomes ineffective.
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.
Monitor resource timeout

```
# clpstat --mon monitor_resource_name --detail
```

Notes

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

The EXPRESSCLUSTER service must be running when you execute this command.

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 messages

Message	Cause/Solution
Log in as administrator.	Log on as a user with Administrator privileges.
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. ex) 2m, 3h, 4d	Set a valid extension period.
Set the extension period in a range less than the maximum extension period.	Set the extension period which does not exceed the maximum extension period.
Could not connect to the server. Check if the cluster service is active.	Check that the EXPRESSCLUSTER service is operating.
Server is not active. Check if the cluster service is active.	Check that the EXPRESSCLUSTER service is operating.
Connection was lost. Check if there is a server where the cluster service is stopped in the cluster.	Check if there is any server in the cluster that the EXPRESSCLUSTER service stopped.
Invalid parameter.	The value specified as the 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.

Continued on next page

Table 2.18 – continued from previous page

Message	Cause/Solution
Processing failed on some servers. Check the status of failed servers.	There is a server in which the processing has failed. Check the statuses of servers in the cluster. Run the command with all servers in the cluster activated.
Internal error. Check if memory or OS resources are sufficient.	Check if the memory or OS resources are 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

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

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

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 two log files. Therefore, it is necessary to have twice the disk space specified by -s.

Notes

Run this command as a user with Administrator privileges.

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

Rebooting the server restores the settings to their pre-change values.

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 messages

Message	Cause/Solution
Log in as administrator.	Log on as a user with Administrator privileges.
invalid option.	The option is invalid. Check the option.
Failed to change configuration. Check if the event service is running.	clpevent may not have been started.
invalid level	The specified level is invalid.
invalid size	The specified size is invalid.
Failed to initialize the xml library. Check if memory or OS resources are sufficient.	Check if the memory or OS resources are sufficient.
Failed to print current configuration. Check if the event service is running.	clpevent may not be started yet.

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

Type	Module	Description
alert	clpaltinsert.exe	Alert
apicl	clpapicl.dll	API client library
apicl_rc	clpapicl.dll	API client library
apisv	clpapisv.dll	API server
appli	clpappli.dll	Application resource
appliw	clpappliw.dll	Application monitor resource
armdrive	armdrive.exe	Drive letter setting command
bwctrl	clpbwctrl.exe	Cluster activation synchronization wait processing control command
cfchk	clpcfchk.exe	Command to check the cluster configuration
cfctrl	clpcfctrl.exe	Cluster generation, cluster information and backup command
cl	clpcl.exe	Cluster startup and stop command
clpdnld	clpdnld.exe	Downloader
clpgetsvcstat	clptrnsv.exe	Transaction server
clpshmstat	clpshmstat.dll	Node status management library
clsv	clpclsv.dll	Client server
commcl	clpcommcl.dll	Common communication client library
cpufreq	clpcpufreq.exe	CPU frequency control command
diskperf	clpdiskperf.dll	Disk performance log library
diskutil	clpdiskutil.dll	Mirror disk/disk shared library
diskw	clpdiskw.dll	Disk RW monitor resource
down	clpdown.exe	Server shutdown command

Continued on next page

Table 2.20 – continued from previous page

Type	Module	Description
event	clpevent.dll	Event log
exping	clpexpng.dll	PING execution management
genw	genw.dll	Custom monitor resource
grp	clpgrp.exe	Group startup, stop, move, and migration command
hblog	clplanhb.dll	Kernel-mode LAN heartbeat resource
healthchk	clphealthchk.exe	Process health check command
ibsv	clpibsv.exe	Information Base service
ipw	clpipw.dll	IP monitor resource
lankhb	clplanhb.dll	Kernel-mode LAN heartbeat resource
lcns	clplcns.dll	License library
ledctrl	clpledctrl.exe	Chassis identify control command
logc	clplogcc.exe	Log collection library
logcc	clplogcc.exe	Collect logs command
logcf	clplogcf.exe	Log level and size modification command
logcmd	clplogcmd.exe	Alert producing command
mail	clpmail.exe	Mail Notification
monctrl	clpmonctrl.exe	Monitor resource control command
mgmtagt	clpmgtmib.dll	Library for SNMP Service
miiw	clpmiiw.dll	NIC Link Up/Down monitor resource
monctrl	clpmonctrl.exe	Monitor resource control command
mrw	clpmrw.dll	Message receive monitor resource
mtw	clpmtw.dll	Multi target monitor resource
nm	clpnm.exe	Node map management
oldapi	clpoldapi.exe	Compatible API
oldapi_cnf	clpoldapi.exe	Compatible API
oldapi_evt	clpoldapi.exe	Compatible API
oldapi_if	clpoldapi.exe	Compatible API
oldapi_sts	clpoldapi.exe	Compatible API
perfc	clpperfc.exe	Command to display cluster statistical information
pm	clppm	Process management
pmsvc	clppmsvc.exe	Process management
psw	clppsw.dll	Process name monitor resource
ptun	clpptun.dll	Parameter tuning
ptunlib	clpptun.dll	Parameter tuning
rc	clprc.exe	Group and group resource management
rc_ex	clprc.exe	Group and group resource management
regctrl	clpregctrl.exe	Reboot count control command
resdllc	clpresdllc.dll	Resource control library
rm	clprm.dll	Monitor management
script	clpscript.dll	Script resource
scrpc	clpscrpc.exe	Script
scrpl	clpscrpl.ece	Script
sem	clpsem.dll	Semaphore library
service	clpservice.dll	Service resource
servicew	clpservicew.dll	Service monitor resource
shmcm	clpshmcm.dll	Shared memory library
shmevt	clpshmevt.dll	Event library
shmnm	clpshmnm.dll	Shared memory library
shmrm	clpshmrm.dll	Shared memory library

Continued on next page

Table 2.20 – continued from previous page

Type	Module	Description
snmpmgr	clpsnmpmgr.dll	SNMP trap reception library
starup	clpstartup.exe	Startup
stat	clpstat.exe	Status display command
stdn	clpstdn.exe	Cluster shutdown command
toratio	clptoratio.exe	Time-out ratio modification command
trncl	clptrncl.dll	Transaction library
trap	claptrap.exe	SNMP trap command
trnreq	clptrnreq.exe	Inter-cluster processing request command
rexec	clprexec.exe	External monitoring link processing request command
trnsv	clptrnsv.exe	Transaction server
userw	clpuserw.dll	User space monitor resource
webalert	clpaltd.exe	Alert synchronization
webmgr	clpwebmc.exe	WebManager service
xml	xlpxml.dll	XML library
vm	clpvm.dll	VM resource
vmw	clpvmw.dll	VM monitor resource
vmctrl	clpvmctrl.dll	VMCtrl library

Monitoring Agent Types that can be specified for the -t option

Type	Module	Description
db2w	clp_db2w.dll	DB2 Monitor (Database Agent)
ftpw	clp_ftpw.dll	FTP Monitor (Internet Server Agent)
httpw	clp_httpw.dll	HTTP Monitor (Internet Server Agent)
imap4w	clp_imap4w.dll	IMAP4 Monitor (Internet Server Agent)
jra	clpjrasvc.exe	JVM Monitor (Java Resource Agent)
jraw	clpjraw.dll	JVM Monitor (Java Resource Agent)
odbcw	clp_odbcw.dll	ODBC Monitor (Database Agent)
oraclew	clp_oraclew.dll	Oracle Monitor (Database Agent)
otxw	clp_otxw.dll	WebOTX Monitor (Application Server Agent)
pop3w	clp_pop3w.dll	POP3 Monitor (Internet Server Agent)
psqlw	clp_psqlw.dll	PostgreSQL Monitor (Database Agent)
smtpw	clp_smtpw.dll	SMTP Monitor (Internet Server Agent)
sqlserverw	clp_sqlserverw.dll	SQL Server Monitor (Database Agent)
sra	clpsraserviceproc.exe	System Monitor/Process resource monitor (System Resource Agent)
sraw	clpsraw.dll	System Monitor (System Resource Agent)
psrw	clppsrw.dll	Process resource monitor(System Resource Agent)
tuxw	clp_tuxw.dll	Tuxedo Monitor (Application Server Agent)
wasw	clp_wasw.dll	Websphere Monitor (Application Server Agent)
wlsw	clp_wlsw.dll	Weblogic Monitor (Application Server Agent)

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. 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]

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

When -a option not specifed, 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.

-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	Invalid option
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 c:\tmp\licensefile
```

- **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 Administrator 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 messages

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 administrator.	Log on as the Administrator 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.
The license is not registered.	The license has not been registered yet.

Continued on next page

Table 2.24 – continued from previous page

Message	Cause/Solution
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.
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 Alert logs.

Command line

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

Note: It is not necessary to run this command during normal setup or operation. You need to write the command in the script resource script.

Description

Write this command in the script resource script to output messages to any destination.
Messages are produced in the following format:

```
[ID] message
```

Option

-m message

Specifies a message. This option cannot be omitted. The maximum size of message is 498 bytes.
You may use alphabets, numbers, and symbols[3] .

--alert

--mail

Specify the output destination from alert and mail. (Multiple destinations can be specified.)
This parameter can be omitted. The alert will be the output destinations when the parameter is omitted.
For more information on output destinations, see "Directory structure of EXPRESSCLUSTER" in "The system maintenance information" in the "EXPRESSCLUSTER X Maintenance Guide".

-i ID

Specify message ID.
This parameter can be omitted. The default value 1 is set for the ID when the parameter is omitted.

[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 output.)

- The symbols below must have a backslash \ at the beginning

```
\
```

(For example, if you specify \\ in the message, \ is output.)

- When there is a space in the **message**, it must be placed in enclosed in double quotes (" ").

-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 administrator privilege.

The specification of the -i option is different from that of the Linux version. In the Windows version, the event ID displayed in an alert cannot be changed.

Examples of command execution

Example 1: When specifying message, message ID, and level:
When the following is written in the script resource script, the message is displayed in the Alert logs.

```
clplogcmd -m test1 -i 100 -l ERR
```

Example 2: When specifying message, output destination, event ID, and level (output destination is mail):
When the following is written in the Script resource script, the message is sent to the mail address set in the **Cluster Properties**. For more information on the mail address settings, see "Alert Service tab" in "Cluster properties" in "Parameter details" in the "EXPRESSCLUSTER X Reference Guide".

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

The following information is sent to the mail destination:

```
Message:test2
Type: logcmd
ID: 100
Host: server1
Date: 2004/09/01 14:00:00
```

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 or resumes monitor resources.

Option

-s, --suspend
Suspends monitoring

-r, --resume
Resumes monitoring

-c, --clear
Initializes the recovery operation count.

-v, --view
Displays the recovery operation count.

-e, --error
Enables dummy failure.Be sure to specify a monitor resource name with the -m option.

-n, --normal
Disables 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, --monitor

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

-w, --wait

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 EXPRESSCLUSTER service is suspended
90	Monitoring control wait timeout
128	Duplicated activation
255	Other internal error

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

Run this command as a user with the administrator 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."

In the case of a monitor resource of which monitor timing is "Active", if a target resource stops temporarily in the active status, and then the target resource or the group which the target resource belongs to is activated, the monitor resource which has been stopped temporarily cannot detect an error. This is because the monitor resource does not start monitoring.

The following are examples of the case described above:

1. Stops an application monitor that is monitoring application resource temporarily.
2. Reactivate the application resource or the group that the application resource belongs to.

This reactivation procedure applies both manual and automatic when a monitor resource detects an error and reactivates an application by the recovery operation.

If you execute clpmonctrl command with the -v option, "FinalAction Count" is script execution count before final action for following setting.

- The **Execute Script before Final Action** check box is selected.
- **Final Action** is **No operation**.

Error Messages

Message	Causes/Solution
Command succeeded.	The command ran successfully.
You are not authorized to run the command. Log in as Administrator.	You are not authorized to run this command. Log in as a user with Administrator privileges.
Initialization error. Check if memory or OS resources are sufficient.	Check 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.
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 service by using the command such as ps command.	The cluster has been stopped. Check the activation status of the EXPRESSCLUSTER service by using the ps command.
The cluster has been suspended. The cluster service has been suspended. Check activation status of the cluster service by using a command such as the ps command.	The EXPRESSCLUSTER service has been suspended. Check the activation status of the EXPRESSCLUSTER service 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 synchronization of the cluster is completed.
Monitor %1 was unregistered, ignored. The specified monitor resources %1is not registered, but continues 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
The command is already executed. Check the execution state by using the "ps" command or some other command.	The command has already been run. Check the status by using the ps command.
Internal error. Check if memory or OS resources are sufficient.	Check if the memory or OS resource is sufficient.

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

Type	Suspending/Resume	Reset Recovery Count	Dummy Failure Possibility
appliw	✓	✓	✓
diskw	✓	✓	✓

Continued on next page

Table 2.26 – continued from previous page

Type	Suspending/Resume	Reset Recovery Count	Dummy Failure Possibility
ipw	✓	✓	✓
miiw	✓	✓	✓
mtw	✓	✓	✓
servicew	✓	✓	✓
genw	✓	✓	✓
vmw	✓	✓	n/a
mrw	✓	✓	n/a
db2w	✓	✓	✓
ftpw	✓	✓	✓
httpw	✓	✓	✓
imap4w	✓	✓	✓
odbcw	✓	✓	✓
oraclew	✓	✓	✓
pop3w	✓	✓	✓
psqlw	✓	✓	✓
smtpw	✓	✓	✓
sqlserverw	✓	✓	✓
tuxw	✓	✓	✓
wasw	✓	✓	✓
wlsw	✓	✓	✓
otxw	✓	✓	✓
jraw	✓	✓	✓
sraw	✓	✓	✓
psrw	✓	✓	✓
userw	✓	✓	✓
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

This command starts and stops group resources.

Option

-s

Starts group resources.

-t

Stops group resources.

-f

When the group resource is running, all group resources that the specified group resource depends start up.
When the group resource is not running, all group resources that the specified group resource depends stop.

--apito `timeout`

Specify the time in seconds to wait for group resources to be started or stopped (internal communication timeout). A value between 1 to 9999 can be specified.
When the --apito option is not specified, the command waits according to the value set for the internal communication timeout in the cluster property.

Return Value

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

Notes

This command must be executed by a user with the administrator privilege.
Check the status of the group resources by using the status display command or the Cluster WebUI.

Error Messages

Message	Causes/Solution
Log in as Administrator.	Run this command as a user with Administrator privileges.

Continued on next page

Table 2.27 – continued from previous page

Message	Causes/Solution
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.
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.	Timeout has occurred in internal communication in the EXPRESSCLUSTER. Set the internal communication timeout longer if this error occurs frequently.
The group resource is busy. Try again later.	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 luster 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 till the other server starts or the wait time times out, 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. To start the group resource on the local server, stop the group resource.	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.
Depending 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.

Continued on next page

Table 2.27 – continued from previous page

Message	Causes/Solution
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.
Server is isolated.	The server is suspended. (Rebooting after down)
Internal error. Check if memory or OS resources are sufficient.	Not enough memory space or OS resource. Check if there is enough space.
Server is not in a condition to start resource. Critical monitor error is detected.	Check the status of the server.

2.15 Controlling CPU frequency (clpcpufreq command)

Controls CPU frequency.

Command line

clpcpufreq --high
clpcpufreq --low
clpcpufreq -i
clpcpufreq -s

Description

This command enables or disables power-saving mode by CPU frequency control.

Option

--high
Sets the highest CPU frequency.

--low
Sets the lowest CPU frequency to switch to the power-saving mode.

-i
Passes the CPU frequency control to EXPRESSCLUSTER X SingleServerSafe.

-s
Displays the current CPU frequency level.

- high The CPU frequency is at its highest.
- low The CPU frequency has been decreased because the CPU is in the power-saving mode.

Return Value

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

Remarks

If the **Use CPU Frequency Control** check box is not selected in the **Extension** tab settings in **Cluster Properties**, this command results in an error.

Notes

This command must be executed by a user with the administrator privilege.
When you use CPU frequency control, it is required that frequency is changeable in the BIOS settings, and that the CPU supports frequency control by Windows OS power management function.

Error Messages

Message	Cause/Solution
Log in as Administrator.	Log in as a user with Administrator privileges.
This command is already run.	This command has already been run.
Invalid option.	This option is invalid. Check the option.

Continued on next page

Table 2.28 – continued from previous page

Message	Cause/Solution
Invalid mode. Check if --high or --low or -i or -s option is specified.	Check if either of the --high, --low, -I or -s option is specified.
Failed to initialize the xml library. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.
Failed to change CPU frequency settings.	Check the BIOS settings and the OS settings. Check if the cluster is started. Check if the setting is configured so that CPU frequency control is used.
Failed to acquire CPU frequency settings.	Check the BIOS settings and the OS settings. Check if the cluster is started. Check if the setting is configured so that CPU frequency control is used.
Failed to create the mutex.	Check if the memory or OS resource is sufficient.
Internal error. Check if memory or OS resources are sufficient.	Check if the memory or OS resource is sufficient.

2.16 Processing inter-cluster linkage (clptrnreq command)

The clptrnreq command requests a server to execute a process.

Command line

clptrnreq -t *request_code* -h *IP* [-r *resource_name*] [-s *script_file*] [-w *timeout*]

Description

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

Option

-t request_code

Specifies the request code of the process to be executed. The following request codes can be specified:

GRP_FAILOVER Group failover

EXEC_SCRIPT Execute script

-h IP

Specifies the server to issue the request to execute the process with IP address. You can specify more than one server by separating by commas. The maximum number of IP addresses you can specify is 32.

When you specify group failover for request code, specify the IP addresses of all the servers in the cluster.

-r resource_name

Specifies the resource name which belongs to the target group for the request for process when GRP_FAILOVER is specified for request code.

If GRP_FAILOVER is specified, -r cannot be omitted.

-s script_file

Specifies the file name (within 30 characters) of the script to be executed (e.g. batch file or executable file) when EXEC_SCRIPT is specified for request code. The script needs to be created in the worktrnreq folder in the folder where EXPRESSCLUSTER is installed in each server specified with -h.

If EXEC_SCRIPT is specified, -s cannot be omitted.

-w timeout

Specifies the timeout value of the command by the second. The minimum value is 5 seconds.

If the -w option is not specified, it waits for 30 seconds.

Return Value

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

Notes

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

It is required that EXPRESSCLUSTER for Windows of internal version 10.02 or later, or EXPRESSCLUSTER for Linux of internal version 2.0.2_1 or later is set up in the server which executes this command and the server with the IP address specified by -h.

Examples

Example 1: When performing a failover on the group having the appli1 resource of another cluster

```
# clptrnreq -t GRP_FAILOVER -h 10.0.0.1,10.0.0.2 -r appli1
GRP_FAILOVER 10.0.0.1: Success
GRP_FAILOVER 10.0.0.2: Success
```

Example 2: When executing the scrpit1.bat script by the server with IP address 10.0.0.1

```
# clptrnreq -t EXEC_SCRIPT -h 10.0.0.1 -s script1.bat
EXEC_SCRIPT 10.0.0.1: Success
```

Error messages

Message	Cause/solution
Log in as Administrator.	Log in as a user with Administrator privileges.
Invalid option.	The command line option is invalid. Specify the correct option.
All servers are busy. Check if this command is already run.	This command may be run already. Check it.
Internal error. Check if memory or OS resources are sufficient.	Check if the memory or OS resource is sufficient.
Command timeout	The cause may be heavy load on OS and so on. Check this.
Failed to obtain the list of nodes. Specify a valid server name in the cluster.	Failed to obtain the list of nodes. Specify a valid IP address.
Could not connect to all data transfer server. Check if the server has started up.	Could not connect to all IP addresses specified. Check the IP addresses and the status of the target server.
Could not connect to the data transfer server. Check if the server has started up.	Could not connect to the IP address specified. Check the IP address and the status of the target server.
GRP_FAILOVER IP: Group that specified resource (resource_name) belongs to is offline.	Failover process is not performed because the group to which the specified resource belongs is not started on the target server.
EXEC_SCRIPT IP: Specified script (script_file) does not exist.	The script does not exist on the specified server. Check it.
EXEC_SCRIPT IP: Specified script (script_file) is not executable.	The specified script could not be executed.
	Check that execution is permitted.
request_code IP : This server is not permitted to execute clptrnreq.	The server that executed the command does not have permission. Check that the server is registered to the connection restriction IP list of Cluster WebUI.
request_code IP : REQEST_TYPE failed in execute.	The execution processing of the request type failed. (Either of a present request type Failover or Script is specified.)

2.17 Requesting processing to cluster servers (clprexec command)

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

Command line

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

This command is an expansion of the existing clptrnreq command and has additional functions such as issuing a processing request (error message) from the external monitor to the EXPRESSCLUSTER server.

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/trnreq 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 monitor type and monitor target 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 monitor type and monitor target 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.

-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 period 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`

For *logfile_path*, specify the file path along which the detailed log of this command is output.
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 999 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 X3.0 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 "Other setting details" in the EXPRESSCLUSTER X SingleServerSafe Configuration Guide.

Examples

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

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

Example 2: 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 reception monitor resource name:

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

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

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

Example 3: 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 reception 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 reception monitor resource:

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

Error Messages

Message	Cause/solution
Success	-
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.
Could not connect to all data transfer server.	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.
Group(%s) is offline.	Check the processing result on the server that received the request.
Group that specified resource(%s) belongs to is offline.	Check the group status.
Specified script(%s) does not exist.	Check if the specified script exist.
Specified resource(%s) is not exist.	Check the resource name or monitor resource name.
Specified resource(Category:%s, Keyword:%s) is not exist.	Check the resource name or monitor resource name.
Specified group(%s) does not exist.	Check the group name.

Continued on next page

Table 2.30 – continued from previous page

Message	Cause/solution
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 failed in execute.	Check the status of the EXPRESSCLUSTER server that received the request.

2.18 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.

Notes

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

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
*****************************
success.(code:0)

#
```

The reboot count is initialized in the following examples.

Example 1: When initializing the count of reboots caused by a group resource error:

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

Example 2: When initializing the count of reboots caused by a monitor resource error:

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

Error Messages

Message	Cause/solution
Command succeeded.	The command ran successfully.
Log in as Administrator.	You are not authorized to run this command. Run this command as a user with Administrator privileges.
The command is already executed.	The command is already running.
Invalid option.	Specify a valid option.
Internal error. Check if memory or OS resources are sufficient.	Not enough memory space or OS resource.

2.19 Estimating the amount of resource usage (clpprer command)

Estimates the future value from changes in the resource usage amount written to the input file and outputs the result to a file. It can also be used to check the result of threshold judgment for estimated data.

Command line

clpprer -i <*inputfile*> -o <*outputfile*> [-p <*number*>] [-t <*number*> [-l]]

Description

Estimates the future value from the tendency of the given resource use amount data.

Option

-i <inputfile>
The clpprer command specifies the resource data for which a future value is to be obtained.

-o <outputfile>
Specifies the name of the file to which the estimate result is output.

-p <number>
Specifies the number of estimate data items. If omitted, 30 items of estimate data are obtained.

-t <number>
Specifies the threshold to be compared with the estimate data.

-l
Valid only when the threshold is set with the -t option.Judges the status to be an error when the data value is less than the threshold.

Return Value

0	Normal end without threshold judgment
1	Error occurrence
2	As a result of threshold judgment, the input data is determined to have exceeded the threshold.
3	As a result of threshold judgment, the estimate data is determined to have exceeded the threshold.
4	As a result of threshold judgment, the data is determined to have not exceeded the threshold.
5	If the number of data items to be analyzed is less than the recommended number of data items to be analyzed (120), the input data is determined to have exceeded the threshold as a result of threshold judgment.
6	If the number of data items to be analyzed is less than the recommended number of data items to be analyzed (120), the estimate data is determined to have exceeded the threshold as a result of threshold judgment.
7	If the number of data items to be analyzed is less than the recommended number of data items to be analyzed (120), the data is determined to have not exceeded the threshold as a result of threshold judgment.

Notes

This command can be used only when the license for the system monitor resource (System Resource Agent) is registered. (If the license is registered, you do not need to configure system monitor resources for the cluster configuration.)

The maximum number of input data items of the resource data file specified with the -i option is 500. A certain number of input data items are required to estimate the amount of resource usage. However, if the number of input data items is large, it takes a considerable amount of time to perform the analysis. So, it is recommended that the number of input data items be restricted to about 120. Moreover, the maximum number of output data items that can be specified in option -p is 500.

If the time data for the input file is not arranged in ascending order, the estimate will not be appropriate. In the input file, therefore, set the time data arranged in ascending order.

Input file

The input file format is explained below. You need to have an input file, written in the following format, for the resource usage amount for which you want to estimate a result.

The input file format is CSV. One piece of data is coded in the form of *date and time, numeric value*. Moreover, the data and time format is YYYY/MM/DD hh:mm:ss.

File example

```
2012/06/14 10:00:00,10.0
2012/06/14 10:01:00,10.5
2012/06/14 10:02:00,11.0
```

Examples

The estimation of the future value is explained using a simple example.

When an error is detected in the input data:

If the latest value of the input data exceeds the threshold, an error is assumed and a return value of 2 is returned. If the number of input data items is less than the recommended value (=120), a return value of 5 is returned.

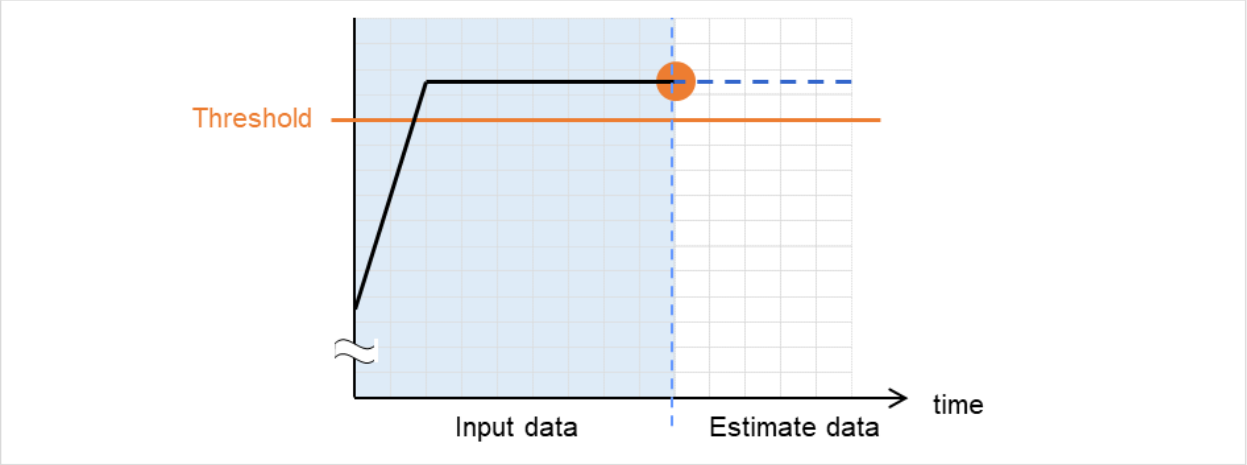


Fig. 2.1: Error detection in the input data

When an error is detected in the estimate data:

If the estimate data exceeds the threshold, an error is assumed and a return value of 3 is returned. If the number of input data items is less than the recommended value (=120), a return value of 6 is returned.

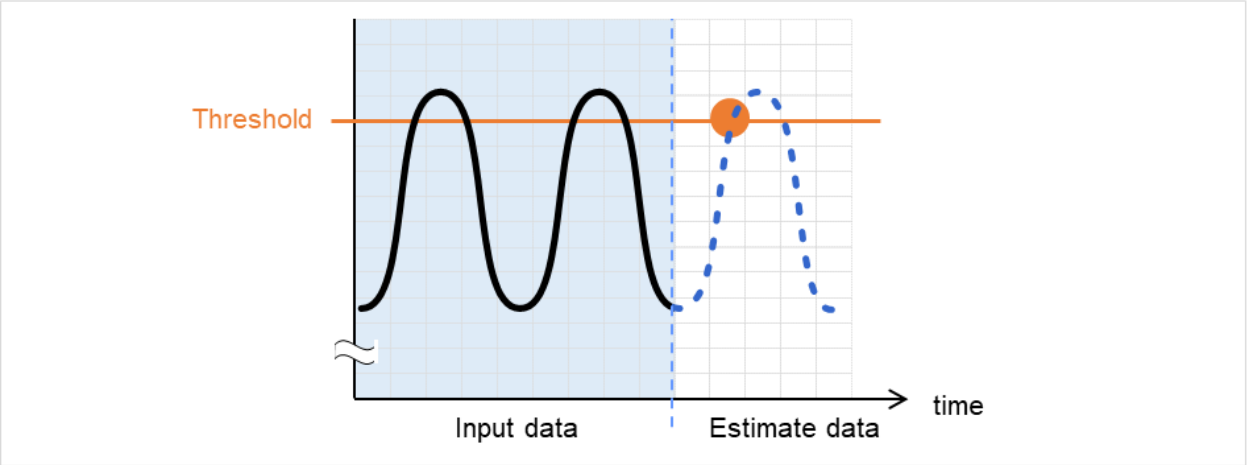


Fig. 2.2: Error detection in the estimate data

When no threshold error is detected:

If neither the input data nor the estimate data exceeds the threshold, a return value of 4 is returned. If the number of input data items is less than the recommended value (=120), a return value of 7 is returned.

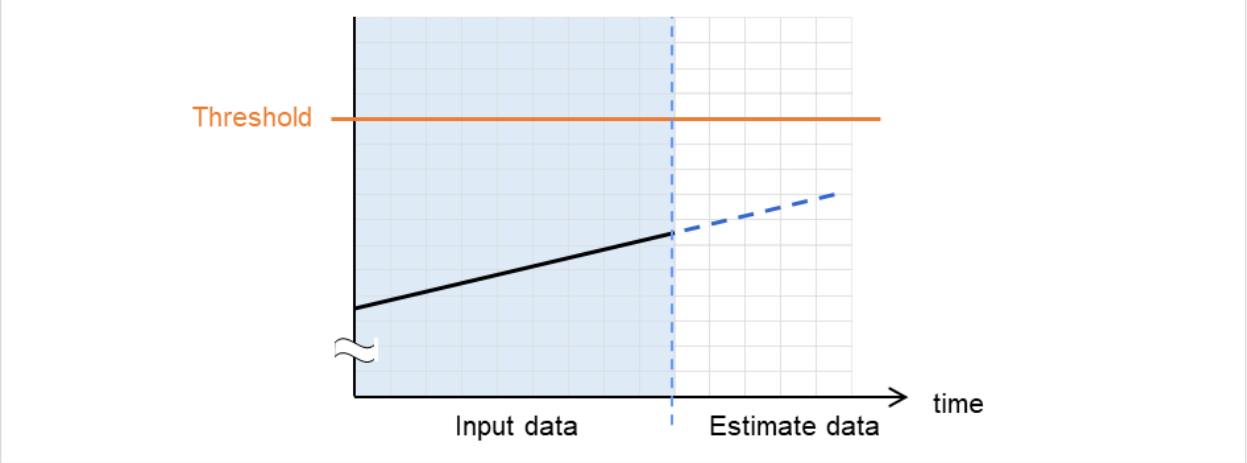


Fig. 2.3: When no threshold error is detected

When the -l option is used:

If the -l option is used, an error is assumed when the data is less than the threshold.

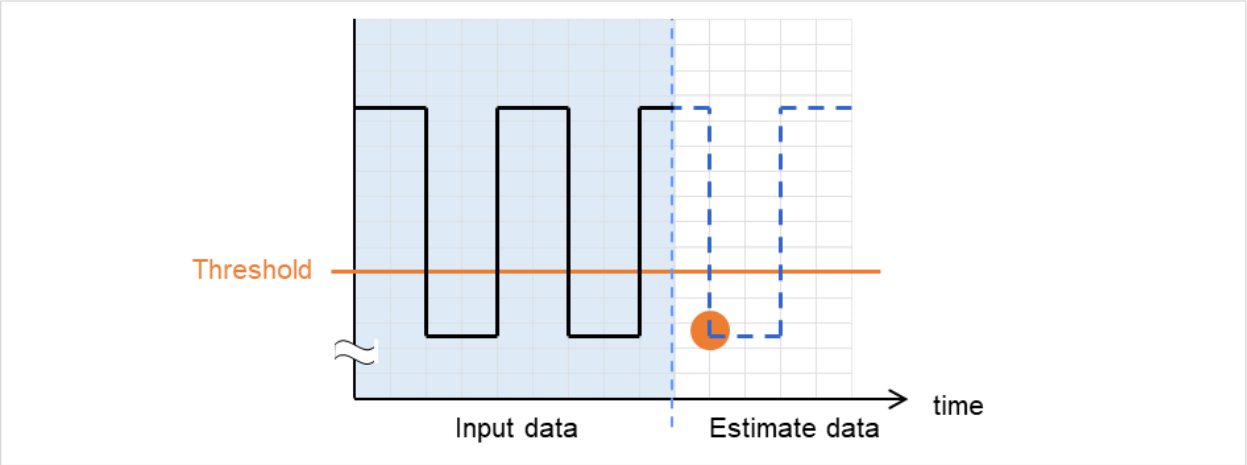


Fig. 2.4: Use of the -l option

Examples

If you use a file written in the specified format and run the clpprer command, you can output the estimate result to a file and check it.

Input file test.csv

```
2012/06/14 10:00:00,10.0
2012/06/14 10:01:00,10.5
2012/06/14 10:02:00,11.0
```

```
# clpprer -i test.csv -o result.csv
```

Output result result.csv

```
2012/06/14 10:03:00,11.5
2012/06/14 10:04:00,12.0
2012/06/14 10:05:00,12.5
2012/06/14 10:06:00,13.0
2012/06/14 10:07:00,13.5
    :
```

If you set a threshold for option, you can check the result of threshold judgment for estimate data at the command prompt.

```
# clpprer -i test.csv -o result.csv -t 12.5
```

Execution result

```
Detect over threshold. datetime = 2012/06/14 10:06:00, data = 13.00, threshold =␣
↪12.5
```

Error Messages

Message	Causes/Solution
Normal state.	As a result of threshold judgment, no data exceeding the threshold is detected.
Detect over threshold. datetime = %s, data = %s, threshold = %s	As a result of threshold judgment, data exceeding the threshold is detected.

Continued on next page

Table 2.32 – continued from previous page

Message	Causes/Solution
Detect under threshold. datetime = %s, data = %s, threshold = %s	As a result of threshold judgment with the -l option, data less than the threshold is detected.
License is nothing.	The license for the valid System Resource Agent is not registered. Check to see the license.
Inputfile is none.	The specified input data file does not exist.
Inputfile length error.	The path for the specified input data file is too long. Specify no more than 1023 bytes.
Output directory does not exist.	The directory specified with the output file does not exist. Check whether the specified directory exists.
Outputfile length error.	The path for the specified output file is too long. Specify no more than 1023 bytes.
Invalid number of -p.	The value specified in the -p option is invalid.
Invalid number of -t.	The value specified in the -t option is invalid.
Not analyze under threshold(not set -t) .	The -t option is not specified. When using the -I option, also specify the -t option.
File open error [%s]. errno = %s	The file failed to open. The amount of memory or OS resources may be insufficient. Check for any insufficiency.
Inputfile is invalid. cols = %s	The number of input data items is not correct. Set the number of input data items to 2 or more.
Inputfile is invalid. rows = %s	The input data format is incorrect. One line needs to be divided into two rows.
Invalid date format. [expected YYYY/MM/DD HH:MM:SS]	The date of the input data is not of the correct format. Check to see the data.
Invalid date format. Not sorted in ascending order.	Input data is not arranged in ascending order of date and time. Check the data.
File read error.	An invalid value is set in the input data. Check the data.
Too large number of data [%s]. Max number of data is %s.	The number of input data items exceeds the maximum value (500). Reduce the number of data items.
Input number of data is smaller than recommendable number.	The number of input data items is less than the recommended number of data items to be analyzed (120). * Data is analyzed even if the recommended number of data items to be analyzed is small.
Internal error.	An internal error has occurred.

2.20 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 <param>

- <param>
  - 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 a user with Administrator privileges.

Error Messages

Message	Cause/Solution
Log in as Administrator.	Log in as a user with Administrator privileges.
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.
Internal error. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.

2.21 Setting an action for OS shutdown initiated by other than cluster service (clpstdncnf command)

Sets an action for OS shutdown initiated by other than cluster service..

Command line

clpstdncnf -e [*time*]
clpstdncnf -d
clpstdncnf -v

Description

This command sets an action for OS shutdown initiated by other than cluster service.

Option

-e [time]

Waits for cluster services to be stopped when OS shutdown is initiated by other than cluster service.
You can specify a timeout value in minutes (A value between 1 to 1440 can be specified).
It is necessary to specify the timeout value at first execution.
From the second execution on, if you don't specify the timeout value, the current value is used.

-d

Does not wait for cluster services to be stopped when OS shutdown is initiated by other than cluster service.

-v

shows the current setting.

Return Value

0	Success
Other than 0	Failure

Notes

Run this command as a user with Administrator privileges.
In case of a virtual environment, such as cloud environment, when OS shutdown is initiated from the virtual infrastructure, power-off may be executed depending on the virtual infrastructure.

Example of command execution

Example 1: Waits for cluster service to be stopped (timeout = 30 minutes)

```
# clpstdncnf -e 30
Command succeeded.
# clpstdncnf -v
Mode : wait
Timeout : 30 min
```

Example 2: Does not wait for cluster service to be stopped

```
# clpstdncnf -d
Command succeeded.
# clpstdncnf -v
Mode : no wait
```

```
Timeout : 30 min
```

2.22 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	C onfiguration information load error
4	C onfiguration information load error
5	Initialization error
6	Internal error
7	I nternal communication initialization error
8	I nternal communication connection error
9	I nternal communication processing error
10	T arget group check error
12	Timeout error

Example of Execution

When displaying the median value of the group start time:

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

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
```

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 Administrator.	Run this command as an Administrator 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.

2.23 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
```

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 Administrator.	Log in as an Administrator 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.

CHAPTER

THREE

NOTES AND RESTRICTIONS

This chapter provides cautions on using EXPRESSCLUSTER X SingleServerSafe, as well as the known problems and how to prevent them.

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 Restrictions during recovery operation

Do not perform the following operations by using the Cluster WebUI or command line while recovery processing is changing (reactivation -> last operation), if a group resource (an application resource, service resource, or other resource) is specified as a recovery target and when a monitor resource detects an error.

- Stopping/suspending the cluster
- Starting or stopping a group

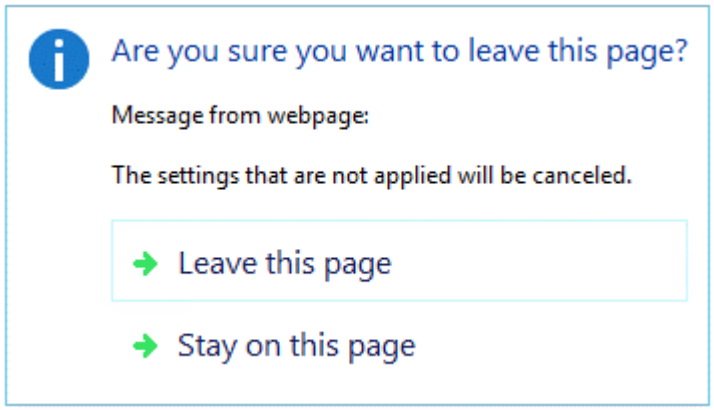
If you perform the above-mentioned operations while recovery caused by detection of an error by a monitor resource is in progress, other group resources of the group with an error may not stop.
However, you can perform them when the final action is completed.

3.1.2 Executable format files and script files not described in the command reference

The installation directory contains executable files and script files that are not described in "EXPRESSCLUSTER command reference" in the "EXPRESSCLUSTER X Reference 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.

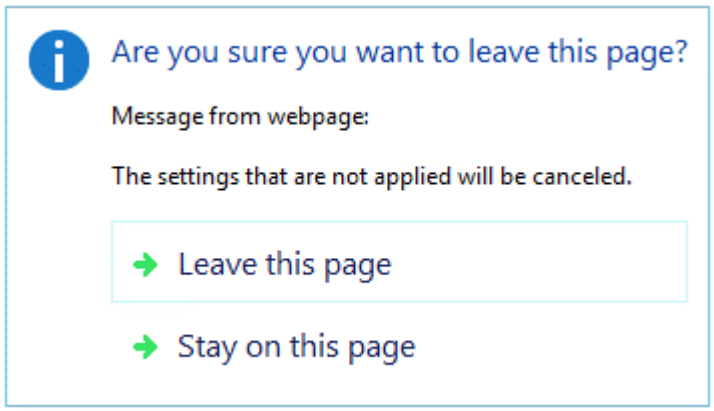
3.1.3 Notes on the Cluster WebUI

- 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.
- When closing the Web browser, 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.

3.1.4 EXPRESSCLUSTER Disk Agent service

The EXPRESSCLUSTER Disk Agent service is not used for EXPRESSCLUSTER X SingleServerSafe. Do not start this service.

3.1.5 Issues with User Account Control (UAC) in Windows Server 2012 or later environment

In Windows Server 2012 or later or later environment, User Account Control (UAC) is enabled by default. When UAC is enabled, there are following issues.

Monitor Resource

Following resource has issues with UAC.

Oracle Monitor Resource

For the Oracle monitor resource, if you select **OS Authentication** for **Authentication Method** and then set any user other than those in the Administrators group as the monitor user, the Oracle monitoring processing will fail.
When you set **OS Authentication** in **Authentication Method**, the user to be set in **Monitor User** must belong to the Administrators group.

3.1.6 Screen display of application resource / script resource

Because the processes started from the application resource or script resource of EXPRESSCLUSTER are executed in session 0, when you start a process having GUI, the **Interactive services dialog detection** pop-up menu is displayed. Unless you select **Show me the message**, GUI is not displayed.

3.1.7 Environment in which the network interface card (NIC) is duplicated

In an environment in which the NIC is duplicated, NIC initialization at OS startup may take some time. If the cluster starts before the NIC is initialized, the starting of the kernel mode LAN heartbeat resource (lankhb) may fail. In such cases, the kernel mode LAN heartbeat resource cannot be restored to its normal status even if NIC initialization is completed. To restore the kernel mode LAN heartbeat resource, you must first suspend the cluster and then resume it.
In that environment, we recommend to delay startup of the cluster by following setting or command.

- Network Initialization complete wait time
  You can configure this setting in **Timeout** tab of **Cluster Properties**. If NIC initialization is completed within timeout, the cluster service starts up.
- ARMDELAY command (armdelay.exe)
  The cluster service starts up after the time that you set with the command from OS startup.

For more details of above setting and command, please refer to the "Legacy Feature Guide" for EXPRESSCLUSTER X.

3.1.8 EXPRESSCLUSTER service login account

The EXPRESSCLUSTER service login account is set in **Local System Account**. If this account setting is changed, EXPRESSCLUSTER might not properly operate as a cluster.

3.1.9 Monitoring the EXPRESSCLUSTER resident process

The EXPRESSCLUSTER resident process can be monitored by using software monitoring processes. However, recovery actions such as restarting a process when the process abnormally terminated must not be executed.

3.1.10 JVM monitor resources

- When restarting the monitoring-target Java VM, you must first suspend JVM monitor resources or stop the cluster.
- When changing the JVM monitor resource settings, you must suspend and resume the cluster.
- JVM monitor resources do not support a delay warning of monitor resources.

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 setting on the OS is changed while a system monitor resource is operating, that system monitor resource may fail to operate normally.
  If you have changed the date or time setting on the OS, suspend and then resume the 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 26 disks that can be monitored by the disk resource monitoring function of System monitor resources.

3.1.12 Display of the Interactive services dialog detection pop-up menu

To allow the **Interactive services dialog detection** pop-up menu to be displayed by setting the **Allow to Interact with Desktop** of the application resource or script resource the "Interactive Service Detection" service must have been started.

The startup of the "Interactive Service Detection" service with its default settings is invalid. Follow the procedure below to validate the service.

See also:

http://msdn.microsoft.com/en-us/library/windows/desktop/ms683502(v=vs.85).aspx
-> Using an Interactive Service

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 during setup

Module Type	Error Message	Solution
setup	Previous version of EXPRESSCLUSTER is installed. Upgrading from this version is not supported. Install after uninstalling the previous version of EXPRESSCLUSTER.	Uninstall the previous version of EXPRESSCLUSTER, and then try installing again.
setup	The SNMP service is running. You need to stop the SNMP service before you perform uninstallation. Do you want to stop the SNMP service now?	Select Yes to stop the SNMP service automatically and continue the installation. Or, select No to cancel the installation, manually stop the SNMP service and then perform installation again.
setup	Setup has failed. Error code : xxx	- Check the system requirements, setup procedures and notes described in the manual, and make sure they are followed. - If other application is running, terminate it. - Install again after restarting the OS.
setup	Setup has failed(xxx). Error code : xxx Please reboot the system and try again.	- Check the system requirements, setup procedures and notes described in the manual, and make sure these requirements are followed. - If other application is running, terminate it. - Install again after starting the OS again.
setup	Unsupported environment.	Install in the environment where the system requirements are met.
setup	Cannot perform uninstallation because there is one or more EXPRESSCLUSTER services still running. Stop all EXPRESSCLUSTER services before you restart uninstallation.	Stop all EXPRESSCLUSTER services, and then perform uninstallation.
setup	Failed to start the installer. (ercode: xxx)	- Check the system requirements, setup procedures and notes described in the manual, and make sure they are followed. - If other application is running, terminate it. - The installer file may be corrupted or missing. Check it.
setup	Internal error. (xxx)	- Check the system requirements, setup procedures and notes described in the manual, and make sure they are followed. - If other application is running, terminate it.

4.2 Messages reported by event log and alert

These are the messages reported by applications, event logs, and alert logs of the Cluster WebUI. Messages with o in the columns of Alert, Eventlog and Userlog are recorded in each log. The following shows how to refer the logs:

Log Name	How to refer	File Name
Alert	Output to the Alert Logs of the Cluster WebUI. Logs can be collected by using the log collection tool.	alertlog.alt
Event log	Output to the Event Viewer (application log) of the OS. Collect logs by using the log collection tool. The source of the event is "EXPRESSCLUSTER X." Logs can be collected by using the log collection tool. Note because they are collected in the binary format with the file names in the right column, it is necessary to open the files using Event Viewer in the environment where EXPRESSCLUSTER is set up to refer to the information.	AppEvent.Evt SysEvent.Evt
User log	These are the logs with text format, in which detail information is recorded. They are output in the "userlog.{00 - 02}.log" file in the log folder of the logs collected by using the log collection tool.	userlog.{00 - 02}.log

Messages with "o" in the Mail Report column will be sent as e-mail by EXPRESSCLUSTER X Alert Service.

Messages with "o" in the SNMP Trap column will be sent as SNMP trap.

"Report Settings" are settings of when linking to the ESMPRO Agent. In "Alive," the ESMPRO Agent performs the Alert report. In "Manager," alerts are output to the ESMPRO Agent. For details, see the manual of the ESMPRO Agent**.**

For Mail Alert and SNMP Trap sending, refer to "Alert Service tab" of "Cluster properties" in "Other setting details" in the "EXPRESSCLUSTER X SingleServerSafe Configuration Guide".

The report settings in "Alert Service tab" of "Cluster properties" in "Other setting details" in the "EXPRESSCLUSTER X SingleServerSafe Configuration Guide" cannot be configured for any message marked with x.

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" - "Other setting details" - "Cluster properties" - "Cloud tab".

In the table below, each number indicates the following:

[1]Alert, [2]Eventlog, [3]Userlog, [4]Mail Report, [5]SNMP Trap, [6]Alive, [7]Manager, [8]Message Topic

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
nm	Information	1	The server %1 has been started.	Server up	-	o	o						
nm	Information	2	The server %1 has been stopped.	Server down	Server down was detected. Remove the failures of the server and then return the server to the cluster.	o	o		o	o	o	o	o
nm	Information	3	The resource %2 of the server %1 has been started.	Resource up	-			o					
nm	Error	4	The resource %2 of the server %1 has an error.	Resource abnormally	An error of the resource was detected. Refer to the event logs of the appropriate resource.			o					
nm	Information	5	The resource %2 of the server %1 has been recovered to the normal status.	Resource recover	-			o					
nm	Error	6	The resource %2 of the server %1 is unknown.	Resource unknown	Check the cluster configuration data.	o	o					o	
nm	Error	7	Network partition was detected. Shut down the server %1 to protect data.	Network partition detected	No heartbeat resources can be used. Make sure there is no error in the network adapter and the network is correctly connected.	o	o	o			o	o	
nm	Error	8	An error occurred while confirming the network partition. Shut down the server %1.	It was not possible to check for a network partition.	Refer to the event logs to check whether an error has occurred in a resource.	o	o	o			o	o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
nm	Error	9	An error occurred in confirming the network partition. To avoid failover on multiple servers, the server %1 suspended failover.	Failover hold	Refer to the event logs to check whether an error has occurred in a resource.	o	o	o			o	o	
nm	Information	10	The server %1 canceled the pending failover.	Failover hold cancel	-	o	o	o					
nm	Error	11	Shut down the server %1. (reason:%2)	Server shut-down	No heartbeat resources can be used. Make sure there is no error in the network adapter and the network is correctly connected.	o	o				o	o	
nm	Error	12	Cluster service will be stopped. (reason:%1)	Cluster service stopping	Check the cause following the message.	o	o					o	
nm	Warning	13	The combination of the network partition resources is invalid. (server name:%1)	NP resource combination error	Check the cluster configuration data.	o	o					o	
nm	Error	14	The status of heartbeat %1 is abnormal.	Heartbeat abnormally	Make sure there is no error in the network adapter and the network is correctly connected.	o	o				o	o	
nm	Information	15	The heartbeat %1 has been recovered to the normal status.	Heartbeat recovered	-	o	o						

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
nm	Error	16	The network partition %2 of the server %1 has an error.	Network partition abnormally	Refer to the event logs to check whether an error has occurred in a resource.	o	o				o	o	
nm	Information	17	The network partition %2 of the server %1 has been recovered to the normal status.	Network partition recovered	-	o	o						
nm	Error	18	Failed to start the resource %1. Server name:%2	Resource start failed	Refer to the event logs to check whether an error has occurred in a resource.	o	o				o	o	
nm	Information	19	Waiting for servers to start up has been canceled.	Waiting for servers to start up has been canceled.	-	o	o						
nm	Error	20	Network partition was detected. Shut down the server %1 for the cluster service to protect data.	Network partition detected	No heartbeat resources can be used. Make sure there is no error in the network adapter and the network is correctly connected.	o	o	o					
nm	Error	21	An error occurred when checking for a network partition. Shut down the server %1 for the cluster service to protect data.	It was not possible to check for a network partition.	Refer to the event logs to check whether an error has occurred in a resource.	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
nm	Error	22	Network partition was detected. Execute action(%1) on the server %2 for the cluster service to protect data.	Network partition	No heartbeat resources can be used. Make sure there is no error in the network adapter and the network is correctly connected.	o	o	o					
nm	Error	23	An error occurred when checking for a network partition. Execute action(%1) on the server %2 for the cluster service to protect data.	Can not network partition resolution	Refer to the event logs to check whether an error has occurred in a resource.	o	o	o					
nm	Error	24	Execute action(%1) on the server %2. (reason:%3)	Can not network partition resolution	No heartbeat resources can be used. Make sure there is no error in the network adapter and the network is correctly connected.	o	o	o					
nm	Warning	25	The NP resolution process at the cluster startup is disabled.	Network partition resolution disabled	The NP resolution process at the cluster startup is disabled.	o	o	o					
pm	Information	501	Cluster service has been started properly.	Cluster service started	-	o	o	o					
pm	Information	502	Cluster service is shutting down.	Cluster service shutting down	-	o	o	o					
pm	Error	510	Cluster service has already been started.	Cluster service already started	Check the status of cluster service.	o	o	o				o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
pm	Error	511	Fatal error has occurred in the cluster service.	Critical error in cluster service	The service is not run by a user with required privilege or the system may not be able to operate properly.	o	o	o	o	o		o	o
pm	Error	512	An error is detected in xml library.	problem detected in xml library	The system may not be able to operate properly.	o	o	o				o	
pm	Error	513	An error is detected in configuration file.	problem detected in configuration file	Check the cluster configuration data.	o	o	o	o	o		o	o
pm	Error	514	Configuration file does not exist.	Configuration file not exists	Upload the cluster configuration data.	o	o	o				o	
pm	Error	515	My host name is not found in configuration file.	my name not found in configuration file	Check the cluster configuration data.	o	o	o				o	
pm	Error	520	%1 process terminated abnormally.	process exit abnormally	The system may not be able to operate properly. 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		o	o

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
pm	Error	521	The cluster service process returned an error. (halting system)	Rc process exit with error	Deactivation of group resources may be failed. Take appropriate action by following the group resource message.	o	o	o				o	
pm	Error	522	An error has occurred while initializing %1 process. (return code:%2)	process init error	Check the cause of an initialization error and troubleshoot it.	o	o	o	o	o		o	o
pm	Information	523	The system will be shut down.	system halting	-	o	o	o					
pm	Information	524	Cluster service will be stopped.	Cluster service stopping	-	o	o	o					
pm	Information	525	System will be rebooted.	System rebooting	-	o	o	o					
pm	Information	526	%1 process will be restarted.	Process restarting	-	o	o	o					
pm	Information	527	Emergency shutdown is in progress.	Emergency shutdown	-	o	o	o					
pm	Information	528	Generating STOP error.	Stop Error	-	o	o	o					
pm	Information	529	Generating hardware reset.	HW reset	-	o	o	o					
pm	Information	530	There was a request to shut down the system from the %1.	request of system halt	-	o	o	o					
pm	Information	531	There was a request to stop cluster service from the %1.	request of cluster service stop	-	o	o	o					
pm	Information	532	There was a request to reboot system from the %1.	request of system reboot	-	o	o	o					
pm	Information	533	There was a request to restart cluster service from the %1.	request of cluster service restart	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
pm	Information	534	There was a request to resume cluster service from the %1.	request of cluster service resume	•	o	o	o					
pm	Information	535	There was a request to suspend cluster service from the %1.	request of cluster service suspend	-	o	o	o					
pm	Information	536	There was a request of emergency shutdown from the %1.	request of emergency shutdown	-	o	o	o					
pm	Information	537	There was a request to generate STOP error from the %1.	request of STOP error	-	o	o	o					
pm	Information	538	There was a request to generate hardware reset from the %1.	request of HW reset	-	o	o	o					
pm	Information	540	Requesting shutdown to the automatic running control software.	shutdown request to the automatic running control software start	-	o	o	o					
pm	Information	541	Requesting shutdown (reboot) to the automatic running control software.	shutdown (reboot) request to the automatic running control software	-	o	o	o					
pm	Information	542	Shutdown request to the automatic running control software is completed.	shutdown request to the automatic running control software complete	-	o	o	o					
pm	Error	543	The automatic running control software returned an error to the shutdown request.	shutdown by ESMPRO/AC fail	The automatic operating settings may be incorrect. Check the settings.	o	o	o				o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
pm	Error	544	Communications with the automatic running control software failed.	Communications with ESMPRO/AC fail	The system may not be able to operate properly.	o	o	o				o	
pmsvc	Error	801	The system will be shutdown because cluster resume was failed.	Failed to resume the cluster daemon	-	o	o	o					
pmsvc	Error	802	An attempt to shutdown the system failed.	Failed to shutdown the system	The system may not be able to operate properly.	o	o	o					
pmsvc	Information	810	The system shutdown was initiated by other than cluster service. Stopping cluster service. (timeout=%1 min).	Stopping cluster service.	-	o	o	o					
pmsvc	Information	811	Stopping cluster service has been completed.	Stopping cluster service has been completed.	-	o	o	o					
pmsvc	Error	812	Stopping cluster service has timed out.	Stopping cluster service has timed out.	-	o	o	o					
pmsvc	Warning	813	Stopping cluster service has been canceled.	Stopping cluster service has been canceled.	-	o	o	o					
rc	Information	1010	The group %1 is starting.	group-start started	-	o	o	o					
rc	Information	1011	The group %1 has been started.	group-start ended	-	o	o	o					
rc	Error	1012	Failed to start the group %1.	group-start failed	Take appropriate action by following the group resource message.	o	o	o				o	
rc	Information	1015	Waiting for group %1 to start has started.	waiting for group to start has started.	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Information	1016	Waiting for group %1 to start has been completed.	waiting for group to start has been completed.	-	o	o	o					
rc	Error	1017	Group start was canceled because waiting for group %1 to start was timed out. (%2)	waiting for 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	o					
rc	Warning	1018	Waiting for group %1 to start has timed out. However, group start continues. (%2)	group start continues.	-	o	o	o					
rc	Warning	1019	Server %1 is not in a condition to start group %2.	cannot-start-group	Perform server recovery if the target server is suspended (Isolated). If it is suspended (Network Partition Unsolved), recover network partition resources to the normal status.	o							
rc	Information	1020	The group %1 is stopping.	group-stop started	-	o	o	o					
rc	Information	1021	The group %1 has been stopped.	group-stop ended	-	o	o	o					
rc	Error	1022	Failed to stop the group %1.	group-stop failed	Take appropriate action by following the group resource message.	o	o	o				o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Information	1025	Waiting for group %1 to stop has started.	waiting for group to stop has started.	-	o	o	o					
rc	Information	1026	Waiting for group %1 to stop has started.	waiting for group to stop has been completed.	-	o	o	o					
rc	Error	1027	Group stop has been canceled because waiting for group %1 to stop has timed out. (%2)	waiting for 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	o					
rc	Warning	1028	Waiting for group %1 to stop has timed out. However, group stop continues. (%2)	group stop continues.	-	o	o	o					
rc	Information	1030	The resource %1 is starting.	resource-start started	-		o	o					
rc	Information	1031	The resource %1 has been started.	resource-start ended	-		o	o					
rc	Error	1032	Failed to start the resource %1. (%2 : %3)	resource-start failed	Check the cause for failing to start the resource. If a stall occurs during start processing, "Failed to start the resource %1. (99 : command is timeout)" is output.	o	o	o	o	o		o	o

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Error	1033	Failed to start the recovery script of resource %1. (%2 : %3)	recoverscript-start failed	Check the cause for failing to start the recovery script.	o	o	o				o	
rc	Information	1034	A request to activate %1 resource on server %2 has been started.	Resource start request to the standby server	-	o	o	o					
rc	Information	1035	A request to activate %1 resource on server %2 has been completed.	Resource start request to the standby server completed.	-	o	o	o					
rc	Error	1036	A request to activate %1 resource on server %2 has been failed.	Resource activation request to the standby server failed.	Check if there is an error with the network or with the remote server.	o	o	o					
rc	Information	1040	The resource %1 is stopping.	resource-stop started	-		o	o					
rc	Information	1041	The resource %1 has been stopped.	resource-stop ended	-		o	o					
rc	Error	1042	Failed to stop the resource %1. (%2 : %3)	resource-stop failed	Check the cause for failing to stop the resource. If a stall occurs during stop processing, "Failed to stop the resource %1. (99 : command is timeout)" is output.	o	o	o	o	o		o	o
rc	Information	1044	A request to stop %1 resource on server %2 has been started.	Resource stop request to the standby server	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Information	1045	A request to stop %1 resource on server %2 has been completed.	Resource stop request to the standby server completed.	-	o	o	o					
rc	Error	1046	A request to stop %1 resource on server %2 has been failed.	Resource stop request to the standby server failed.	Check if there is an error with the network or with the remote server.	o	o	o					
rc	Information	1050	Moving the group %1.	group-move started	-	o	o	o					
rc	Information	1051	The group %1 has been moved.	group-move ended	-	o	o	o					
rc	Error	1052	Failed to move the group %1.	group-move failed	Take appropriate action by following the group resource message.	o	o	o				o	
rc	Warning	1059	Server %1 is not in a condition to move group %2.	cannot-move-group	Perform server recovery if the target server is suspended (Isolated). If it is suspended (Network Partition Unsolved), recover network partition resources to the normal status.	o							
rc	Information	1060	Failing over the group %1.	group-failover started	-	o	o	o					
rc	Information	1061	The group %1 has been failed over.	group-failover ended	-	o	o	o					
rc	Error	1062	Failed to fail over the group %1.	group-failover failed	Take appropriate action by following the group resource message.	o	o	o				o	
rc	Information	1070	Restarting the group %1.	group-restart started	-	o	o	o					
rc	Information	1071	The group %1 has been restarted.	group-restart ended	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Error	1072	Failed to restart the group %1.	group-restart failed	Take appropriate action by following the group resource message.	o	o	o				o	
rc	Error	1077	Group failover has failed because there is a server incapable of internal communication.	group-failover failed (internal communication disabled)	Check the LAN heartbeat status in kernel mode. Start the group after recovering internal communication.	o	o	o					
rc	Information	1080	Restarting the resource %1.	resource-restart started	-	o	o	o					
rc	Information	1081	The resource %1 has been restarted.	resource-restart ended	-	o	o	o					
rc	Error	1082	Failed to restart the resource %1.	resource-restart failed	Take appropriate action by following the group resource message.	o	o	o				o	
rc	Information	1090	Shutting down the cluster.	cluster shutdown	-	o	o	o					
rc	Information	1091	Shutting down the server.	server shutdown	-	o	o	o					
rc	Error	1092	Group %1 is started on more than one server.	group double start	Server will automatically be shut down. Check the cause for the group to be started in more than one server.	o	o	o	o	o		o	o
rc	Error	1093	The system shutdown was performed by other than the cluster service.	system shutdown by other than cluster service	It is considered as an error if the system shuts down by other than cluster service. Follow the appropriate steps to shut down the system.	o	o	o				o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Warning	1100	Shutdown count is reached the maximum number (%1). Final action of resource %2 was ignored.	shutdown count reached the limit	-	o	o	o	o	o		o	o
rc	Warning	1101	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	o					
rc	Warning	1102	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	o					
rc	Warning	1103	Since server %1 is specified as that which suppresses shutdown at both-system activation detection, it ignored the shutdown request.	Suppression of shutdown caused by both-system activation detection	-	o	o	o					
rc	Warning	1104	A mismatch in the group %1 status occurs between the servers.	Generation of group status mismatch	Restart the group or reboot the cluster.	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Information	1105	Since server %1 is not specified as that which suppresses shutdown at both-system activation detection, it executed the shutdown request.	Shutdown caused by both-system	-	o	o	o					
rc	Information	1110	Server %1 is returned to the cluster.	server returned	-	o	o	o					
rc	Information	1111	Server %1 is isolated from the cluster.	server isolated	-	o	o	o					
rc	Information	1112	Server %1 started to return to the cluster.	server return start	-	o	o	o					
rc	Error	1113	Server %1 failed to return to the cluster.	server return fail	The system may not be able to operate properly.	o	o	o				o	
rc	Information	1120	Server %1 will notify the automatic running control software of shutdown start.	shutdown notification start	-	o	o	o					
rc	Error	1121	The automatic running control software returned an error to the shutdown start notification in server %1.	shutdown notification fail	The automatic operating settings may be incorrect. Check the settings.	o	o	o				o	
rc	Information	1122	Server %1 notified the automatic running control software of shutdown start.	shutdown notification finish	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Information	1123	The automatic running control software is checking the power status of shared disks. A server will be restarted after the power status is checked.	waiting for disk power-on	-	o	o	o					
rc	Error	1124	An error was returned from the automatic running control software. Failed to check the power status of shared disks.	disk power-on confirmation failed	The automatic operating settings may be incorrect. Check the settings. An error may have occurred in the automatic power control unit. Check the automatic power control unit.	o	o	o				o	
rc	Error	1125	Server %1 failed to communicate with the automatic running control software.	communications with the automatic running control software failed	The system may not be able to operate properly.	o	o	o				o	
rc	Information	1130	Starting a single resource %1.	single-resource-start started	-	o	o	o					
rc	Information	1131	A single resource %1 has been started.	single-resource-start ended	-	o	o	o					
rc	Error	1132	Failed to start a single resource %1.	single-resource-start failed	Take appropriate action by following the group resource message.	o	o	o				o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Warning	1139	Server %1 is not in a condition to start a single resource %2.	cannot-start-single-resource	Perform server recovery if the target server is suspended (Isolated). If it is suspended (Network Partition Unsolved), recover network partition resources to the normal status.	o							
rc	Information	1140	Stopping a single resource %1.	single-resource-stop started	-	o	o	o					
rc	Information	1141	A single resource %1 has been stopped.	single-resource-stop ended	-	o	o	o					
rc	Error	1142	Failed to stop a single resource %1.	single-resource-stop failed	Take appropriate action by following the group resource message.	o	o	o				o	
rc	Information	1150	The group %1 is being migrated.	The group is being migrated.	-	o	o	o					
rc	Information	1151	The group %1 has been migrated.	The group has been migrated.	-	o	o	o					
rc	Error	1152	Failed to migrate the group %1.	Migrating the group has failed.	Take appropriate action by following the group resource message.	o	o	o					
rc	Warning	1159	Server %1 is not in a condition to migrate group %2.	The group cannot be migrated.	Perform server recovery if the target server is suspended (isolated). If it is suspended (due to an unresolved network partition), recover network partition resources to the normal status.	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Information	1170	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	o					
rc	Information	1171	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	o					
rc	Warning	1179	Can not fail over 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 or isolated. If so, start the servers or return the servers to the cluster.	o	o	o					
rc	Information	1200	The resource %1 will be restarted since starting the resource %2 failed.	resource-restart by resource-acterr	-	o	o	o					
rc	Information	1201	The group %1 will be failed over to server %2 since starting the resource %3 failed.	group-failover by resource-acterr	-	o	o	o					
rc	Information	1202	The group %1 will be stopped since starting the resource %2 failed.	group-stop by resource-acterr	-	o	o	o					
rc	Information	1203	The cluster service will be stopped since starting the resource %1 failed.	service-stop by resource-acterr	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Information	1204	The system will be shut down since starting the resource %1 failed.	shutdown-system by resource-acterr	-	o	o	o					
rc	Information	1205	The system will be re-booted since starting the resource %1 failed.	reboot-system by resource-acterr	-	o	o	o					
rc	Information	1220	The resource %1 will be stopped again since stopping the resource %2 failed.	resource-stop retry by resource-deacterr	-	o	o	o					
rc	Information	1223	The cluster service will be stopped since stopping the resource %1 failed.	service-stop by resource-deacterr	-	o	o	o					
rc	Information	1224	The system will be shut down since stopping the resource %1 failed.	shutdown-system by resource-deacterr	-	o	o	o					
rc	Information	1225	The system will be re-booted since stopping the resource %1 failed.	reboot-system by resource-deacterr	-	o	o	o					
rc	Information	1241	Hardware reset will be generated since starting the resource %1 failed.	hw-reset by resource-acterr	-	o	o	o					
rc	Information	1242	STOP error will be generated since starting the resource %1 failed.	stop-error by resource-acterr	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Information	1281	Hardware reset will be generated since stopping the resource %1 failed.	hw-reset by resource-deacterr	-	o	o	o					
rc	Information	1282	STOP error will be generated since stopping the resource %1 failed.	stop-error by resource-deacterr	-	o	o	o					
rc	Information	1300	Script before final action upon activation failure in resource %1 started.	Script before final action upon resource activation failure started.	-	o	o	o					
rc	Information	1301	Script before final action upon activation failure in resource %1 completed.	Script before final action upon resource activation failure completed.	-	o	o	o					
rc	Information	1302	Script before final action upon deactivation failure in resource %1 started.	Script before final action upon resource deactivation failure started.	-	o	o	o					
rc	Information	1303	Script before final action upon deactivation failure in resource %1 completed.	Script before final action upon resource deactivation failure completed.	-	o	o	o					
rc	Information	1304	Script before activation in resource %1 started.	Script before resource activation started.	-	o	o	o					
rc	Information	1305	Script before activation in resource %1 completed.	Script before resource activation completed.	-	o	o	o					
rc	Information	1306	Script after activation in resource %1 started.	Script after resource activation started.	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Information	1307	Script after activation in resource %1 completed.	Script after resource activation completed.	-	o	o	o					
rc	Information	1308	Script before deactivation in resource %1 started.	Script before resource deactivation started.	-	o	o	o					
rc	Information	1309	Script before deactivation in resource %1 completed.	Script before resource deactivation completed.	-	o	o	o					
rc	Information	1310	Script after deactivation in resource %1 started.	Script after resource deactivation started.	-	o	o	o					
rc	Information	1311	Script after deactivation in resource %1 completed.	Script after resource deactivation completed.	-	o	o	o					
rc	Error	1340	Script before final action upon activation failure in resource %1 failed.	Script before final action upon resource activation failure failed.	Check the cause of the script failure and take measures.	o	o	o				o	
rc	Error	1341	Script before final action upon deactivation failure in resource %1 failed.	Script before final action upon resource deactivation failure failed.	Check the cause of the script failure and take measures.	o	o	o				o	
rc	Error	1342	Failed to execute script before activation in resource %1.	Script before resource activation failed.	Check the cause of the script failure and take measures.	o	o	o				o	
rc	Error	1343	Failed to execute script after activation in resource %1.	Script after resource activation has failed.	Check the cause of the script failure and take measures.	o	o	o				o	
rc	Error	1344	Failed to execute script before deactivation in resource %1.	Script before resource deactivation failed.	Check the cause of the script failure and take measures.	o	o	o				o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Error	1345	Failed to execute script after deactivation in resource %1.	Script after resource deactivation failed.	Check the cause of the script failure and take measures.	o	o	o				o	
rc	Error	1346	Failed to log on as a user.	Logon as a user failed	Check if the domain, account and password of the execution user are correctly set.	o	o	o					
rc	Information	1400	Forced stop (BMC Power Off) of server %1 has been requested.	forced-stop (bmc-poweroff) requested	-			o					
rc	Information	1401	Forced stop (BMC Power Cycle) of server %1 has been requested.	forced-stop (bmc-powercycle) requested	-			o					
rc	Information	1402	Forced stop (BMC Reset) of server %1 has been requested.	forced-stop (bmc-reset) requested	-			o					
rc	Information	1403	Forced stop (BMC NMI) of server %1 has been requested.	forced-stop (bmc-nmi) requested	-			o					
rc	Information	1404	Forced stop has been requested.	forced-stop (VMware vSphere CLI) requested	-			o					
rc	Information	1405	Script for forced stop has started.	Script for forced-stop has started.	-			o					
rc	Information	1406	Script for forced stop has completed.	Script for forced-stop has completed.	-			o					
rc	Error	1420	Forced stop (BMC Power Off) of server %1 failed.	forced-stop (bmc-poweroff) failed	The system may not be able to operate properly.	o	o	o				o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Error	1421	Forced stop (BMC Power Cycle) of server %1 failed.	forced-stop (bmc-powercycle) failed	The system may not be able to operate properly.	o	o	o				o	
rc	Error	1422	Forced stop (BMC Reset) of server %1 failed.	forced-stop (bmc-reset) failed	The system may not be able to operate properly.	o	o	o				o	
rc	Error	1423	Forced stop (BMC NMI) of server %1 failed.	forced-stop (bmc-nmi) failed	The system may not be able to operate properly.	o	o	o				o	
rc	Error	1424	Forced stop failed.	forced-stop (VMware vSphere CLI) failed	The system may not be able to operate properly.	o	o	o				o	
rc	Error	1425	Script for forced stop has failed. (%1)	Script for forced-stop has stopped.	Check the cause of the script failure and take measures.	o	o	o				o	
rc	Error	1426	Script for forced stop has timed out.	Timeout on the-script for forced stop	Check the cause of the script timeout and take measures.	o	o	o				o	
rc	Warning	1427	Group failover has been canceled because forced stop of server %1 failed.	Suppression of failover for forceed stop failed	Check the cause of the forced stop failure and take measures.	o	o	o					
rc	Information	1440	The CPU frequency has been set to high.	The CPU frequency has been set to high.	-	o	o	o					
rc	Information	1441	The CPU frequency has been set to low.	The CPU frequency has been set to low.	-	o	o	o					
rc	Information	1442	The CPU frequency has been set to %1.	The CPU frequency has been set.	-	o	o	o					
rc	Information	1443	CPU frequency setting has been switched to automatic control by cluster.	CPU frequency setting has been switched to automatic control by cluster.	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Warning	1450	Cluster action is disabled.	Cluster action is disabled.	-	o	o	o					
rc	Warning	1451	Ignored the automatic start of groups because automatic group startup is disabled.	Automatic group startup is not executed.	-	o	o	o					
rc	Warning	1452	Ignored the recovery action in resource activation because recovery action caused by group resource activation error is disabled.	Resource recovery action is not executed.	-	o	o	o					
rc	Warning	1453	Ignored the recovery action in resource deactivation because recovery action caused by group resource deactivation error is disabled.	Resource recovery action is not executed.	-	o	o	o					
rc	Information	1454	Cluster action is set disabled.	Cluster action is disabled.	-	o	o	o					
rc	Information	1455	Cluster action is set enabled.	Cluster action is enabled.	-	o	o	o					
rc	Error	1460	CPU frequency control cannot be used.	CPU frequency control cannot be used.	Check BIOS settings and kernel settings.	o	o	o				o	
rc	Error	1461	Failed to set the CPU frequency to high.	Setting the CPU frequency to high has failed.	Check BIOS settings and kernel settings. Check if the cluster service is started. Check if the configuration is set so that CPU frequency control is used.	o	o	o				o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Error	1462	Failed to set the CPU frequency to low.	Setting the CPU frequency to low has failed.	Check BIOS settings and kernel settings. Check if the cluster service is started. Check if the configuration is set so that CPU frequency control is used.	o	o	o				o	
rc	Error	1463	Failed to set the CPU frequency to %1.	Setting the CPU frequency has failed.	Check BIOS settings and kernel settings. Check if the cluster service is started. Check if the configuration is set so that CPU frequency control is used.	o	o	o				o	
rc	Error	1464	Failed to switch the CPU frequency setting to automatic control by cluster.	Switching the CPU frequency setting to automatic control by cluster has failed.	Check if the cluster service is started. Check if the configuration is set so that CPU frequency control is used.	o	o	o				o	
rc	Information	1470	Server %1 has been set as the destination for the group %2 (reason: %3).	destination found	-	o	o	o					
rc	Warning	1471	There is no appropriate destination for the group %1 (reason: %2).	destination not found	Check if any monitor resources detects an error on the other servers.	o	o	o				o	
rc	Warning	1472	Server %1 is not in a condition to start group %2 (reason: %3).	not in a condition to start group	Check if any monitor resources detects an error on the server.	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Error	1480	Group start has been canceled because waiting for group %1 to start has failed. (%2)	waiting for group to start failed	-	o	o	o					
rc	Warning	1481	Waiting for group %1 to start has failed. However, group start continues. (%2)	waiting for group to start failed	-	o	o	o					
rc	Error	1482	Group start has been canceled because waiting for group %1 to start has canceled.	waiting for group to start canceled	-	o	o	o					
rc	Warning	1483	Waiting for group %1 to start has canceled. However, group start continues.	waiting for group to start canceled	-	o	o	o					
rc	Error	1484	Group stop has been canceled because waiting for group %1 to stop has failed. (%2)	waiting for group to stop failed	-	o	o	o					
rc	Warning	1485	Waiting for group %1 to stop has failed. However, group stop continues. (%2)	waiting for group to stop failed	-	o	o	o					
rc	Error	1486	Group stop has been canceled because waiting for group %1 to stop has canceled.	waiting for group to stop canceled	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rc	Warning	1487	Waiting for group %1 to stop has canceled. However, group stop continues.	waiting for group to stop canceled	-	o	o	o					
rc	Information	1490	Group %1 started to check the double activation.	check the double activation started	-			o					
rc	Information	1491	Group %1 completed to check the double activation.	check the double activation ended	-			o					
rc	Error	1492	Group %1 failed to check the double activation.	check the double activation failed	Check the status of the group.	o	o	o				o	
rc	Information	1493	Waiting for group %1 to start for check the double activation.	group start continues for check the double activation	Check the status of the group.	o	o	o					
rm	Information	1501	Monitor %1 has been started.	Monitor start	-	o	o	o					
rm	Information	1502	Monitor %1 has been stopped.	Monitor stop	-	o	o	o					
rm	Information	1503	Monitor %1 does not monitor in this server.	Not target server	-	o	o	o					
rm	Warning	1504	Monitor %1 is in the warning status. (%2 : %3)	Monitor warn	Check the cause of Warning.	o	o	o				o	
rm	Warning	1505	The number of monitor resources reached the maximum number. (registered resource: %1)	invalid number of monitor resource	Check the cluster configuration data.	o	o	o				o	
rm	Warning	1506	Configuration of %1 is invalid. (%2 : %3)	invalid monitor resource	Check the cluster configuration data.	o	o	o				o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rm	Error	1507	Failed to start monitor %1.	monitor starting failed	The system may not be able to operate properly.	o	o	o	o	o		o	o
rm	Error	1508	Failed to stop monitor %1.	monitor stopping failed	The system may not be able to operate properly.	o	o	o				o	
rm	Error	1509	Monitor %1 detected an error. (%2 : %3)	monitor failed	Check the cause for monitor error.	o	o	o	o	o		o	o
rm	Information	1510	Monitor %1 is not monitored.	not monitored	-	o	o	o					
rm	Information	1511	Monitor resource has not been registered.	unregistered monitor resource	-	o	o	o					
rm	Information	1512	%1 was stopped for failure in monitor %2.	relation stop	-	o	o	o					
rm	Information	1513	%1 was restarted for failure in monitor %2.	relation restart	-	o	o	o					
rm	Information	1514	%1 was failed over for failure in monitor %2.	relation group failover	-	o	o	o					
rm	Information	1515	There was a request to stop cluster for failure in monitor %1.	cluster stop	-	o	o	o					
rm	Information	1516	There was a request to shut down the system for failure in monitor %1.	system shutdown	-	o	o	o					
rm	Information	1517	There was a request to restart the system for failure in monitor %1.	system reboot	-	o	o	o					
rm	Error	1518	Failed to stop %1 due to error detection of %2.	relation stop failure	Check the status of resources.	o	o	o				o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rm	Error	1519	Failed to restart %1 due to error detection of %2.	relation restart failure	Check the status of resources.	o	o	o				o	
rm	Error	1520	Failed to fail over %1 due to error detection of %2.	relation group failover failure	Check the status of resources.	o	o	o				o	
rm	Error	1521	Failed to stop the cluster due to error detection of %1.	cluster stop failure	The system may not be able to operate properly.	o	o	o				o	
rm	Error	1522	Failed to shut down the system due to error detection of %1.	os shutdown failure	The system may not be able to operate properly.	o	o	o				o	
rm	Error	1523	Failed to restart the system due to error detection of %1.	os reboot failure	The system may not be able to operate properly.	o	o	o				o	
rm	Error	1524	The group of monitor %1 is unknown.	unknown group	Check the cluster configuration data.	o	o	o				o	
rm	Warning	1525	No action is taken because %1 is not online.	not perform failure action	-	o	o	o				o	
rm	Information	1526	Status of monitor %1 was returned to normal.	status changed into normal	-	o	o	o					
rm	Information	1527	Status of monitor %1 was changed into unknown.	status changed into unknown	The system may not be able to operate properly.	o	o	o					
rm	Error	1528	Initialization error has occurred (%1 : %2)	process initialize error	The system may not be able to operate properly.	o	o	o				o	
rm	Information	1529	Monitor %1 was suspended.	suspend (single monitor)	-	o	o	o					
rm	Information	1530	Monitor %1 was resumed.	resume (single monitor)	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rm	Information	1531	All monitors were suspended.	suspend (all monitors)	-	o	o	o					
rm	Information	1532	All monitors were resumed.	resume (all monitors)	-	o	o	o					
rm	Information	1533	The polling interval of monitor %1 was changed into %2*%3.	change polling interval (single monitor)	-	o	o	o					
rm	Information	1534	The polling interval ratio of all monitors were changed into %1.	change polling interval (all monitors)	-	o	o	o					
rm	Information	1535	Causing intentional stop error was required because an error is detected by %1.	intentional panic	-	o	o	o					
rm	Error	1536	Causing intentional stop error has failed because an error is detected by %1.	intentional panic failure	The system may not be able to operate properly.	o	o	o				o	
rm	Warning	1537	Recovery will not be executed since server is suspending.	not recovery(server suspending)	Monitor resource is not recovered if the server is suspended (Network Partition Unsolved). Check the cause for being suspended (Network Partition Unsolved) and recover network partition resources to the normal status.	o	o	o				o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rm	Warning	1538	Recovery will not be executed since none of the recovery targets is active.	not recovery (all groups)	-	o	o	o					
rm	Warning	1571	Monitor %1 was delayed. (timeout=%2, response time=%3, rate=%4)	monitor delayed	Check the load on the server where monitoring delay was detected and reduce the load. Set longer timeout if the monitoring timeout is detected.	o	o	o				o	
rm	Warning	1572	Monitor %1 could not perform monitoring.	Delay in internal processing	The system may not be able to operate properly.	o	o	o					
rm	Warning	1600	Shutdown count reached the maximum number (%1). Final action of monitor %2 was ignored.	reached OS shutdown limit	-	o	o	o	o	o		o	o
rm	Warning	1601	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	o					
rm	Information	1700	Script before action(%1) upon failure in %2 monitor resource started.	Script before final action upon monitor resource failure started.	-	o	o	o					
rm	Information	1701	Script before action(%1) upon failure in %2 monitor resource completed.	Script before final action upon monitor resource failure completed.	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rm	Information	1720	Script before action(%1) upon failure in %2 monitor resource failed.	Script before final action upon monitor resource failure has failed.	-	o	o	o					
rm	Information	1750	The collecting of detailed information triggered by monitoring %1 error has been started (timeout=%2).	The collecting of detailed information has been started.	-	o	o	o					
rm	Information	1751	The collection of detailed information triggered by monitoring %1 error has been completed.	The collection of detailed information has been completed.	-	o	o	o					
rm	Information	1752	The collection of detailed information triggered by monitoring %1 error has been failed (%2).	The collection of detailed information has been failed.	-	o	o	o					
rm	Information	1800	The %1 service will be started by cluster system.	start service	-	o	o	o					
rm	Information	1801	The %1 service will be started again because the service has been stopped by cluster system. (retry: %2/%3)	start service (retry)	-	o	o	o					
rm	Information	1802	The %1 service will be resumed by cluster system.	resume service	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rm	Information	1803	The %1 service will be resumed again because the service has been suspended by cluster system. (retry: %2/%3)	resume service (retry)	-	o	o	o					
rm	Information	1804	The %1 service will be stopped by cluster system.	stop service	-	o	o	o					
rm	Information	1805	The %1 service entered the running state.	service running	-	o	o	o					
rm	Information	1806	The %1 service entered the stopped state.	service stopped	-	o	o	o					
rm	Warning	1811	Start request of the %1 service failed. Check the service status.	failed to start service	Check the service status.	o	o	o					
rm	Warning	1812	Resume request of the %1 service failed. Check the service status.	failed to resume service	Check the service status.	o	o	o					
rm	Warning	1813	Stop request of the %1 service failed. Check the service status.	failed to stop the service	Check the service status.	o	o	o					
rm	Warning	1816	The %1 service has been stopped by other than cluster system.	service stopped (error)	Check the cause of the service stopped.	o	o	o					
rm	Warning	1817	The %1 service has been suspended by other than cluster system.	service suspended (error)	Check the cause of the service suspended.	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rm	Warning	1819	Start or resume retry count for the %1 service exceeded the threshold (%2).	start or resume retry count exceeded the threshold	-	o	o	o					
rm	Information	1820	The cluster will be stopped because there was a failure in %1 service monitoring.	cluster stop (failure in service monitoring)	-	o	o	o					
rm	Information	1821	The system will be shut down because there was a failure in %1 service monitoring.	system shut down (failure in service monitoring)	-	o	o	o					
rm	Information	1822	The cluster will be rebooted because there was a failure in %1 service monitoring.	system reboot (failure in service monitoring)	-	o	o	o					
rm	Error	1870	Monitor resource %1 can not be controlled because the license is invalid.	cannot control monitor (invalid license)	Check if the license is registered or the license is valid.	o	o	o					
rm	Information	1890	Recovery script has executed because an error was detected in monitoring %1.	Recovery script upon monitor resource failure executed		o	o	o					
rm	Error	1891	Attempted to execute recovery script due to the error detected in monitoring %1, but failed.	failed to execute recovery script	Check the cause of the recovery script failure and take measures.	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rm	Error	1892	Failed to log on as a user.	Logon as a user failed	Check if the domain, account and password of the execution user are correctly set.	o	o	o					
rm	Information	1910	Dummy Failure of monitor resource %1 is enabled.	enable dummy failure	-	o	o	o					
rm	Information	1911	Dummy Failure of monitor resource %1 is disabled.	disable dummy failure	-	o	o	o					
rm	Information	1912	Dummy Failure of all monitors will be enabled.	enable dummy failure (all monitors)	-	o	o	o					
rm	Information	1913	Dummy Failure of all monitors will be disabled.	disable dummy failure (all monitors)	-	o	o	o					
rm	Warning	1914	An attempt was made to enable Dummy Failure of monitor resource %1, but failed.	failed to enable dummy failure	-	o	o	o					
rm	Warning	1915	An attempt was made to disable Dummy Failure of monitor resource %1, but failed.	failed to disable dummy failure	-	o	o	o					
rm	Information	1930	Recovery action caused by monitor resource error is disabled.	disable recovery action caused by monitor resource error	-	o	o	o					
rm	Information	1931	Recovery action caused by monitor resource error is enabled.	enable recovery action caused by monitor resource error	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
rm	Warning	1932	Ignored the recovery action in monitoring %1 because recovery action caused by monitor resource error is disabled.	not recovery (recovery action caused by monitor resource error has disabled)	-	o	o	o					
rm	Warning	1933	Recovery action at timeout occurrence was disabled, so the recovery action of monitor %1 was not executed.	disable recovery action caused by monitor resource timeout	-	o	o	o					
event	Information	2101	%1 service has been started.	Start service	-		o						
event	Information	2102	%1 service has been stopped.	Stop service	-		o						
event	Warning	2130	Timeout or other error has occurred while waiting for internal threads to stop. Detected internal error %1.	Threads were timeout	The system may not be able to operate properly.	o	o					o	
event	Error	2150	The specified parameters are invalid. Check the cluster configuration data.	Invalid configuration	Check the cluster configuration data.	o	o					o	
event	Error	2151	Failed to obtain the policy data. Check the data.	Invalid configuration	Check the policy file.	o	o					o	
event	Error	2152	Failed to obtain the registry data. System may be unable to operate correctly.	Failed to read registry	The system may not be able to operate properly.	o	o					o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
event	Error	2153	Failed to dispatch to the service manager. System may be unable to operate correctly.	Dispatch failed	The system may not be able to operate properly.	o	o					o	
event	Error	2154	Failed to create an internal resource. System may be unable to operate correctly.	failed to resource creation	The system may not be able to operate properly.	o	o					o	
event	Error	2155	Failed to create communication sockets. System may be unable to operate correctly.	failed to socket creation	The system may not be able to operate properly.	o	o					o	
event	Error	2156	Failed to control the shared memory. System may be unable to operate correctly.	failed to shared memory control	The system may not be able to operate properly.	o	o					o	
event	Error	2157	Failed to generate internal threads. System may be unable to operate correctly.	failed to thread creation	The system may not be able to operate properly.	o	o					o	
event	Error	2199	Other internal error has occurred. System may be unable to operate correctly.	Internal Error	The system may not be able to operate properly.	o	o					o	
trnsv	Error	2301	There was a notification from external (IP=%1), but it was denied.	Connection limit by client IP address	Check the client IP address from which the connection is permitted.	o	o	o					
trnsv	Information	2310	There was a notification (%1) from external (IP=%2).	Received an abnormity occurrence notification from outside	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
trnsv	Information	2320	Recovery action (%1) of monitoring %2 has been executed because a notification arrived from external.	Executed the recovery action at abnormity occurrence	-	o	o	o					
trnsv	Information	2321	Recovery action (%1) of monitoring %2 has been completed.	Completed the recovery action at abnormity occurrence	-	o	o	o					
trnsv	Error	2322	Attempted to recovery action (%1) of monitoring %2 due to the notification from external, but failed.	Failed to execute the recovery action at abnormity occurrence	Make sure that the recovery action on the environment is executable.	o	o	o					
trnsv	Information	2330	Action (%1) has been completed.	The requested action completed	-	o	o	o					
trnsv	Error	2331	Attempted to execute action (%1), but it failed.	The requested action Failed	Make sure that the recovery action is an executable environment.	o	o	o					
trnsv	Information	2340	Script before action of monitoring %1 has been executed.	Script execution started	-	o	o	o					
trnsv	Information	2341	Script before action of monitoring %1 has been completed.	Script execution completed	-	o	o	o					
trnsv	Error	2342	Attempted to execute script before action of monitoring %1, but it failed.	Script execution failed	Handle the problem after making sure the cause of script failure.	o	o	o					
trnsv	Error	2350	The system will be shutdown because cluster resume was failed.	Failed to resume the cluster daemon	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
trnsv	Error	2351	An attempt to shutdown the system failed.	Failed to shutdown the system	The system may not be able to operate properly.	o	o	o					
lankhb	Error	2851	Keep-alive timeout was detected on the server %1.	Keep-alive timeout	There is a server where keep-alive timeout is detected. Check the server error.	o	o	o				o	
lankhb	Error	2852	STOP error was detected on the server %1. (source:%2, exit code:%3)	STOP error	There is a server where STOP error is detected. Remove the failure of the server.	o	o	o				o	
lankhb	Error	2853	Hardware reset was detected on the server %1. (source:%2, exit code:%3)	Hardware reset	There is a server where hardware reset is detected. Remove the failure of the server.	o	o	o				o	
ptun	Warning	3301	The parameter (%1) exceeded the threshold (%2 p.c.). Timeout value=%3(sec) Data=%4(sec)	Delay warning	The parameter exceeded the threshold. Set an appropriate value to the parameter.	o	o	o				o	
ptun	Warning	3302	The parameter (%1) exceeded the threshold (%2 p.c.). Timeout value=%3 Data=%4 Server=%5 Resource=%6	Delay warning	The parameter exceeded the threshold. Set an appropriate value to the parameter.	o	o	o				o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
armcmd	Error	3501	ARMLOAD detected that the application (watchID=%2) of the group %1 has stopped. The number of failovers has reached the maximum count. Check what has caused the application to stop.	Application stopped	Check the cause for application to be stopped.	o	o					o	
armcmd	Error	3502	ARMLOAD detected that the application (watchID=%2) of the group %1 has stopped. Script will be restarted. Check what has caused the application to stop.	Application stopped	Check the cause for application to be stopped.	o	o					o	
armcmd	Error	3503	ARMLOAD detected that the application (watchID=%2) of the group %1 has stopped. The application will be restarted. Check what has caused the application to stop.	Application stopped	Check the cause for application to be stopped.	o	o					o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
armcmd	Error	3504	ARMLOAD detected that the application (watchID=%2) of the group %1 has stopped. Group will be failed over. Check what has caused the application to stop.	Application stopped	Check the cause for application to be stopped.	o	o					o	
armcmd	Error	3505	ARMLOAD detected that the application (watchID=%2) of the group %1has stopped. The server will shut down. Check what has caused the application to stop.	Application stopped	Check the cause for application to be stopped.	o	o					o	
armcmd	Error	3506	ARMLOAD detected that the service (watchID=%2) of the group %1 has stopped. The number of failovers has reached the maximum count. Check what has caused the application to stop.	Service stopped	Check the cause for service to be stopped.	o	o					o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
armcmd	Error	3507	ARMLOAD detected that the service (watchID=%2) of the group %1 has stopped. Script will be restarted. Check what has caused the application to stop.	Service stopped	Check the cause for service to be stopped.	o	o					o	
armcmd	Error	3508	ARMLOAD detected that the service (watchID=%2) of the group %1 has stopped. The service will be restarted. Check what has caused the application to stop.	Service stopped	Check the cause for service to be stopped.	o	o					o	
armcmd	Error	3509	ARMLOAD detected that the service (watchID=%2) of the group %1 has stopped. The group will be failed over. Check what has caused the application to stop.	Service stopped	Check the cause for service to be stopped.	o	o					o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
armcmd	Error	3510	ARMLOAD detected that the service (watchID=%2) of the group %1 has stopped. The server will shut down. Check what has caused the application to stop.	Service stopped	Check the cause for service to be stopped.	o	o					o	
armcmd	Error	3513	An error occurred in command %1. Shut down the server.	Command error	The system may not be able to operate properly.	o	o					o	
armcmd	Warning	3514	An abnormal connection to the shared name (%1) has been detected.	Share-name abnormally	The shared name cannot be used. Recover the devices that correspond to the shared name. (1) OS is unstable. Check the OS status. (2) Check if the power is supplied to the appropriate devices. (3) Check if the appropriate devices and the servers are connected properly.	o	o					o	
armcmd	Information	3515	Connection to the shared name (%1) has been recovered.	Share-name recovered	-	o	o						
armcmd	Warning	3516	Failed to start the application (WID=%2) of the group %1.	Application failed	Check the cause for failing to start the application.	o	o					o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
armcmd	Information	3517	The application (WID=%2) of the group %1 has restarted.	Application restarted	-	o	o						
armcmd	Warning	3518	Failed to start the service (WID=%2) of the group %1.	Service failed	Check the cause for failing to start the service.	o	o					o	
armcmd	Information	3519	The service (WID=%2) of the group %1 has restarted.	Service restarted	-	o	o						
armcmd	Error	3520	Failed to fail over the group %1. Check whether the server where the group can fail over exists.	Fail over failed	There may not be a server where the group can fail over.	o	o					o	
lcns	Information	3551	The trial license is valid until %1. (Product name:%2)	Trial version license (normal)	-	o	o						
lcns	Error	3552	The trial license has expired in %1. (Product name:%2)	Trial version license (expired)	Register the license.	o	o	o				o	
lcns	Warning	3553	The number of licenses is insufficient. The number of insufficient licenses is %1. (Product name:%2)	Insufficient	Register the license.	o	o					o	
lcns	Error	3554	The license is not registered. (Product name:%1)	Not registered	Register the license.	o	o	o				o	
lcns	Error	3555	The same license is registered with other servers. (Product name:%1)	Repetition registered	Delete the overlapping license.	o	o	o				o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
lcns	Error	3556	Manufacturer or model of this server is invalid.	Invalid manufacturer or model	Confirm the manufacturer or model.	o	o	o				o	
lcns	Error	3558	The registered license is invalid. (Product name:%1, Serial No:%2)	The license is invalid.	Register the valid lincense.	o	o	o				o	
lcns	Information	3559	The fixed term license is effective until %1. (Product name:%2)	Fixed term license (normal)	-	o	o						
lcns	Error	3560	The fixed term license has expired in %1. (Product name:%2)	Fixed term license (expired)	Register the license.	o	o	o				o	
logcmd	Information	3601		log command	-	o	x	x	x	x	x	x	x
diskw	Warning	3701	Monitor %1 was delayed. (timeout=%2 response time=%3 rate=%4)	monitor delayed	-	o	o	o				o	
userw	Warning	3711	Monitor %1 was delayed. (timeout=%2 response time=%3 rate=%4)	monitor delayed	-	o	o	o				o	
mail	Error	4101	mail failed(%1).(SMTP server: %2)	Mail failed	Make sure there is no error in the SMTP server and no problem communicating with the SMTP server.	o	o	o				o	
mail	Information	4102	mail succeed.(SMTP server: %1)	Mail succeeded	-		o	o					
apisv	Information	4301	There was a request to stop cluster from the %1(IP=%2).	Cluster stop	-	o		o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
apisv	Information	4302	There was a request to shutdown cluster from the %1(IP=%2).	Cluster shutdown	-	o		o					
apisv	Information	4303	There was a request to reboot cluster from the %1(IP=%2).	Cluster restart	-	o		o					
apisv	Information	4304	There was a request to suspend cluster from the %1(IP=%2).	Cluster suspend	-	o		o					
apisv	Information	4310	There was a request to stop server from the %1(IP=%2).	Cluster service stop	-	o		o					
apisv	Information	4311	There was a request to shutdown server from the %1(IP=%2).	Shutdown	-	o		o					
apisv	Information	4312	There was a request to reboot server from the %1(IP=%2).	Restart	-	o		o					
apisv	Information	4330	There was a request to start group(%1) from the %2(IP=%3).	Group start	-	o		o					
apisv	Information	4331	There was a request to start all groups from the %1(IP=%2).	All group start	-	o		o					
apisv	Information	4332	There was a request to stop group(%1) from the %2(IP=%3).	Group stop		o		o					
apisv	Information	4333	There was a request to stop all groups from the %1(IP=%2).	All group stop	-	o		o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
apisv	Information	4334	There was a request to restart group(%1) from the %2(IP=%3).	Group restart	-	o		o					
apisv	Information	4335	There was a request to restart all groups from the %1(IP=%2).	All group restart	-	o		o					
apisv	Information	4336	There was a request to move group(%1) from the %2(IP=%3).	Group move	-	o		o					
apisv	Information	4337	There was a request to move all groups from the %1(IP=%2).	All group move	-	o		o					
apisv	Information	4338	There was a request to failover group(%1) from the %2(IP=%3).	Group failover	-	o		o					
apisv	Information	4339	There was a request to failover all groups from the %1(IP=%2).	All group failover	-	o		o					
apisv	Information	4340	There was a request to migrate group(%1) from the %2(IP=%3).	Group migration	-	o		o					
apisv	Information	4341	There was a request to migrate all groups from the %1(IP=%2).	All group migration	-	o		o					
apisv	Information	4342	There was a request to failover all groups from the %1(IP=%2).	All group failover	-	o		o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
apisv	Information	4343	There was a request to cancel waiting for the dependence destination group of group %1 was issued from the %2.	Cancel waiting	-	o		o					
apisv	Information	4350	There was a request to start resource(%1) from the %2(IP=%3).	Resource start	-	o		o					
apisv	Information	4351	There was a request to start all resources from the %1(IP=%2).	All resource start	-	o		o					
apisv	Information	4352	There was a request to stop resource(%1) from the %2(IP=%3).	Resource stop	-	o		o					
apisv	Information	4353	There was a request to stop all resources from the %1(IP=%2).	All resource stop	-	o		o					
apisv	Information	4354	There was a request to restart resource(%1) from the %2(IP=%3).	Resource restart	-	o		o					
apisv	Information	4355	There was a request to restart all resources from the %1(IP=%2).	All resource restart	-	o		o					
apisv	Information	4360	There was a request to suspend monitor resources from the %1(IP=%2).	Monitor temporary stop	-	o		o					
apisv	Information	4361	There was a request to resume monitor resources from the %1(IP=%2).	Monitor restart	-	o		o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
apisv	Information	4362	There was a request to enable Dummy Failure of monitor resource(%1) from the %2(IP=%3).	Dummy Failure enabled	-	o		o					
apisv	Information	4363	There was a request to disable Dummy Failure of monitor resource(%1) from the %2(IP=%3).	Dummy Failure disabled	-	o		o					
apisv	Information	4364	There was a request to disable Dummy Failure of all monitor resources from the %1(IP=%2).	All Dummy Failure disabled	-	o		o					
apisv	Information	4370	There was a request to set CPU frequency from the %1(IP=%2).	CPU clock control	-	o		o					
apisv	Error	4401	A request to stop cluster was failed(%1).	Cluster stop failure	Check the cluster status.	o		o					
apisv	Error	4402	A request to shutdown cluster was failed(%1).	Cluster shutdown failure	Check the cluster status.	o		o					
apisv	Error	4403	A request to reboot cluster was failed(%1).	Cluster restart failure	Check the cluster status.	o		o					
apisv	Error	4404	A request to suspend cluster was failed(%1).	Cluster suspend failure	Check the cluster status.	o		o					
apisv	Error	4410	A request to stop server was failed(%1).	Cluster service stop failure	Check the cluster status.	o		o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
apisv	Error	4411	A request to shutdown server was failed(%1).	Server shutdown failure	Check the server status.	o		o					
apisv	Error	4412	A request to reboot server was failed(%1).	Server restart failure	Check the server status.	o		o					
apisv	Error	4430	A request to start group(%1) was failed(%2).	Group start failure	Check the group status.	o		o					
apisv	Error	4431	A request to start all groups was failed(%1).	All group start failure	Check the group status.	o		o					
apisv	Error	4432	A request to stop group(%1) was failed(%2).	Group stop failure	Check the group status.	o		o					
apisv	Error	4433	A request to stop all groups was failed(%1).	All group stop failure	Check the group status.	o		o					
apisv	Error	4434	A request to restart group(%1) was failed(%2).	Group restart failure	Check the group status.	o		o					
apisv	Error	4435	A request to restart all groups was failed(%1).	All group restart failure	Check the group status.	o		o					
apisv	Error	4436	A request to move group(%1) was failed(%2).	Group move failure	Check the group status.	o		o					
apisv	Error	4437	A request to move all groups was failed(%1).	All group move failure	Check the group status.	o		o					
apisv	Error	4438	A request to failover group(%1) was failed(%2).	Group failover failure	Check the group status.	o		o					
apisv	Error	4439	A request to failover all groups was failed(%1).	All group failover failure	Check the group status.	o		o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
apisv	Error	4440	A request to migrate group(%1) was failed(%2).	Group migration failure	Check the group status.	o		o					
apisv	Error	4441	A request to migrate all groups was failed(%1).	All group migration failure	Check the group status.	o		o					
apisv	Error	4442	A request to failover all groups was failed(%1).	All group failover failure	Check the group status.	o		o					
apisv	Error	4443	A request to cancel waiting for the dependency destination group of group %s has failed(%1).	Cancel waiting failure	Check the group status.	o		o					
apisv	Error	4450	A request to start resource(%1) was failed(%2).	Resource start failure	Check the resource status.	o		o					
apisv	Error	4451	A request to start all resources was failed(%1).	All resource start failure	Check the resource status.	o		o					
apisv	Error	4452	A request to stop resource(%1) was failed(%2).	Resource stop failure	Check the resource status.	o		o					
apisv	Error	4453	A request to stop all resources was failed(%1).	All resource stop failure	Check the resource status.	o		o					
apisv	Error	4454	A request to restart resource(%1) was failed(%2).	Resource restart failure	Check the resource status.	o		o					
apisv	Error	4455	A request to restart all resources was failed(%1).	All resource restart failure	Check the resource status.	o		o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
apisv	Error	4460	A request to suspend monitor resource was failed(%1).	Monitor temporary stop failure	Check the monitor resource status.	o		o					
apisv	Error	4461	A request to resume monitor resource was failed(%1).	Monitor restart failure	Check the monitor resource status.	o		o					
apisv	Error	4462	A request to enable Dummy Failure of monitor resource(%1) was failed(%2).	Dummy Failure enabled	Check the monitor resource status.	o		o					
apisv	Error	4463	A request to disable Dummy Failure of monitor resource(%1) was failed(%2).	Dummy Failure disabled	Check the monitor resource status.	o		o					
apisv	Error	4464	A request to disable Dummy Failure of all monitor resource was failed(%1).	All Dummy Failure disabled	Check the monitor resource status.	o		o					
apisv	Error	4470	A request to set CPU frequency was failed(%1).	CPU clock control failure	Check if the server handles CPU clock control.	o		o					
apisv	Error	4480	Initializing internal communication (%1) failed (port=%2).	Initializing internal communication failed.	Check if an application other than EXPRESSCLUSTER uses the port.	o		o					
userw	Warning	5001	Monitor %1 was delayed. (timeout=%2 response time=%3 rate=%4)	Monitor delayed	-	o	o	o				o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
genw	Warning	5151	Since loss of the target script (%1) has been detected, it was rebooted.	Since loss of the target script (%1) has been detected, it was rebooted	-	o	o						
db2 ftp http imap4 odbc oracle otx pop3 psql smtp sqlserver tux was wls	Warning	10001	%1	Error message for each monitored application.	Take appropriate action for the application failure by following the error message.	o	x	x	x	x	x	x	x

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
db2w ftpw httpw imap4w odbcw oraclew otxw pop3w psqlw smtpw sqlserverw tuxw wasw wlsw db2 ftp http imap4 odbc oracle otx pop3 psql smtp sqlserver tux was wls	Warning	10002	The API Error of Windows occurred.%1	API error of Windows has occurred. %1 is API error code.	Take appropriate action for the OS failure by following the error code.	o	x	x	x	x	x	x	x
mrw	Warning	4901	Monitor %1 is in the warning status. (%2 : %3)	Monitor warn	Check the cause of Warning.	o	o	o				o	
mrw	Warning	4902	Configuration of %1 is invalid. (%2 : %3)	invalid monitor resource	Check the cluster configuration data.	o	o	o				o	
mrw	Error	4903	Failed to start monitor %1.	monitor starting failed	The system may not be able to operate properly.	o	o	o	o	o		o	o

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
mrw	Error	4904	Failed to stop monitor %1.	monitor stopping failed	The system may not be able to operate properly.	o	o	o				o	
mrw	Error	4905	Monitor %1 detected an error. (%2 : %3)	monitor failed	Check the cause for monitor error.	o	o	o	o	o		o	o
mrw	Information	4906	Monitor resource has not been registered.	unregistered monitor resource	-	o	o	o					
mrw	Information	4907	%1 was stopped for failure in monitor %2.	relation stop	-	o	o	o					
mrw	Information	4908	%1 was restarted for failure in monitor %2.	relation restart	-	o	o	o					
mrw	Information	4909	%1 was failed over for failure in monitor %2.	relation group failover	-	o	o	o					
mrw	Information	4910	There was a request to stop cluster for failure in monitor %1.	cluster stop	-	o	o	o					
mrw	Information	4911	There was a request to shut down the system for failure in monitor %1.	system shutdown	-	o	o	o					
mrw	Information	4912	There was a request to restart the system for failure in monitor %1.	system reboot	-	o	o	o					
mrw	Information	4913	Failed to stop %1 due to error detection of %2.	relation stop failure	Check the status of resources.	o	o	o				o	
mrw	Error	4914	Failed to restart %1 due to error detection of %2.	relation restart failure	Check the status of resources.	o	o	o				o	

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
mrw	Error	4915	Failed to fail over %1 due to error detection of %2.	relation group failover failure	Check the status of resources.	o	o	o				o	
mrw	Error	4916	Failed to stop the cluster due to error detection of %1.	cluster stop failure	The system may not be able to operate properly.	o	o	o				o	
mrw	Error	4917	Failed to shut down the system due to error detection of %1.	os shutdown failure	The system may not be able to operate properly.	o	o	o				o	
mrw	Error	4918	Failed to restart the system due to error detection of %1.	os reboot failure	The system may not be able to operate properly.	o	o	o				o	
mrw	Error	4919	The group of monitor %1 is unknown.	unknown group	Check the cluster configuration data.	o	o	o				o	
mrw	Warning	4920	No action is taken because %1 is not online.	not perform failure action	-	o	o	o				o	
mrw	Information	4921	Status of monitor %1 was returned to normal.	status changed into normal	-	o	o	o					
mrw	Information	4922	Status of monitor %1 was changed into unknown.	status changed into unknown	The system may not be able to operate properly.	o	o	o					
mrw	Error	4923	Initialization error has occurred (%1 : %2)	process initialize error	The system may not be able to operate properly.	o	o	o				o	
mrw	Information	4924	Causing intentional stop error was required because an error is detected by %1.	intentional panic	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
mrw	Error	4925	Causing intentional stop error has failed because an error is detected by %1.	intentional panic failure	The system may not be able to operate properly.	o	o	o				o	
mrw	Warning	4926	Recovery will not be executed since server is suspending.	not recovery(server suspending)	Monitor resource is not recovered if the server is suspended (Network Partition Unsolved). Check the cause for being suspended (Network Partition Unsolved) and recover network partition resources to the normal status.	o	o	o				o	
mrw	Warning	4927	Shutdown count reached the maximum number (%1). Final action of monitor %2 was ignored.	reached OS shutdown limit	-	o	o	o	o	o		o	o
mrw	Information	4928	Script before action(%1) upon failure in %2 monitor resource started.	Script before final action upon monitor resource failure started.	-	o	o	o					
mrw	Information	4929	Script before action(%1) upon failure in %2 monitor resource completed.	Script before final action upon monitor resource failure completed.	-	o	o	o					
mrw	Information	4930	Script before action(%1) upon failure in %2 monitor resource failed.	Script before final action upon monitor resource failure has failed.	-	o	o	o					

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
mrw	Information	4931	Recovery script has executed because an error was detected in monitoring %1.	Recovery script upon monitor resource failure executed		o	o	o					
mrw	Error	4932	Attempted to execute recovery script due to the error detected in monitoring %1, but failed.	failed to execute recovery script	Check the cause of the recovery script failure and take measures.	o	o	o					
mrw	Warning	4933	Ignored the recovery action in monitoring %1 because recovery action caused by monitor resource error is disabled.	not recovery (recovery action caused by monitor resource error has disabled)	-	o	o	o					
mrw	Information	4934	There was a notification (%1) from external. (detail: %2)	An error notification from external was received.	-	o	o	o					
tuxw	Warning	10004	The API Error of Application occurred.%1	API error of application has occurred. %1 is API error code.	Take appropriate action for the application failure by following the error code.	o							
jra	Error	20251	Internal processing has failed. (%1)	An internal error occurred. %1: Internal error code	Check if JVM monitor resource is running. If not, restart the server.		o						
jra	Error	20252	Startup has failed due to an error of the setting value. (%1)	Specified setting valueis invalid. %1: Internal error code	Check if the Java installation path is correct.		o						

Continued on next page

Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
sra	Error	20301	Service was terminated because reading an SG file failed.	An error occurred in reading the setting file.	Check the message separately issued.		o						
sra	Error	20302	The installation folder name could not be acquired.	The installation folder name could not be acquired.	Restart the cluster, or execute the suspend and resume.		o						
sra	Error	20305	No IModules could be loaded.	Some files required to execute this product do not exist. So, this product failed to start.	Install this product again.		o						
sra	Error	20306	An unexpected error occurred.	An attempt was made to start this product, but failed for some reason or another.	Restart the cluster, or execute the suspend and resume.		o						
sra	Error	20307	Internal error occurred.	This product has terminated abnormally.	See the system log message issued last.		o						
sra	Error	20308	An error has occurred in issuing WMI. %1(ErrorID:0x%2 class:%3) %1: Message %2: Error code %3: Information that could not be acquired	Statistics information could not be acquired. %1: Message %2: Error code %3: Information that could not be acquired	Restart the cluster, or execute the suspend and resume.		o						

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Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
sra	Warning	20336	Script is timeout. (%1 %2) %1: Script file name %2: Argument	An internal error has occurred.	Check the load status of the server and remove the load.		o						
sra	Information	20346	%1 event succeeded. %1: Event type (Boot, Shutdown, Stop, Start, or Flush)	The operation management command has been executed. The executed event type %1 (boot, shutdown, stop, start, or flush) is output.	-		o						
sra	Warning	20347	%1 was smaller than %2, it changed to minimum value(%3).	The configuration value of the monitoring is not correct. %1:Variable name %2:Variable name %3:configured value	Check the configured value on the Cluster WebUI.		o						
sra	Warning	20348	%1 was too long compared with %2, it changed to %1(%3).	The configuration value of the monitoring is not correct. %1:Variable name %2:Variable name %3:configured value	Check the configured value on the Cluster WebUI.		o						

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Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
sra	Warning	20349	%1 was smaller than %2, it changed to %2 value(%3).	The configuration value of the monitoring is not correct. %1:Variable name %2:Variable name %3:configured value	Check the configured value on the Cluster WebUI.		o						
sra	Warning	20350	%1 was larger than %2, it changed to %2 value(%3).	The configuration value of the monitoring is not correct. %1:Variable name %2:Variable name %3:configured value	Check the configured value on the Cluster WebUI.		o						
sra	Warning	20351	%1 was over than Total disk size, %2.	The configuration value of the monitoring is not correct. %1:Variable name %2:configured value	Check the configured value on the Cluster WebUI.		o						
sra	Warning	20352	%1 was over than Total disk size, %2.	The configuration value of the monitoring is not correct. %1:Variable name %2:configured value	Check the configured value on the Cluster WebUI.		o						

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Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
sra	Warning	20353	Delete MOUNT[%1] in DiskCapacity list.	The configuration value of the monitoring is not correct. %1:configured value	Check the configured value on the Cluster WebUI.		o						
sra	Warning	20354	%1 was illegal value (%2).	The configuration value of the monitoring is not correct. %1:Variable name %2:configured value	Check the configured value on the Cluster WebUI.		o						
sra	Warning	20355	The DriveLetter of %1 is not ready, or Drive type was not fixed.(DriveLetter = %2)	The configuration value of the monitoring is not correct. %1:Variable name %2:configured value	Check the configured value on the Cluster WebUI.		o						
sra	Error	20358	A process resource error was detected. (type = cpu, pid = %1, %2)	An error was detected in monitoring the CPU usage rate of the specific process. %1:Process ID %2:Process name	Check the possible causes of the monitoring failure.	o	o						

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Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
sra	Error	20358	A process resource error was detected. (type = memory leak, pid = %1, %2)	An error was detected in monitoring the memory usage of the specific process. %1:Process ID %2:Process name	Check the possible causes of the monitoring failure.	o	o						
sra	Error	20358	A process resource error was detected. (type = file leak, pid = %1, %2)	An error was detected in monitoring the number of the open files of the specific process. %1:Process ID %2:Process name	Check the possible causes of the monitoring failure.	o	o						
sra	Error	20358	A process resource error was detected. (type = thread leak, pid = %1, %2)	An error was detected in monitoring the number of the threads of the specific process. %1:Process ID %2:Process name	Check the possible causes of the monitoring failure.	o	o						
sra	Error	20358	A process resource error was detected. (type = same name process, pid = %1, %2)	An error was detected in monitoring a process with the same name. %1:Process ID %2:Process name	Check the possible causes of the monitoring failure.	o	o						

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Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
sra	Error	20359	A system resource error was detected. (type = cpu)	An error was detected in monitoring the CPU usage rate of the system.	Check the possible causes of the monitoring failure.	o	o						
sra	Error	20359	A system resource error was detected. (type = memory)	An error was detected in monitoring the usage amount of the total memories of the system.	Check the possible causes of the monitoring failure.	o	o						
sra	Error	20359	A system resource error was detected. (type = swap)	An error was detected in monitoring the usage amount of the total virtual memories of the system.	Check the possible causes of the monitoring failure.	o	o						
sra	Error	20360	A disk resource error was detected. (type = used rate, level = NOTICE, %1)	A notice-level error was detected in monitoring the disk usage rate. %1:Logical drive	Check the possible causes of the monitoring failure.	o	o						
sra	Error	20360	A disk resource error was detected. (type = used rate, level = WARNING, %1)	A warning-level error was detected in monitoring the disk usage rate. %1:Logical drive	Check the possible causes of the monitoring failure.	o	o						

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Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
sra	Error	20360	A disk resource error was detected. (type = free space, level = NOTICE, %1)	A notice-level error was detected in monitoring the free space of disks. %1:Logical drive	Check the possible causes of the monitoring failure.	o	o						
sra	Error	20360	A disk resource error was detected. (type = free space, level = WARNING, %1)	A warning-level error was detected in monitoring the free space of disks. %1:Logical drive	Check the possible causes of the monitoring failure.	o	o						
webmgr	Warning	5121	HTTPS configuration isn't correct, HTTPS mode doesn't work. Please access WebManager by HTTP mode.	Invalid HTTPS setting	-	o	o	o					
sss	Error	20004	Failed to get the system drive letter.	The system drive letter could not be acquired.	The system may not be able to operate properly.			o					
sss	Error	20005	Failed to get the server name.	The server name could not be acquired.	The system may not be able to operate properly.			o					
sss	Info	20006	The server name has been updated.	The server name has been updated.	-	o		o					
sss	Error	20007	Failed to update the configuration file.	The configuration file could not be updated.	Check the configuration data.	o		o					
sss	Info	20008	The configuration file has been updated.	The configuration file has been updated.	-			o					

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Table 4.3 – continued from previous page

Module Type	Event Type	Event ID	Messages	Description	Solution	1	2	3	4	5	6	7	8
sss	Error	20009	The content of the configuration file is invalid.	The content of the configuration file is invalid.	Check the configuration data.			o					
sss	Error	20010	Failed to start %1 service.	The %1 service could not be started.	The system may not be able to operate properly.	o		o					
sss	Info	20012	%1 service has been started.	The %1 service has been started.	-			o					
sss	Info	20013	%1 service has been stopped.	The %1 service has been stopped.	-			o					
sss	Info	20014	The redundant module of the LAN board has been started.	The redundant module of the LAN board has been started.	Memory or OS resources may not be sufficient. Check them.			o					
sss	Error	20015	Failed to start the redundant module of the LAN board.	The redundant module of the LAN board could not be started.	-	o		o					
ncctl	Error	20101	An error was detected in LAN board %1.	An error was detected in LAN board %1.	Check whether the settings of the standby LAN board are correct.	o		o					
ncctl	caution	20102	Changing LAN board %1 to LAN board %2.	LAN board %1 will now be switched to LAN board %2.	-	o		o					
ncctl	Error	20103	The operation of LAN board %1 failed.	The operation of LAN board %1 failed.	-	o		o					

4.3 Driver event log messages

4.3.1 Kernel mode LAN heartbeat driver

The following events are recorded in system event log as the source "clphb".

Module Type	Event Type	Event ID	Message	Description	Solution
clphb	Error	3001	Fatal error occurred in the driver.	Fatal error occurred in the driver.	Kernel memory or OS resource may not be sufficient. Check with performance monitor.
clphb	Info	1001	Signal has been set to the shutdown event due to the keep alive timeout.	User mode is stalled.	Kernel memory or OS resource may not be sufficient. Check with performance monitor.
clphb	Info	1002	Signal has been set to the shutdown event due to the FILTER closing action.	Received FILTER closing action.	Kernel memory or OS resource may not be sufficient. Check with performance monitor.

4.4 Detailed information in activating and deactivating group resources

The following information is displayed in the messages recorded in event logs or alert logs as detail information when the resource activation / deactivation fails.

4.4.1 Application resource

Module Type	Type	Return Value	Message	Description	Solution
appli	Error	5	The application path is invalid.	The application path is invalid.	Check if the application path is correct.
appli	Error	7	Failed to start application.	Failed to start application.	Memory or OS resources may not be sufficient. Check them.
appli	Error	8	Failed to stop application.	Failed to stop application.	Memory or OS resources may not be sufficient. Check them.
appli	Error	10	Timeout occurred.	Timeout occurred.	Check if the application terminates within the timeout period.
appli	Error	11	Failed to log on as a user.	Failed to log on as a user.	Check if a domain, an account and a password of the logon user are set properly.
appli	Error	12	Returned exit code %1.	The non-resident type application returned abnormal error code.	Check the cause for the abnormal error code.
appli	Error	Others	Internal error occurred.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.

4.4.2 Script resource

Module Type	Type	Return Value	Message	Description	Solution
script	Error	6	Failed to execute start script.	Failed to execute start script.	Memory or OS resources may not be sufficient. Check them.
script	Error	7	Failed to execute stop script.	Failed to execute stop script.	Memory or OS resources may not be sufficient. Check them.
script	Error	8	Returned exit code %1.	The synchronous type script returned abnormal error code.	Check the cause for the abnormal error code.
script	Error	9	Timeout occurred.	Timeout occurred.	Check if the script terminates within the timeout period.

Continued on next page

Table 4.6 – continued from previous page

Module Type	Type	Return Value	Message	Description	Solution
script	Error	10	Failed to log on as a user.	Logon as a user failed	Check if the domain, account and password of the execution user are correctly set.
script	Error	Others	Internal error occurred.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.

4.4.3 Service resource

Module Type	Type	Return Value	Message	Description	Solution
service	Error	5	Failed to get service control right.	Failed to get service control right.	Check if the service name is correct.
service	Error	6	Failed to start service.	Failed to start service.	Check the status of the service.
service	Error	7	Failed to stop service.	Failed to stop service.	Check the status of the service.
service	Error	8	Service has already been running.	Service has already been running.	Check the status of the service. It is possible to configure settings not to make it an error when the service is already running.
service	Error	10	Timeout occurred.	Timeout occurred.	Check if the service starts or stops within the timeout period.
service	Error	13	Computer name related to service that is running is different from virtual computer name of target VCOM resource.	Computer name related to service that is running is different from virtual computer name of target VCOM resource.	When you set the same service to more than one service, do not set the target VCOM resource name.
service	Error	Others	Internal error occurred.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.

4.4.4 Virtual machine resource

Module Type	Type	Return Value	Message	Description	Solution
vm	Error	5	Virtual Machine configuration data is invalid.	The configuration file of the virtual machine may be invalid.	Check if VM configuration file path is correct.

Continued on next page

Table 4.8 – continued from previous page

Module Type	Type	Return Value	Message	Description	Solution
vm	Error	6	Virtual machine has been already started.	The virtual machine failed to start because the virtual machine has been already started.	Check the status of the virtual machine.
vm	Error	7	Hyper-V Virtual Machine Management service has not started yet.	Hyper-V Virtual Machine Management has not started yet.	Check the status of Hyper-V Virtual Machine Management service.
vm	Error	8	Failed to start virtual machine.	Failed to start virtual machine.	Check the status of the virtual machine and if the configuration file is valid.
vm	Error	9	Failed to stop virtual machine.	Failed to stop virtual machine.	Check the status of the virtual machine.
vm	Error	10	Failed to save virtual machine.	Failed to temporarily stop and export the virtual machine.	Check if the status of the virtual machine is Running on Hyper-V manager.
vm	Error	11	Failed to resume virtual machine.	Failed to import and restart the virtual machine.	Check if VM configuration file path is correct.
vm	Error	13	Timeout occurred.	It took much time to import, export, start or stop the virtual machine.	Check if the timeout value is proper.
vm	Error	Others	Internal error occurred.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.

4.5 Detailed information of monitor resource errors

The following information is displayed in the message recorded in event logs or alert logs as detail information when monitor resource detects an error.

4.5.1 Application monitor resource

Module Type	Type	Return Value	Message	Description	Solution
appliw	Error	9	Process did not exist. (Stop code : %1)	Process did not exist. (The stop code is displayed only if it can be acquired.)	Process of the monitoring target application resource was cleared due to some error. Check it.
appliw	Error	11	Failed to log on as a user.	Failed to log on as a user.	Check if a domain, an account and a password of the logon user are set properly.
appliw	Warning	Others	Internal error occurred.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.

4.5.2 DB2 monitor resource

Module Type	Type	Return Value	Message	Description	Solution
db2w	Warning	190	Initialization has failed[%1].	Initialization process has failed. It may be due to memory allocation failure. Information on the initialization may be displayed on %1.	OS itself may have errors. Restart the server or take other actions.
db2w	Warning	102	The configured value is not correct.	The configured value of the monitoring is not correct.	Check the configured value on the Cluster WebUI because they may not be correct.
db2w	Warning	110	A function error was detected.	A function error occurred.	Monitor applications or OS may have errors. Check the status of the system.
db2w	Error	11	An error was detected in accessing the monitor target.	Accessing the database failed.	Check configured values on the Cluster WebUI (such as a database name). If there is no error, check the database has errors.

Continued on next page

Table 4.10 – continued from previous page

Module Type	Type	Return Value	Message	Description	Solution
db2w	Warning	112	An error was detected in user authentication.	Accessing the database failed.	Check configured values on the Cluster WebUI (such as a user name or a password). If there is no error, check the database has errors.
db2w	Warning	113	An application error was detected.	A database error was detected.	Refer to error messages for database described separately to fix errors.
db2w	Error	14	An error was detected in executing SQL statement [%1].	Executing SQL statement failed. The executed SQL statement is displayed on %1.	Refer to error messages for database described separately to fix errors.
db2w	Error	15	A data error was detected.	A value on the table of database has an error.	Database may be corrupt. Stop the database operation and investigate it. This error may occur when more than one monitoring is performed with the same monitor table name concurrently. Check if the values set in the multi-directional environment are appropriate.
db2w	Warning	140	No license is registered.	The license has not been registered.	Register the license.
db2w	Warning	160	Failed to obtain the configuration data.	The configured value could not be obtained.	OS may have errors. Restart the server or take other actions.
db2w	Warning	190	Internal error.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.

4.5.3 Disk RW monitor resource

Module Type	Type	Return Value	Message	Description	Solution
diskw	Error	5	Failed to open the file.	Failed to open the file.	Check if the disk driver of the monitoring target disk is loaded, the 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	6	Failed to write in the file.	Failed to write in the file.	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	7	Failed to synchronize the disk of the file.	Failed to synchronize the disk of the file.	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	8	Failed to close the file.	Failed to close the file.	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	71	Timeout has occurred when opening the file.	Timeout has occurred when opening the file.	Check if the monitoring target disk is connected properly, the disk is powered on, or no other errors are occurred on the disk. The system may be under high load, or memory or OS resources may not be sufficient. Check them.

Continued on next page

Table 4.11 – continued from previous page

Module Type	Type	Return Value	Message	Description	Solution
diskw	Error	72	Timeout has occurred when writing in the file.	Timeout has occurred when writing in the file.	Check if the monitoring target disk is connected properly, the disk is powered on, or no other errors are occurred on the disk. The system may be under high load, or memory or OS resources may not be sufficient. Check them.
diskw	Error	73	Timeout has occurred when synchronizing the disk of the file.	Timeout has occurred when synchronizing the disk of the file.	Check if the monitoring target disk is connected properly, the disk is powered on, or no other errors are occurred on the disk. The system may be under high load, or memory or OS resources may not be sufficient. Check them.
diskw	Error	74	Timeout has occurred when closing the file.	Timeout has occurred when closing the file.	Check if the monitoring target disk is connected properly, the disk is powered on, or no other errors are occurred on the disk. The system may be under high load, or memory or OS resources may not be sufficient. Check them.
diskw	Warning	100	Failed to add keep alive drive when initializing keep alive driver.	Failed to add keep alive drive when initializing keep alive driver.	Memory or OS resources may not be sufficient. Check them.
diskw	Warning	101	There is not enough disk space.	There is not enough disk space.	Secure free space on the monitoring target disk.
diskw	Warning	102	Timeout has occurred when initializing internal resources.	Timeout has occurred when initializing internal resources.	Memory or OS resources may not be sufficient. Check them.
diskw	Warning	103	Timeout has occurred when other timing.	Timeout has occurred when other timing.	The system may be under high load, or memory or OS resources may not be sufficient. Check them.
diskw	Warning	104	Failed to allocate memory.	Failed to allocate memory.	Memory or OS resources may not be sufficient. Check them.
diskw	Warning	105	Internal error occurred.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.

Continued on next page

Table 4.11 – continued from previous page

Module Type	Type	Return Value	Message	Description	Solution
diskw	Warning	190	Initialization error has occurred in internal resource.	Initialization error has occurred in internal resource.	Memory or OS resources may not be sufficient. Check them.

4.5.4 FTP monitor resource

Module Type	Type	Return Value	Message	Description	Solution
ftpw	Error	11	An error was detected in accessing the monitor target.	The access to the monitor application failed.	Check configured values on the Cluster WebUI (such as an IP address). If there is no error, check if the monitor application has errors.
ftpw	Error	12	An error was detected in user authentication.	The user authentication failed.	Check configured values on the Cluster WebUI (such as a user name or a password). If there is no error, check if the monitor application has errors
ftpw	Warning	110	A function error was detected.	A function error occurred.	Monitor applications or OS may have errors. Check the status of the system.
ftpw	Warning	113	An application error was detected.	A monitor application error was detected.	Refer to error messages for monitor applications described separately to fix errors.
ftpw	Warning	115	A data error was detected.	A value of the response data has an error.	Refer to error messages for monitor applications described separately to fix errors.
ftpw	Warning	140	No license is registered.	The license has not been registered.	Register the license.
ftpw	Warning	188	Internal error.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.
ftpw	Warning	190	Initialization has failed[%1].	Initialization process has failed. It may be due to memory allocation failure or a failure in obtaining the configured value. Information on the initialization may be displayed on %1.	The configured value of the Cluster WebUI may be incorrect. Check the value. If there is no problem with the value, OS itself may have errors. Restart the server or take other actions

4.5.5 Custom monitor resource

Module Type	Type	Return Value	Message	Description	Solution
genw	Error	5	Failed to start script.	Failed to start script.	Check if the script can be executed.
genw	Error	6	Script did not exist.	The asynchronous type script terminated abnormally.	Check the cause of the termination of the script.
genw	Error	8	Returned exit code %1.	The synchronous type script returned abnormal error code.	Check the cause for the abnormal error code.
genw	Error	9	Failed to log on as a user.	Logon as a user failed	Check if the domain, account and password of the execution user are correctly set.
genw	Warning	100	Timeout occurred.	The synchronous type script did not terminate within the timeout period.	Check the cause of the delay of the script.
genw	Warning	100	Returned exit code %1.	The synchronous type script returned abnormal error code.	Check the cause for the abnormal error code.
genw	Warning	100 190	Script path is invalid.	The configured value of the script path is not correct.	Check the configured value on the Cluster WebUI.
genw	Warning	100 190	Internal error occurred.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.
genw	Warning	190	Parameter is invalid.	The configured value of the monitoring is not correct.	Check the configured value on the Cluster WebUI.
genw	Warning	190	Resource does not exist in cluster configuration data.	The cluster configuration data is not correct.	Check the cluster configuration data on the Cluster WebUI.
genw	Warning	190	Failed to get the value from cluster configuration data.	The cluster configuration data is not correct.	Check the cluster configuration data on the Cluster WebUI.
genw	Warning	190	Script did not exist.	The asynchronous type script terminated abnormally.	Check the cause of the termination of the script.
genw	Error	200	Failed to start script.	Failed to start script.	Check if the script can be executed.

4.5.6 HTTP monitor resource

Module Type	Type	Return Value	Message	Description	Solution
httpw	Error	11	An error was detected in accessing the monitor target.	The access to the monitor application failed.	Check configured values on the Cluster WebUI (such as an IP address). If there is no error, check if the monitor application has errors.
httpw	Warning	110	A function error was detected.	A function error occurred.	Monitor applications or OS may have errors. Check the status of the system.
httpw	Warning	113	An application error was detected.	A monitor application error was detected.	Refer to error messages for monitor applications described separately to fix errors.
httpw	Warning	115	A data error was detected.	A value of the response data has an error.	Refer to error messages for monitor applications described separately to fix errors.
httpw	Warning	140	No license is registered.	The license has not been registered.	Register the license.
httpw	Warning	188	Internal error.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.
httpw	Warning	190	Initialization has failed[%1].	Initialization process has failed. It may be due to memory allocation failure or a failure in obtaining the configured value. Information on the initialization may be displayed on %1.	The configured value of the Cluster WebUI may be incorrect. Check the value. If there is no problem with the value, OS itself may have errors. Restart the server or take other actions.

4.5.7 IMAP4 monitor resource

Module Type	Type	Return Value	Message	Description	Solution
imap4w	Error	11	An error was detected in accessing the monitor target.	The access to the monitor application failed.	Check configured values on the Cluster WebUI (such as an IP address). If there is no error, check if the monitor application has errors.

Continued on next page

Table 4.15 – continued from previous page

Module Type	Type	Return Value	Message	Description	Solution
imap4w	Error	12	An error was detected in user authentication.	The access to the monitor application failed.	Check configured values on the Cluster WebUI (such as a user name or a password). If there is no error, check if the monitor application has errors.
imap4w	Warning	110	A function error was detected.	A function error occurred.	Monitor applications or OS may have errors. Check the status of the system.
imap4w	Warning	113	An application error was detected.	A monitor application error was detected.	Refer to error messages for monitor applications described separately to fix errors.
imap4w	Warning	115	A data error was detected.	A value of the response data has an error.	Refer to error messages for monitor applications described separately to fix errors.
imap4w	Warning	140	No license is registered.	The license has not been registered.	Register the license.
imap4w	Warning	188	Internal error.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.
imap4w	Warning	190	Initialization has failed[%1].	Initialization process has failed. It may be due to memory allocation failure or a failure in obtaining the configured value. Information on the initialization may be displayed on %1.	The configured value of the Cluster WebUI may be incorrect. Check the value. If there is no problem with the value, OS itself may have errors. Restart the server or take other actions

4.5.8 IP monitor resource

Module Type	Type	Return Value	Message	Description	Solution
ipw	Error	4	Ping could not reach.	Ping could not reach.	Check if the ping command to the corresponding IP address succeeds. When the command fails, check the status of the device that has the IP address and the network interface.
ipw	Warning	105	Timeout occurred.	Timeout occurred.	Memory or OS resources may not be sufficient. Check them.
ipw	Warning	189	Internal error occurred.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.

4.5.9 NIC Link Up/Down monitor resource

Module Type	Type	Return Value	Message	Description	Solution
miiw	Error	4	IP address does not exist.	IP address does not exist.	NIC may have been disabled. Check if the IP address of the specified NIC exists by the ipconfig command.
miiw	Error	8	Detected NIC Link Down.	Detected NIC Link Down.	Check if the LAN cable is connected properly.
miiw	Warning	105	Failed to get the IP address list.	Failed to get the IP address list.	Memory or OS resources may not be sufficient. Check them.
miiw	Warning	106	Failed to get the NIC interface name.	Failed to get the NIC interface name.	Memory or OS resources may not be sufficient. Check them.
miiw	Warning	107	Failed to get the NIC status.	Failed to get the NIC status.	Check if the NIC device is supported by the device I/O controller.
miiw	Warning	189	An internal error has occurred.	An internal error has occurred.	Memory or OS resources may not be sufficient. Check them.

4.5.10 Multi target monitor resource

Module Type	Type	Return Value	Message	Description	Solution
mtw	Error	Other	Internal error occurred.(status:%1!d!)	Internal error occurred.(status:%1!d!)	Memory or OS resources may not be sufficient. Check them.
mtw	Error	5	Status of resources is abnormal.	Status of resources is abnormal.	Check the status of the monitor resources listed on the monitor resources list.
mtw	Error	1	This option is invalid.	This option is invalid.	Memory or OS resources may not be sufficient. Check them.

4.5.11 Process name monitor resource

Module Type	Type	Return Value	Message	Description	Solution
psw	Error	4	Process [%1, pid=%2] down.	Loss of the process to be monitored has been detected.	Check whether the process to be monitored is running properly.
psw	Error	5	The number of processes is less than the specified minimum process count. %1/%2 (%3)	The number of running processes to be monitored does not reach the specified lower limit.	Check whether the process to be monitored is running properly.
psw	Warning	100	Internal error occurred.	An internal error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency. Check it.
psw	Warning	190	Parameter is invalid.	The monitor setting value is incorrect.	The setting value for the Cluster WebUI may be incorrect. Check it.

4.5.12 ODBC monitor resource

Module Type	Type	Return Value	Message	Description	Solution
odbcw	Warning	190	Initialization has failed[%1].	Initialization process has failed. It may be due to memory allocation failure. Information on the initialization may be displayed on %1.	OS itself may have errors. Restart the server or take other actions.

Continued on next page

Table 4.20 – continued from previous page

Module Type	Type	Return Value	Message	Description	Solution
odbcw	Warning	102	The configured value is not correct.	The configured value of the monitoring is not correct.	Check the configured value on the Cluster WebUI because it may not be correct.
odbcw	Warning	110	A function error was detected.	A function error occurred.	Monitor applications or OS may have errors. Check the status of the system.
odbcw	Error	11	An error was detected in accessing the monitor target.	The access to the database failed.	Check configured values on the Cluster WebUI (such as a database name). If there is no error, check the database has errors.
odbcw	Warning	112	An error was detected in user authentication.	The access to the database failed.	Check configured values on the Cluster WebUI (such as a user name or a password). If there is no error, check if the database has errors.
odbcw	Warning	113	An application error was detected.	The database error was detected.	Refer to error messages for database described separately to fix errors.
odbcw	Error	14	An error was detected in executing SQL statement [%1].	Executing SQL statement failed. The executed SQL statement is displayed on %1.	Refer to error messages for database described separately to fix errors.
odbcw	Error	15	A data error was detected.	A value on the table of database has an error.	Database may be corrupt. Stop the database operation and investigate it. This error may occur when more than one monitoring is performed with the same monitor table name concurrently. Check if the values set in the multi-directional environment are appropriate.
odbcw	Warning	140	No license is registered.	The license has not been registered.	Register the license.
odbcw	Warning	160	Failed to obtain the configuration data.	The configured value could not be obtained.	OS may have errors. Restart the server or take other actions

Continued on next page

Table 4.20 – continued from previous page

Module Type	Type	Return Value	Message	Description	Solution
odbcw	Warning	190	Internal error.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.

4.5.13 Oracle monitor resource

Module Type	Type	Return Value	Message	Description	Solution
oraclew	Warning	190	Initialization has failed[%1].	Initialization process has failed. It may be due to memory allocation failure. Information on the initialization may be displayed on %1.	OS itself may have errors. Restart the server or take other actions
oraclew	Warning	102	The configured value is not correct.	The configured value of the monitoring is not correct.	Check the configured value on the Cluster WebUI because it may not be correct.
oraclew	Warning	110	A function error was detected.	A function error occurred.	Monitor applications or OS may have errors. Check the status of the system.
oraclew	Error	11	An error was detected in accessing the monitor target.	The access to the database failed.	Check configured values on the Cluster WebUI (such as a database name). If there is no error, check the database has errors.
oraclew	Warning	112	An error was detected in user authentication.	The access to the database failed.	Check configured values on the Cluster WebUI (such as a user name or a password). If there is no error, check if the database has errors.
oraclew	Warning	113	An application error was detected.	The database error was detected.	Refer to error messages for database described separately to fix errors.
oraclew	Error	14	An error was detected in executing SQL statement [%1].	Executing SQL statement failed. The executed SQL statement is displayed on %1.	Refer to error messages for database described separately to fix errors.

Continued on next page

Table 4.21 – continued from previous page

Module Type	Type	Return Value	Message	Description	Solution
oraclew	Error	15	A data error was detected.	A value on the table of database has an error.	Database may be corrupt. Stop the database operation and investigate it. This error may occur when more than one monitoring is performed with the same monitor table name concurrently. Check if the values set in the multi-directional environment are appropriate.
oraclew	Warning	140	No license is registered.	The license has not been registered.	Register the license.
oraclew	Warning	160	Failed to obtain the configuration data.	The configured value could not be obtained.	OS may have errors. Restart the server or take other actions.
oraclew	Warning	190	Internal error.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.

4.5.14 POP3 monitor resource

Module Type	Type	Return Value	Message	Description	Solution
pop3w	Error	11	An error was detected in accessing the monitor target.	The access to the monitor application failed.	Check configured values on the Cluster WebUI (such as an IP address). If there is no error, check if the monitor application has errors.
pop3w	Error	12	An error was detected in user authentication.	The access to the monitor application failed.	Check configured values on the Cluster WebUI (such as a user name or a password). If there is no error, check if the monitor application has errors.
pop3w	Warning	110	A function error was detected.	A function error occurred.	Monitor applications or OS may have errors. Check the status of the system.
pop3w	Warning	113	An application error was detected.	The monitor application error was detected.	Refer to error messages for monitor applications described separately to fix errors.

Continued on next page

Table 4.22 – continued from previous page

Module Type	Type	Return Value	Message	Description	Solution
pop3w	Warning	115	A data error was detected.	A value of the response data has an error.	Refer to error messages for monitor applications described separately to fix errors.
pop3w	Warning	140	No license is registered.	The license has not been registered.	Register the license.
pop3w	Warning	188	Internal error.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.
pop3w	Warning	190	Initialization has failed[%1].	Initialization process has failed. It may be due to memory allocation failure or a failure in obtaining the configured value. Information on the initialization may be displayed on %1.	The configured value of the Cluster WebUI may be incorrect. Check the value. If there is no problem with the value, OS itself may have errors. Restart the server or take other actions.

4.5.15 PostgreSQL monitor resource

Module Type	Type	Return Value	Message	Description	Solution
psqlw	Warning	190	Initialization has failed[%1].	Initialization process has failed. It may be due to memory allocation failure. Information on the initialization may be displayed on %1.	OS itself may have errors. Restart the server or take other actions.
psqlw	Warning	102	The configured value is not correct.	The configured value of the monitoring is not correct.	Check the configured value on the Cluster WebUI because it may not be correct.
psqlw	Warning	110	A function error was detected.	A function error occurred.	Monitor applications or OS may have errors. Check the status of the system.

Continued on next page

Table 4.23 – continued from previous page

Module Type	Type	Return Value	Message	Description	Solution
psqlw	Error	11	An error was detected in accessing the monitor target.	The access to the database failed.	Check configured values on the Cluster WebUI (such as a database name). If there is no error, check the database has errors.
psqlw	Warning	112	An error was detected in user authentication.	The access to the database failed.	Check configured values on the Cluster WebUI (such as a user name or a password). If there is no error, check if the database has errors.
psqlw	Warning	113	An application error was detected.	The database error was detected.	Refer to error messages for database described separately to fix errors.
psqlw	Error	14	An error was detected in executing SQL statement [%1].	Executing SQL statement failed. The executed SQL statement is displayed on %1.	Refer to error messages for database described separately to fix errors.
psqlw	Error	15	A data error was detected.	A value on the table of database has an error.	Database may be corrupt. Stop the database operation and investigate it. This error may occur when more than one monitoring is performed with the same monitor table name concurrently. Check if the values set in the multi-directional environment are appropriate.
psqlw	Warning	140	No license is registered.	The license has not been registered.	Register the license.
psqlw	Warning	160	Failed to obtain the configuration data.	The configured value could not be obtained.	OS may have errors. Restart the server or take other actions.
psqlw	Warning	190	Internal error.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.

4.5.16 Service monitor resource

Module Type	Type	Return Value	Message	Description	Solution
servicew	Error	9	Service has been stopped.	Service has been stopped.	Check the status of the service.
servicew	Warning	100	Failed to obtain the service control right.	Failed to obtain the service control right.	Check if the service name is correct.
servicew	Warning	Others	An internal error has occurred.	An internal error has occurred.	Memory or OS resources may not be sufficient. Check them.

4.5.17 SMTP monitor resource

Module Type	Type	Return Value	Message	Description	Solution
smtpw	Error	11	An error was detected in accessing the monitor target.	The access to the monitor application failed.	Check configured values on the Cluster WebUI (such as an IP address). If there is no error, check if the monitor application has errors.
smtpw	Error	12	An error was detected in user authentication.	The access to the monitor application failed.	Check configured values on the Cluster WebUI (such as a user name or a password). If there is no error, check if the monitor application has errors.
smtpw	Warning	110	A function error was detected.	A function error occurred.	Monitor applications or OS may have errors. Check the status of the system.
smtpw	Warning	113	An application error was detected.	The monitor application error was detected.	Refer to error messages for monitor applications described separately to fix errors.
smtpw	Warning	115	A data error was detected.	A value of the response data has an error.	Refer to error messages for monitor applications described separately to fix errors.
smtpw	Warning	140	No license is registered.	The license has not been registered.	Register the license.
smtpw	Warning	188	Internal error.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.

Continued on next page

Table 4.25 – continued from previous page

Module Type	Type	Return Value	Message	Description	Solution
smtpw	Warning	190	Initialization has failed[%1].	Initialization process has failed. It may be due to memory allocation failure or a failure in obtaining the configured value. Information on the initialization may be displayed on %1.	The configured value of the Cluster WebUI may be incorrect. Check the value. If there is no problem with the value, OS itself may have errors. Restart the server or take other actions.

4.5.18 SQL Server monitor resource

Module Type	Type	Return Value	Message	Description	Solution
sqlserverw	Warning	190	Initialization has failed[%1].	Initialization process has failed. It may be due to memory allocation failure. Information on the initialization may be displayed on %1.	OS itself may have errors. Restart the server or take other actions.
sqlserverw	Warning	102	The configured value is not correct.	The configured value of the monitoring is not correct.	Check the configured value on the Cluster WebUI because it may not be correct.
sqlserverw	Warning	110	A function error was detected.	A function error occurred.	Monitor applications or OS may have errors. Check the status of the system.
sqlserverw	Error	11	An error was detected in accessing the monitor target.	The access to the database failed.	Check configured values on the Cluster WebUI (such as a database name). If there is no error, check the database has errors.
sqlserverw	Warning	112	An error was detected in user authentication.	The access to the database failed.	Check configured values on the Cluster WebUI (such as a user name or a password). If there is no error, check if the database has errors.
sqlserverw	Warning	113	An application error was detected.	The database error was detected.	Refer to error messages for database described separately to fix errors.

Continued on next page

Table 4.26 – continued from previous page

Module Type	Type	Return Value	Message	Description	Solution
sqlserverw	Error	14	An error was detected in executing SQL statement [%1].	Executing SQL statement failed. The executed SQL statement is displayed on %1.	Refer to error messages for database described separately to fix errors.
sqlserverw	Error	15	A data error was detected.	A value on the table of database has an error.	Database may be corrupt. Stop the database operation and investigate it. This error may occur when more than one monitoring is performed with the same monitor table name concurrently. Check if the values set in the multi-directional environment are appropriate.
sqlserverw	Warning	140	No license is registered.	The license has not been registered.	Register the license.
sqlserverw	Warning	160	Failed to obtain the configuration data.	The configured value could not be obtained.	OS may have errors. Restart the server or take other actions.
sqlserverw	Warning	190	Internal error.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.

4.5.19 Tuxedo monitor resource

Module Type	Type	Return Value	Message	Description	Solution
tuxw	Error	11	An error was detected in accessing the monitor target.	The access to the monitor application failed.	Check configured values on the Cluster WebUI (such as an application config file). If there is no error, check if the monitor application has errors.
tuxw	Warning	110	A function error was detected.	A function error occurred.	Monitor applications or OS may have errors. Check the status of the system.
tuxw	Warning	113	An application error was detected.	The monitor application error was detected.	Refer to error messages for monitor applications described separately to fix errors.

Continued on next page

Table 4.27 – continued from previous page

Module Type	Type	Return Value	Message	Description	Solution
tuxw	Warning	140	No license is registered.	The license has not been registered.	Register the license.
tuxw	Warning	188	Internal error.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.
tuxw	Warning	190	Initialization has failed[%1].	Initialization process has failed. It may be due to memory allocation failure or a failure in obtaining the configured value. Information on the initialization may be displayed on %1.	The configured value of the Cluster WebUI may be incorrect. Check the value. If there is no problem with the value, OS itself may have errors. Restart the server or take other actions.

4.5.20 VM monitor resource

Module Type	Type	Return Value	Message	Description	Solution
vmw	Error	12	Virtual machine is unnormal [%1]	The status of the virtual machine is other than Running.	Check the status of the virtual machine on Hyper-V manager.
vmw	Error	Others	Internal error occurred.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.

4.5.21 Websphere monitor resource

Module Type	Type	Return Value	Message	Description	Solution
wasw	Error	12	An error was detected in user authentication.	The access to the monitor application failed.	Check configured values on the Cluster WebUI (such as a user name or a password). If there is no error, check if the monitor application has errors.
wasw	Warning	110	A function error was detected.	A function error occurred.	Monitor applications or OS may have errors. Check the status of the system.

Continued on next page

Table 4.29 – continued from previous page

Module Type	Type	Return Value	Message	Description	Solution
wasw	Warning	113	An application error was detected.	The monitor application error was detected.	Refer to error messages for monitor applications described separately to fix errors.
wasw	Warning	140	No license is registered.	The license has not been registered.	Register the license.
wasw	Warning	188	Internal error.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.
wasw	Warning	190	Initialization has failed[%1].	Initialization process has failed. It may be due to memory allocation failure or a failure in obtaining the configured value. Information on the initialization may be displayed on %1.	The configured value of the Cluster WebUI may be incorrect. Check the value. If there is no problem with the value, OS itself may have errors. Restart the server or take other actions.

4.5.22 Weblogic monitor resource

Module Type	Type	Return Value	Message	Description	Solution
wlsw	Error	11	An error was detected in accessing the monitor target.	The access to the monitor application failed.	Check configured values on the Cluster WebUI (such as an IP address). If there is no error, check if the monitor application has errors.
wlsw	Error	12	An error was detected in user authentication.	The access to the monitor application failed.	Check configured values on the Cluster WebUI (such as a user name or a password). If there is no error, check if the monitor application has errors.
wlsw	Warning	110	A function error was detected.	A function error occurred.	Monitor applications or OS may have errors. Check the status of the system.
wlsw	Warning	113	An application error was detected.	The monitor application error was detected.	Refer to error messages for monitor applications described separately to fix errors.
wlsw	Warning	140	No license is registered.	The license has not been registered.	Register the license.

Continued on next page

Table 4.30 – continued from previous page

Module Type	Type	Return Value	Message	Description	Solution
wlsw	Warning	188	Internal error.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.
wlsw	Warning	190	Initialization has failed[%1].	Initialization process has failed. It may be due to memory allocation failure or a failure in obtaining the configured value. Information on the initialization may be displayed on %1.	The configured value of the Cluster WebUI may be incorrect. Check the value. If there is no problem with the value, OS itself may have errors. Restart the server or take other actions.

4.5.23 WebOTX monitor resource

Module Type	Type	Return Value	Message	Description	Solution
otxw	Error	11	An error was detected in accessing the monitor target.	The access to the monitor application failed.	Check configured values on the Cluster WebUI (such as an IP address or an application server name). If there is no error, check if the monitor application has errors.
otxw	Error	12	An error was detected in user authentication.	The access to the monitor application failed.	Check configured values on the Cluster WebUI (such as a user name or a password). If there is no error, check if the monitor application has errors.
otxw	Warning	110	A function error was detected.	A function error occurred.	Monitor applications or OS may have errors. Check the status of the system.
otxw	Warning	113	An application error was detected.	The monitor application error was detected.	Refer to error messages for monitor applications described separately to fix errors.
otxw	Warning	140	No license is registered.	The license has not been registered.	Register the license.
otxw	Warning	188	Internal error.	Internal error occurred.	Memory or OS resources may not be sufficient. Check them.

Continued on next page

Table 4.31 – continued from previous page

Module Type	Type	Return Value	Message	Description	Solution
otxw	Warning	190	Initialization has failed[%1].	Initialization process has failed. It may be due to memory allocation failure or a failure in obtaining the configured value. Information on the initialization may be displayed on %1.	The configured value of the Cluster WebUI may be incorrect. Check the value. If there is no problem with the value, OS itself may have errors. Restart the server or take other actions.

4.5.24 JVM monitor resource

Module Type	Type	Return Value	Message	Description	Solution
jraw	Error	11	An error was detected in accessing the monitor target.	Connection to the target to be monitored has failed.	Check that the Java VM to be monitored is running.
jraw	Error	12	%1 to be monitored has become abnormal. %1:Error generation cause	An error in the target to be monitored has been detected.	Based on the message, check the Java application that is running on Java VM to be monitored.
jraw	Warning	192	Internal error occurred.	An internal error has occurred.	Execute cluster suspend and cluster resume.

4.5.25 System monitor resource

Module Type	Type	Return Value	Message	Description	Solution
sraw	Error	11	Monitor sraw has detected an 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.

4.5.26 Process resource monitor resource

Module Type	Type	Return Value	Message	Description	Solution
psrw	Error	11	Monitor psrw has detected an 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.

4.5.27 User space monitoring resource

Module Type	Type	Return Value	Message	Description	Solution
userw	Error	71	Timeout has occurred when creating dummy thread.	Timeout has occurred when creating dummy thread.	The system may be under high load, or memory or OS resources may not be sufficient. Check them.
userw	Warning	100	A timeout occurred when initializing internal resources.	A timeout occurred when initializing internal resources.	Memory or OS resources may not be sufficient. Check them.
userw	Warning	101	Timeout has occurred when closing dummy thread handle.	Timeout has occurred when closing dummy thread handle.	The system may be under high load, or memory or OS resources may not be sufficient. Check them.
userw	Warning	102	Timeout has occurred when other timing.	Timeout has occurred when other timing.	The system may be under high load, or memory or OS resources may not be sufficient. Check them.
userw	Warning	190	An initialization error has occurred in an internal resource.	An initialization error has occurred in an internal resource.	Memory or OS resources may not be sufficient. Check them.

4.6 STOP codes list of disk RW monitor resources

The following information is the STOP codes list which are generated when selecting **Generating of intentional Stop Error** on **Action when stalling is detected** of disk RW monitor resource.

STOP code	Description
0xE0000000	The STOP error which was generated as the Final action at detection of an error of the monitor resource at activation or deactivation failure of the group resource.
0xE000FF**	The STOP error which was generated by keep alive timeout (the timeout of disk RW monitor). The lower 8 bits (the part of "**") shows the following checkpoint (The chances are high that it was being executed during timeout).
0xE000FF00	The internal processing of EXPRESSCLUSTER
0xE000FF01	free(), SetWaitableTimer(), GetTickCount(), WaitForMultipleObjects()
0xE000FF02	CreateFile(), _beginthreadex()
0xE000FF03	malloc(), WriteFile()
0xE000FF04	FlushFileBuffers()
0xE000FF05	CloseHandle()
0xE000FF06	The internal processing of EXPRESSCLUSTER

4.7 JVM monitor resource log output messages

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

The file is created in the following location:

JVM operation log: <*EXPRESSCLUSTER_install_path*>\log\ha\jra\jragent*.log (* indicates a number starting at 0.)

JVM load balancer linkage log: <*EXPRESSCLUSTER_install_path*>\log\ha\jra\lbadmin.log

4.7.1 JVM operation log

Message	Cause of generation	Action
Failed to write the %1.stat.	Writing to the JVM statistics log has failed. %1 .stat: JVM statistics log file name	Check whether there is sufficient free disk space.
%1: analyze finish[%4]. state = %2, cause = %3	(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: Name of the Java VM to be monitored %2: Status of Java VM to be monitored (1=normal, 0=abnormal) %3: Error generation location at abnormality occurrence %4: Measurement thread name	Review the Java application that runs on the Java VM to be monitored.

Continued on next page

Table 4.37 – continued from previous page

Message	Cause of generation	Action
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: monitor thread can't connect to JVM.	The Java VM to be monitored could not be connected. %1: Name of the Java VM to be monitored	Check that the Java VM to be monitored is running.
%1: monitor thread can't get the JVM state.	The resource use amount could not be acquired from Java VM to be monitored. %1: Name of the Java VM to be monitored	Check that the Java VM to be monitored is running.
%1: JVM state is changed [abnormal -> normal].	The status of the Java VM to be monitored has changed from abnormal to normal. %1: Name of the Java VM to be monitored	-
%1: JVM state is changed [normal -> abnormal].	The status of the Java VM to be monitored has changed from normal to abnormal. %1: Name of the Java VM to be monitored	Review the Java application that runs on the Java VM to be monitored.

Continued on next page

Table 4.37 – continued from previous page

Message	Cause of generation	Action
%1: Failed to connect to JVM.	The Java VM to be monitored could not be connected.	Check that the Java VM to be monitored is running. %1: Name of the Java VM to be monitored
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: GARBAGE_COLLECTOR_MXBEAN_DOMAIN_TYPE is invalid.	GC information could not be acquired from the Java VM to be monitored. %1: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1: GarbageCollectorMXBean is invalid.	GC information could not be acquired from the Java VM to be monitored. %1: 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 4.37 – continued from previous page

Message	Cause of generation	Action
%1: Failed to measure the GC stat.	GC information could not be acquired from the Java VM to be monitored. %1: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1: GC stat is invalid. last.getCount = %2, last.getTime = %3, now.getCount = %4, now.getTime = %5.	The GC generation count and GC execution time could not be measured for the Java VM to be monitored. %1: Name of the Java VM to be monitored %2: GC generation count at last measurement %3: Total GC execution time at last measurement %4: GC generation count at this measurement %5: 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 4.37 – continued from previous page

Message	Cause of generation	Action
%1: GC average time is too long. av = %6, last.getCount = %2, last.getTime = %3, now.getCount = %4, now.getTime = %5.	The average GC execution time has exceeded the threshold in the Java VM to be monitored. %1: Name of the Java VM to be monitored %2: GC generation count at last measurement %3: Total GC execution time at last measurement %4: GC generation count at this measurement %5: Total GC execution time at this measurement %6: Average of the GC execution time used from the last measurement to this measurement	Review the Java application that runs on the Java VM to be monitored.

Continued on next page

Table 4.37 – continued from previous page

Message	Cause of generation	Action
%1: GC average time is too long compared with the last connection. av = %6, last.getCount = %2, last.getTime = %3, now.getCount = %4, now.getTime = %5.	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: Name of the Java VM to be monitored %2: GC generation count at last measurement %3: Total GC execution time at last measurement %4: GC generation count at this measurement %5: Total GC execution time at this measurement %6: Average of the GC execution time used from the last measurement to this measurement	Review the Java application that runs on the Java VM to be monitored.

Continued on next page

Table 4.37 – continued from previous page

Message	Cause of generation	Action
%1: GC count is too frequently. count = %4 last.getCount = %2, now.getCount = %3.	The GC generation count has exceeded the threshold in the Java VM to be monitored. %1: Name of the Java VM to be monitored %2: GC generation count at last measurement %3: GC generation count at this measurement %4: GC generation count from the last measurement to this measurement	Review the Java application that runs on the Java VM to be monitored.
%1: GC count is too frequently compared with the last connection. count = %4 last.getCount = %2, now.getCount = %3.	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: Name of the Java VM to be monitored %2: GC generation count at last measurement %3: GC generation count at this measurement %4: GC generation count from the last measurement to this measurement	Review the Java application that runs on the Java VM to be monitored.

Continued on next page

Table 4.37 – continued from previous page

Message	Cause of generation	Action
%1: RuntimeMXBean is invalid.	Information could not be acquired from the Java VM to be monitored. %1: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1: Failed to measure the runtime stat.	Information could not be acquired from the Java VM to be monitored. %1: 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: MEMORY_MXBEAN_NAME is invalid. %2, %3.	Memory information could not be acquired from the Java VM to be monitored. %1: Name of the Java VM to be monitored %2: Memory pool name %3: Memory name	Check whether the operating environment of the Java VM to be monitored is correct.
%1: MemoryMXBean is invalid.	Memory information could not be acquired from the Java VM to be monitored. %1: 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 4.37 – continued from previous page

Message	Cause of generation	Action
%1: Failed to measure the memory stat.	Memory information could not be acquired from the Java VM to be monitored. %1: 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: MemoryPool name is undefined. memory_name = %2.	Memory information could not be acquired from the Java VM to be monitored. %1: Name of the Java VM to be monitored %2: Name of the Java memory pool to be measured	Check whether the operating environment of the Java VM to be monitored is correct.
%1: MemoryPool capacity is too little. memory_name = %2, used = %3, max = %4, ratio = %5.	The Java memory pool free space has fallen below the threshold in the Java VM to be monitored. %1: Name of the Java VM to be monitored %2: Name of the Java memory pool to be measured %3: Use amount of the Java memory pool %4: Maximum usable amount of the Java memory pool %5: Use rate of the Java memory pool	Review the Java application that runs on the Java VM to be monitored.

Continued on next page

Table 4.37 – continued from previous page

Message	Cause of generation	Action
%1: THREAD_MXBEAN_NAME is invalid.	Thread information could not be acquired from the Java VM to be monitored. %1: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1: ThreadMXBean is invalid.	Thread information could not be acquired from the Java VM to be monitored.	Check whether the operating environment of the Java VM to be monitored is correct. %1: Name of the Java VM to be monitored
%1: Failed to measure the thread stat.	Thread information could not be acquired from Java VM to be monitored. %1: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1: Detect Deadlock. threads = %2.	Thread deadlock has occurred in the Java VM to be monitored. %1: Name of the Java VM to be monitored %2: ID of the deadlock thread	Review the Java application that runs on the Java VM to be monitored.

Continued on next page

Table 4.37 – continued from previous page

Message	Cause of generation	Action
%1: Thread count is too much(%2).	The number of activated threads has exceeded the threshold in the Java VM to be monitored. %1: Name of the Java VM to be monitored %2: Number of activated threads at measurement	Review the Java application that runs on the Java VM to be monitored.
%1: ThreadInfo is null.Thread count = %2.	Thread information could not be acquired in the Java VM to be monitored. %1: Name of the Java VM to be monitored %2: Number of activated threads at measurement	Check whether the operating environment of the version of the Java VM to be monitored is correct.
%1: Failed to disconnect.	Disconnection from the Java VM to be monitored has failed. %1: Name of the Java VM to be monitored	-
%1: Failed to connect to WebLogicServer.	WebLogic Server to be monitored could not be connected. %1: 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 4.37 – continued from previous page

Message	Cause of generation	Action
%1: Failed to connect to Sun JVM.	Java VM and WebOTX to be monitored could not be connected. %1: 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.	The JVM statistics log could not be output. %1: 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: Can't find monitor file.	No monitoring %1: Name of the Java VM to be monitored	-
%1: Can't find monitor file, monitor stopped[thread:%2].	Monitoring stops. %1: Name of the Java VM to be monitored %2: Type of the measurement thread	-
%1: Failed to create monitor status file.	An internal file could not be created. %1: Name of the Java VM to be monitored	Check whether the disk free space and the maximum number of volume files are sufficient.
%1: Failed to delete monitor status file.	An internal file could not be deleted.	Check whether there is a problem with the hard disk.

Continued on next page

Table 4.37 – continued from previous page

Message	Cause of generation	Action
%1: com.bea:Type=ServerRuntime is invalid.	Information could not be acquired from the Java VM to be monitored. %1: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1: WorkManagerRuntimeMBean or ThreadPoolRuntimeMBean is invalid.	Information could not be acquired from the WebLogic Server to be monitored. %1: Name of the Java VM to be monitored	Check whether the operating environment of the WebLogic Server to be monitored is correct.
%1: Failed to measure the WorkManager or ThreadPool stat.	Information could not be acquired from the WebLogic Server to be monitored. %1: Name of the Java VM to be monitored	Check whether the operating environment of the WebLogic Server to be monitored is correct.
%1: ThreadPool stat is invalid. last.pending = %2, now.pending = %3.	The number of waiting requests could not be measured in the thread pool of the WebLogic Server to be monitored. %1: Name of the Java VM to be monitored %2: Number of waiting requests at last measurement %3: 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 4.37 – continued from previous page

Message	Cause of generation	Action
%1: WorkManager stat is invalid. last.pending = %2, now.pending = %3.	The number of waiting requests could not be measured in the work manager of the WebLogic Server to be monitored. %1: Name of the Java VM to be monitored %2: Number of waiting requests at last measurement %3: 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: PendingRequest count is too much. count = %2.	The number of waiting requests has exceeded the threshold in the thread pool of the WebLogic Server to be monitored. %1: Name of the Java VM to be monitored %2: Number of waiting requests at this measurement	Review the Java application that runs on the WebLogic Server to be monitored.

Continued on next page

Table 4.37 – continued from previous page

Message	Cause of generation	Action
%1: PendingRequest increment is too much. increment = %4, last.pending = %2, now.pending = %3.	The increment of the number of waiting requests has exceeded the threshold in the thread pool of the WebLogic Server to be monitored. %1: Name of the Java VM to be monitored %2: Number of waiting requests at last measurement %3: Number of waiting requests at this measurement %4: Increment of the number of waiting requests from the last measurement to this measurement	Review the Java application that runs on the WebLogic Server to be monitored.

Continued on next page

Table 4.37 – continued from previous page

Message	Cause of generation	Action
%1: PendingRequest increment is too much compared with the last connection. increment = %4, last.pending = %2, now.pending = %3.	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: Name of the Java VM to be monitored %2: Number of waiting requests at last measurement %3: Number of waiting requests at this measurement %4: Increment of the number of waiting requests from the last measurement to this measurement	Review the Java application that runs on the WebLogic Server to be monitored.
%1: Throughput count is too much. count = %2.	The number of requests executed per unit time has exceeded the threshold in the thread pool of the WebLogic Server to be monitored. %1: Name of the Java VM to be monitored %2: Number of requests executed per unit time at this measurement	Review the Java application that runs on the WebLogic Server to be monitored.

Continued on next page

Table 4.37 – continued from previous page

Message	Cause of generation	Action
%1: Throughput increment is too much. increment = %4, last.throughput = %2, now.throughput = %3.	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: Name of the Java VM to be monitored %2: Number of requests executed per unit time at last measurement %3: Number of requests executed per unit time at this measurement %4: Increment of the number of requests executed per unit time from the last measurement to this measurement	Review the Java application that runs on the WebLogic Server to be monitored.

Continued on next page

Table 4.37 – continued from previous page

Message	Cause of generation	Action
%1: Throughput increment is too much compared with the last connection. increment = %4:, last.throughput = %2, now.throughput = %3.	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: Name of the Java VM to be monitored %2: Number of requests executed per unit time at last measurement %3: Number of requests executed per unit time at this measurement %4: Increment of the number of requests executed per unit time from the last measurement to this measurement	Review the Java application that runs on the WebLogic Server to be monitored.

Continued on next page

Table 4.37 – continued from previous page

Message	Cause of generation	Action
%1: PendingRequest count is too much. appName = %2, name = %3, count = %4.	The number of waiting requests has exceeded the threshold in the work manager of the WebLogic Server to be monitored. %1: Name of the Java VM to be monitored %2: Application name %3: Work manager name %4: Number of waiting requests	Review the Java application that runs on the WebLogic Server to be monitored.

Continued on next page

Table 4.37 – continued from previous page

Message	Cause of generation	Action
%1: PendingRequest increment is too much. appName = %2, name = %3, increment = %6, last.pending = %4, now.pending = %5.	The increment of the number of waiting requests has exceeded the threshold in the work manager of the WebLogic Server to be monitored. %1: Name of the Java VM to be monitored %2: Application name %3: Work manager name %4: Number of waiting requests at last measurement %5: Number of waiting requests at this measurement %6: Increment of the number of waiting requests from the last measurement to this measurement	Review the Java application that runs on the WebLogic Server to be monitored.

Continued on next page

Table 4.37 – continued from previous page

Message	Cause of generation	Action
%1: PendingRequest increment is too much compared with the last connection. AppName = %2, Name = %3, increment = %6, last.pending = %4, now.pending = %5.	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: Name of the Java VM to be monitored %2: Application name %3: Work manager name %4: Number of waiting requests at last measurement %5: Number of waiting requests at this measurement %6: Increment of the number of waiting requests from the last measurement to this measurement	Review the Java application that runs on the WebLogic Server to be monitored.
%1: Can't find WorkManager. appName = %2, name = %3.	The work manager which was set could not be acquired from the WebLogic Server. %1: Name of the Java VM to be monitored %2: Application name %3: Work manager name	Review the setting of Target WebLogic Work Managers.

Continued on next page

Table 4.37 – continued from previous page

Message	Cause of generation	Action
%1: analyze of average start[%2].	Analyzing of the average value has started. %1: Name of the Java VM to be monitored %2: Thread name	-
%1: analyze of average finish[%2].state = %3.	Analyzing of the average value has been completed. %1: Name of the Java VM to be monitored %2: Thread name %3: Status of the target to be monitored	-
%1: Average of PendingRequest count is too much. count = %2.	The average of the number of waiting requests has exceeded the threshold in the thread pool of the WebLogic Server to be monitored. %1: Name of the Java VM to be monitored %2: Number of waiting requests at this measurement	Review the Java application that runs on the WebLogic Server to be monitored.

Continued on next page

Table 4.37 – continued from previous page

Message	Cause of generation	Action
%1: Average of Throughput count is too high. count = %2.	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: Name of the Java VM to be monitored %2: Number of requests executed per unit time at this measurement	Review the Java application that runs on the WebLogic Server to be monitored.
%1: Average of PendingRequest count is too high. AppName = %2, Name = %3, count = %4.	The average of the number of waiting requests has exceeded the threshold in the work manager of the WebLogic Server to be monitored. %1: Name of the Java VM to be monitored %2: Application name %3: Work manager name %4: 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]	%1: Error code	Review the setting.

4.7.2 JVM load balancer linkage log

Message	Cause of generation	Action
lbadmin command start.	Execution of the load balancer linkage command has started.	-
lbadmin command finish.	Execution of the load balancer linkage command has been completed.	-
Into HealthCheck mode.	The health check function is enabled.	-
Into Weight mode.	The load calculation function of the Java VM to be monitored is valid.	-
The PID of lbadmin.jar is "%1".	ID of the process relating to the load balancer linkage %1: Process ID of lbadmin.jar	-
Thread wait stopped by Exception	Waiting for down judgment has been stopped.	-
Rename Command succeeded.	Renaming of the HTML file has been successful.	-
Rename Command failed.	Renaming of the HTML file has failed.	Check the HTML file name and HTML rename destination file name.
%1 doesn't exist.	The rename source HTML file does not exist. %1: HTML file name	Check the HTML file name.
%1 already exists.	The rename destination HTML file already exists. %1: HTML rename destination file name	Check the HTML rename destination file name.
Can't rename file:%1.	Renaming of the HTML file has failed. %1: HTML file name	Check the HTML rename destination file name.
The number of retries exceeded the limit.	The retry count for renaming the HTML file has exceeded the upper limit.	Check the HTML rename destination file name.
The percent of the load is "%1".	Load calculation for the Java VM to be monitored has been successful. %1: Load of Java VM to be monitored	-

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Table 4.38 – continued from previous page

Message	Cause of generation	Action
stat log (%1) doesn't exist.	There is no JVM statistics log file. %1: JVM statistics log file name	Execute cluster suspend/cluster resume and then restart the JVM monitor resource.
stat log(%1:) cannot be opened for reading.	The JVM statistics log file could not be opened. %1: JVM statistics log file name	Execute cluster suspend/cluster resume and then restart the JVM monitor resource.
format of stat log (%1) is wrong.	The contents of the JVM statistics log file are invalid. %1: Statistics log file name	After deleting the JVM statistics log file, execute cluster suspend/cluster resume and then restart the JVM monitor resource.
Failed to get load of application server.	Data for load calculation could not be acquired from the JVM statistics log file.	Review whether the load calculation setting of the Java VM to be monitored is correct.
Can't find lock file(%1s*.stat.lck), maybe HA/JVMSaver did not start yet.	JVM monitoring has not yet started. %1: Internal file name	Start the JVM monitor resource.

4.8 STOP codes list of user space monitor resources

The following information is a list of the STOP codes which are generated upon the selection of **Generate an intentional stop error** for **Action When Timeout Occurs** of the user space monitor resource.

STOP code	Description
0xE0000000	The STOP error which was generated as the final action upon the detection of an error of the monitor resource
0xE000FF**	The STOP error which was generated by keep alive timeout (the timeout of user space monitor) The lower 8 bits (the part of "**") shows the following checkpoint (The chances are high that it was being executed during timeout).
0xE000FF00	The internal processing of EXPRESSCLUSTER
0xE000FF01	SetWaitableTimer(), GetTickCount(), WaitForMultipleObjects()
0xE000FF02	_beginthreadex(),WaitForMultipleObjects()
0xE000FF05	CloseHandle()
0xE000FF06	The internal processing of EXPRESSCLUSTER

CHAPTER

FIVE

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CHAPTER

SIX

REVISION HISTORY

Edition	Revised Date	Description
1st	Apr 09, 2021	New manual