ExpressCluster® X SingleServerSafe 3.2
for Linux

Operation Guide

02/19/2014
1st Edition

Revision History

Edition	Revised Date	Description
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Preface

Who Should Use This Guide

The *ExpressCluster® X SingleServerSafe Operation Guide* is intended for system administrators who will operate and maintain an introduced system. It describes how to operate ExpressCluster X SingleServerSafe. The guide consists of three sections: I to III.

How This Guide Is Organized

Section I **WebManager operation reference**

Chapter 1 "Functions of the WebManager": Provides information on function of the ExpressCluster X WebManager.

Section II **Command reference**

Chapter 2 "ExpressCluster X SingleServerSafe command reference": Provides information on commands available to use in ExpressCluster.

Section III **Release notes**

Chapter 3 "Notes and restrictions": Provides information on known problems and restrictions.
Chapter 4 "Error messages": Lists and describes error messages you might encounter when operating ExpressCluster X SingleServerSafe.

Appendix

Appendix A "Appendix A Index"

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.

Term	Explanation
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

ExpressCluster X SingleServerSafe Documentation Set

The ExpressCluster X SingleServerSafe documentation consists of the five 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 Integrated WebManager Administrator's Guide
This guide is intended for system administrators who manage a cluster system using ExpressCluster with ExpressCluster Integrated WebManager and for system engineers who are introducing the Integrated WebManager. Details about items required when introducing a cluster system are described in accordance with actual procedures.

ExpressCluster X WebManager Mobile Administrator's Guide
This guide is intended for system administrators who manage a cluster system using ExpressCluster with WebManager Mobile, and for system engineers who are introducing WebManager Mobile. Details on the actual procedures required when introducing a cluster system using WebManager Mobile are described in this guide.

Conventions

In this guide, **Note**, **Important**, and **Related Information** 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.

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

The following conventions are used in this guide.

Convention	Usage	Example
Bold	Indicates graphical objects, such as fields, list boxes, menu selections, buttons, labels, icons, etc.	In **User Name**, type your name. On the **File** menu, click **Open Database**.
Angled bracket within the command line	Indicates that the value specified inside of the angled bracket can be omitted.	`clpstat –s[-h host_name]`
#	Prompt to indicate that a Linux user has logged in as root user.	`# clpcl -s -a`
Monospace (courier)	Indicates path names, commands, system output (message, prompt, etc), directory, file names, functions and parameters.	`/Linux/3.2/en/server/`
Monospace bold (courier)	Indicates the value that a user actually enters from a command line.	Enter the following: **`#clpcl -s -a`**
Monospace italic (courier)	Indicates that users should replace italicized part with values that they are actually working with.	`rpm –i expressclssss-<version_number>-<release_number>.i686.rpm`

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Section I WebManager operation reference

This section provides details about the ExpressCluster X WebManager functions. ExpressCluster X SingleServerSafe uses windows common to those of the clustering software ExpressCluster X to ensure high compatibility with ExpressCluster X in terms of operation and other aspects.

- Chapter 1 Functions of the WebManager

Chapter 1 Functions of the WebManager

This chapter describes the functions of the WebManager.

This chapter covers:

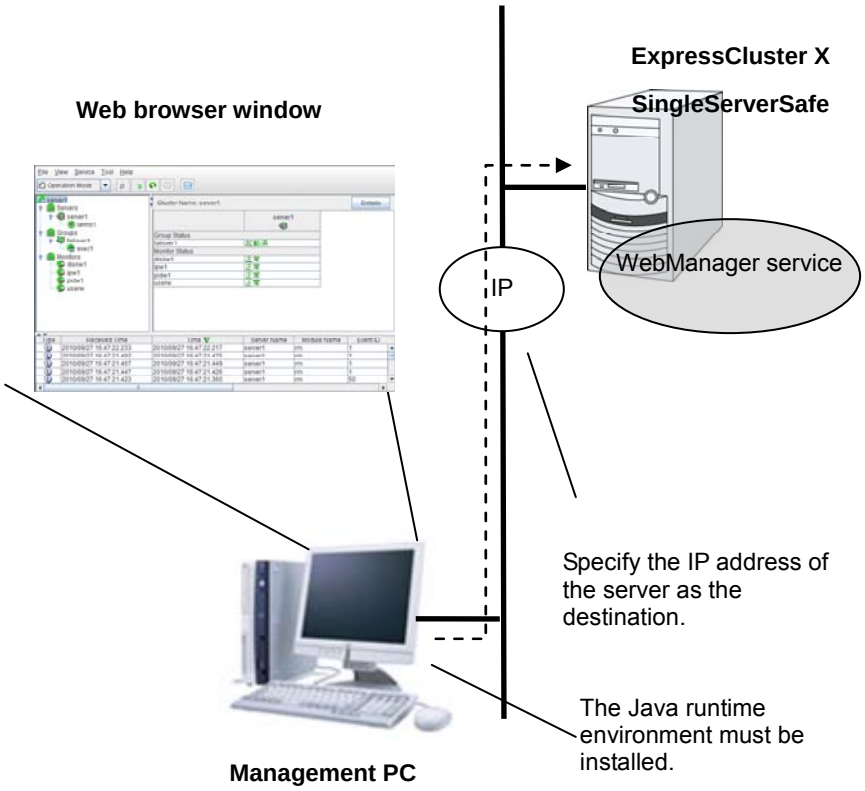
Starting up the WebManager

Some of the windows and terms used to describe the WebManager in this chapter are the same as those for ExpressCluster X WebManager. Therefore, cluster-related terms are used in parts of the chapter.

Read the guide, assuming that ExpressCluster X SingleServerSafe is in a one-node cluster.

What is the WebManager?

The WebManager is a function for setting up ExpressCluster, monitoring its status, starting and stopping servers and groups, and collecting operation logs through a Web browser. The overview of the WebManager is shown in the following figures.



The WebManager service on the ExpressCluster X SingleServerSafe Server is set up to start up when the operating system starts up.

Starting the WebManager

The procedure for starting the WebManager is described below.

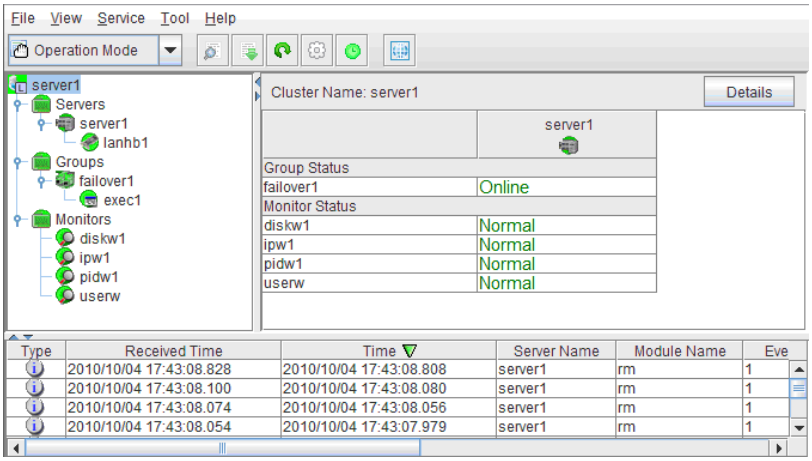
1. Start your Web browser.
2. Enter the IP address and port number of the server where ExpressCluster X SingleServerSafe is installed in the browser address bar.

http://192.168.0.3:29003/

The port number for the WebManager specified at installation. (Default value: 29003)

The IP address of the server where ExpressCluster X SingleServerSafe is installed.
If the local server is used, the local host can be specified.

3. The WebManager starts.



Window of the WebManager

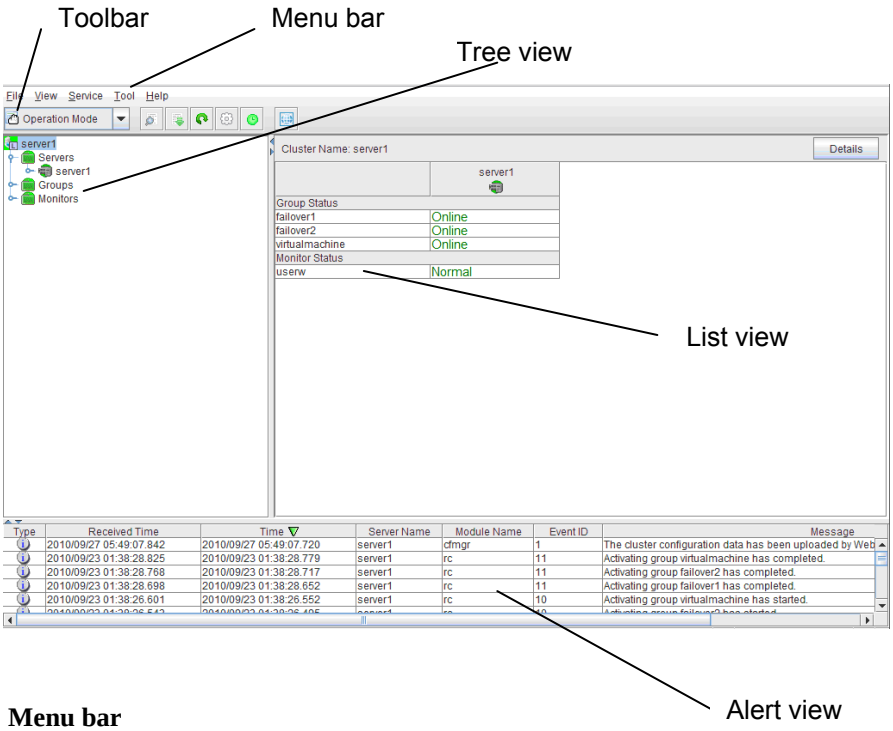
This chapter provides information about the WebManager window.

Note:

For the language used on the screen, see "Cluster properties – info tab" in Chapter 7 "Details of other settings" in *"ExpressCluster X SingleServerSafe Configuration Guide"*.

Main WebManager window

The WebManager window consists of two bars and three views.



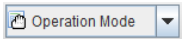
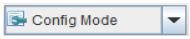
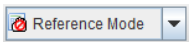
Menu bar

The menu bar has the five menus described below. The contents of these menus differ depending on the config mode and operation/reference mode. The menu items displayed in the operation/reference mode are described later in this chapter. For information about the menus displayed in the config mode, see the next chapter.

- **File** menu
- **View** menu
- **Service** menu
- **Tool** menu
- **Help** menu

Toolbar

If you click the combo box and icons on the toolbar, you can perform the same operation as when selecting the corresponding item on the menu bar.

Button	Function	Refer to
	Changes the WebManager to the operation mode. This is the same as clicking **View** on the menu bar and then selecting **Operate Mode**.	"Changing the WebManager operation mode" (on page 23)
	Changes the WebManager to the config mode (online version of the Builder). This is the same as clicking **View** on the menu bar and then selecting **Config Mode**.	"Changing the WebManager operation mode" (on page 23)
	Changes the WebManager to the reference mode. This is the same as clicking **View** on the menu bar and then selecting **Reference Mode**.	"Changing the WebManager operation mode" (on page 23)
	Switches to WebManager verification mode. This is the same as clicking **View** on the menu bar and then selecting **Verification Mode**.	"Changing the WebManager operation mode" (on page 23)
	Searches for an alert. This is the same as clicking **Tool** on the menu bar and then selecting **Filter Alert**.	"Searching for an alert by using the WebManager" (on page 24)
	Collects logs. This is the same as clicking **Tool** on the menu bar and then selecting **Collecting Logs**.	"Collecting logs by using the WebManager" (on page 26)
	Performs reloading. This is the same as clicking **Tool** on the menu bar and then selecting **Reload**.	"Updating the WebManager information" (on page 29)
	Displays options. This is the same as clicking **Tool** on the menu bar and then selecting **Option**.	"Changing the screen layout on the WebManager" (on page 29)
	Displays the time information. This is the same as clicking **Tool** on the menu bar and then selecting **TimeInfo**. When the time information has been updated, the icon changes accordingly. The icon reverts to its original form when the time information dialog is displayed.	"Checking the time information from the WebManager" (on page 30)

	Displays Integrated WebManager. This is the same as clicking **Tool** on the menu bar and then selecting **Integrated WebManager**.	"Executing Integrated WebManager from the WebManager" (page 32)

Tree view

The statuses of servers and group resources can be confirmed. For further information, see "Checking the status of each object in the tree view of WebManager" on page 33.

List view

The upper part of the view provides information on the server or other resource selected in the tree view. The lower part lists the start/stop statuses and comments of each server, group resource, and monitor resource. If you click the **Details** button located on the upper right of the view, further information will be displayed in a dialog. For further information, see "Checking the cluster status by using the WebManager list view" on page 43.

Alert view

The operation status of ExpressCluster X SingleServerSafe is indicated by a message. For further information, see "Checking alerts by using the WebManager" on page 50.

Changing the WebManager operation mode

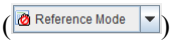
The WebManager has the following four operation modes.

- Operate Mode
  This mode allows the user to see the status of and operate the server.
  Select **Operation Mode** on the **View** menu or click the **Operation Mode** on the combo box (

) on the toolbar to switch to the operation mode. However, if you used the reference mode password for login when starting the WebManager or connected to the WebManager from a client that is not allowed to perform operations, it is not possible to switch to the operation mode.

- Config Mode
  This mode allows the user to set up the server and change the settings. The WebManager in the config mode is called Builder (online version). For details about operations in the config mode, see the *ExpressCluster X SingleServerSafe Configuration Guide*.
  Select **Config Mode** on the **View** menu or click the **Config Mode** on the combo box (

) on the toolbar to switch to the config mode. However, if you connected to the WebManager from a client that is not allowed to perform operations, it is not possible to switch to the config mode.

- Reference Mode
  This mode allows the user to see the cluster status, but not to operate the server.
  Select **Reference Mode** on the **View** menu or click the **Reference Mode** on the combo box (

) on the toolbar to switch to the reference mode.

- Verification mode
  This mode allows the user to enable or disable dummy failure of monitor resource.
  Select **Verification Mode** on the **View** menu or click **Verification Mode** in the combo box (

) on the toolbar to switch to verification mode. However, if you connected to the WebManager from a client that is not allowed to perform operations, it is not possible to switch to verification mode.
  If you switch from the verification mode to another mode, a dialog box asks if you want to cancel the enabled dummy failure of all the monitor resources. Select **Yes** to place all the monitor resources in the enabled dummy failure back in the normal monitored status. Select **No** to switch to another mode while keeping the monitor resources in the enabled dummy failure.

Note: When the pop-up window is displayed for **Operation Mode**, **Reference Mode**, or **Verification Mode** in the WebManager, and if switching to **Config Mode** is performed, the open pop-up window closes.

The operation performed on the pop-up window continues.

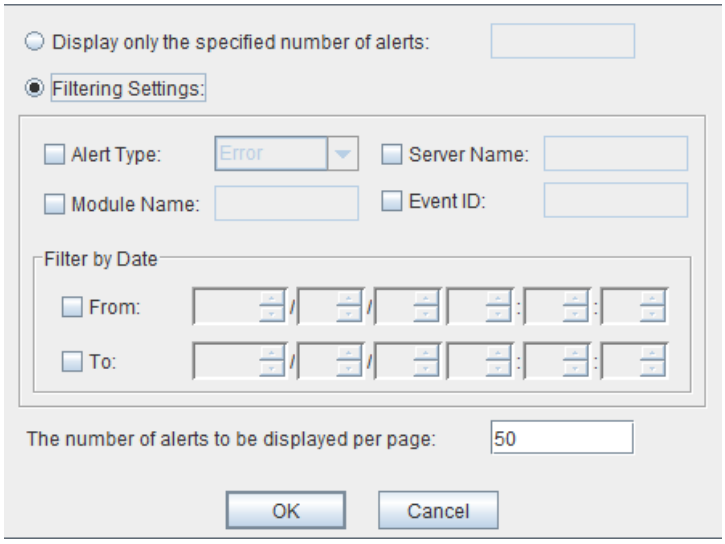
Searching for an alert by using the WebManager

You can search for an alert by using the WebManager. Searching in this method is useful to view only a specific type alert.

Note:

For information bout alert logs, see “Checking alerts by using the WebManager” on page 50.

To search for an alert, click **Filter Alert** on the **Tool** menu or click the alert search icon ( ) on the toolbar. The window for specifying alert log search conditions is displayed.



To search only the specified number of past alert logs:

1. Select **Display only the specified number of alerts**.
2. Enter the number of past alert logs to search, and then click **OK**. Past alert logs are displayed as many as you have specified.

Note:

The maximum value to enter is the number specified for **Max Number to Save Alert Records**. To configure **Max Number to Save Alert Records**, right-click the cluster icon in the Builder, and then click **Cluster Properties** on the shortcut menu. In the properties dialog box, click the **Alert Log** tab.

To search by specifying search conditions:

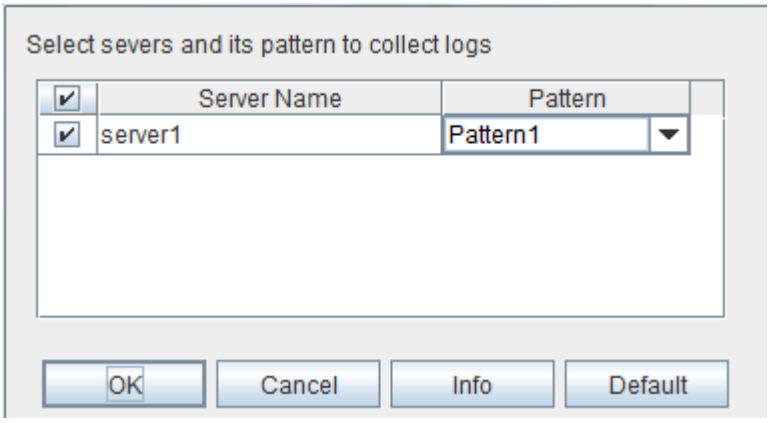
1. Click **Select the filter option**.
2. Enter the search conditions in each field and start searching.

Alert Type:	Select the type of alerts you want to see.
Module Name:	Enter the module type you want to see.
Server Name:	Type in the name of a server whose alerts you want to see.
Event ID:	Type in an event ID whose alerts you want to see. For event IDs, see Chapter 4, “Error messages.”
Start Time, Stop Time:	Select this to search by the time of the event occurrence. Enter the values in **Start Time** and **Stop Time**.

3. Enter the number of alerts to display on one page in **The number of alerts to be displayed per page:**, and then click **OK**. Research results are displayed based on the time an alert occurred.
4. If the results of research are displayed on more than one page, move the page by clicking **Back**, **Next,** and **Jump** buttons.

Collecting logs by using the WebManager

Clicking **Collect Cluster Logs** on the **Tool** menu or clicking the log collection icon ( ) on the toolbar opens the log collection dialog box.



Check box

Select the check boxes of the servers that have the logs you want to collect.

Pattern

Select the information to be collected. Specify one of Pattern 1 to Pattern 3 as the log collection pattern.

	Pattern1	Pattern2	Pattern3
(1) Default collect Information	y	y	y
(2) syslog	y	y	n
(3) core	y	n	y
(4) OS Information	y	y	y
(5) script	y	n	n
(6) ESMPRO/AC	y	n	n

For (1)-(6) information , see "Collecting logs (`clplogcc` command)" in Chapter 2, "ExpressCluster SingleServerSafe command reference" in this guide.

OK

Starts log collection and displays the dialog box of log collection progress.

Cancel

Closes this dialog box.

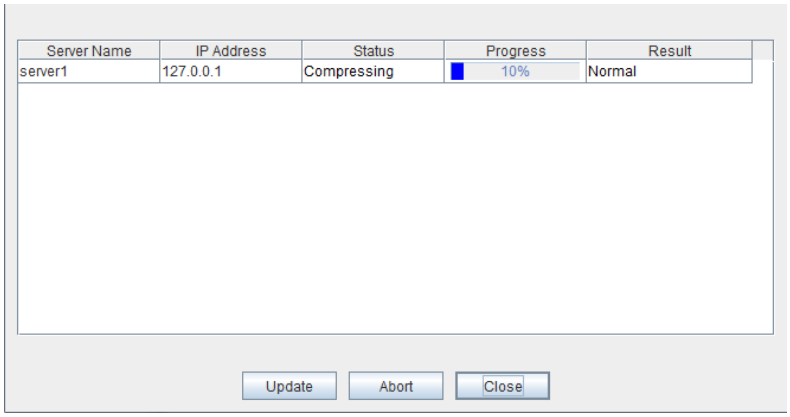
Info

Displays the information for each pattern.

Default

Resets the selections of servers and collect patterns to default values.

The dialog box of the log collection progress



Update

Updates the dialog box of the log collection progress.

Abort

Aborts the log collection.

Close

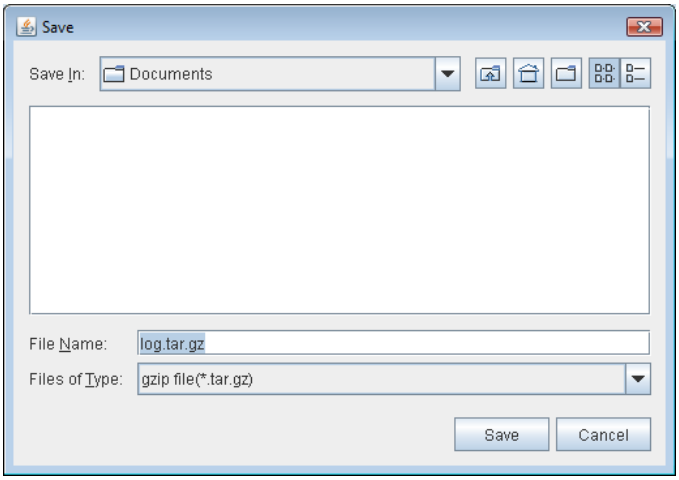
Closes the **Cluster Log Collection Progress** dialog box. Log collection continues.

At this time, the display of **Collect Cluster Logs** in title view has changed to **Progress**. Click **Progress** to display the log collection progress dialog box again.

Collect Logs Results

Result	Explanation
Normal	Log collection succeeded.
Abort	Log collection was cancelled by user.
Invalid parameter	Internal error may have occurred.
Communication Error	Connecting error occurred.
Timeout	Timeout occurred.
Busy	The server is busy.
Compression Error	Error occurred when compressing a file.
File I/O Error	File I/O failed.
Not Enough Free Space	No free space on the disk.
Unknown Error	Failure caused by other errors

When the log collection completes, the browser displays a dialog box that asks where you want to save the logs. Download the logs to any location.



Note:

Logs may not be downloaded properly if nothing is changed for more than 10 minutes.

When you collect logs, the following message may be displayed in the server console.

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

This will not affect log collection. Ignore this message.

Note:

If other modal dialog box is displayed while collecting logs, the file saving dialog box for the log collection will not be displayed. To display the file saving dialog box, close the modal dialog box.

Updating the WebManager information

Click **Reload** on the **Tool** menu or click the reload icon ( ) on the toolbar to update the information displayed in the WebManager.

Note:

When **RealTime** is set for the client data update method, what is displayed for the WebManager is updated automatically

When **Polling** is set for the client data update method, what is displayed for the WebManager is generally updated automatically, however, it does not always display the latest status because of the refresh interval configuration.
To display the latest information, click the reload icon or **Reload** on the **Tool** menu after performing an operation.

To configure the client data update method, from the shortcut menu, select **Properties**. In the properties dialog box, click the **WebManager** tab. Select the **Client Data Update Method** on **Tuning**

To configure the automatic reload interval of the WebManager, from the shortcut menu, select **Cluster Properties**. In the properties dialog box, click the **WebManager** tab.

If communication with the connection destination is not available, or if ExpressCluster X SingleServerSafe is not running at the connection destination, some objects might be grayed out.

Changing the screen layout on the WebManager

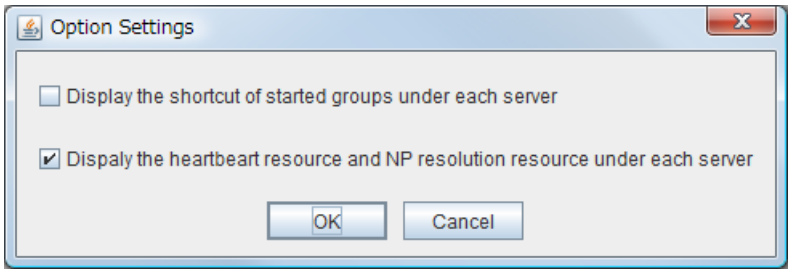
The WebManager screen layout can be changed by clicking the buttons of the split bars that divide the screen or by dragging the bars. This is useful to display only a specific view.

The split bars divide the views in the WebManager.

On the bar, click to maximize the view. Click to minimize it.

To change the display items on the tree view, click **Option** on the **Tool** menu or option icon ( ) on the tool bar.

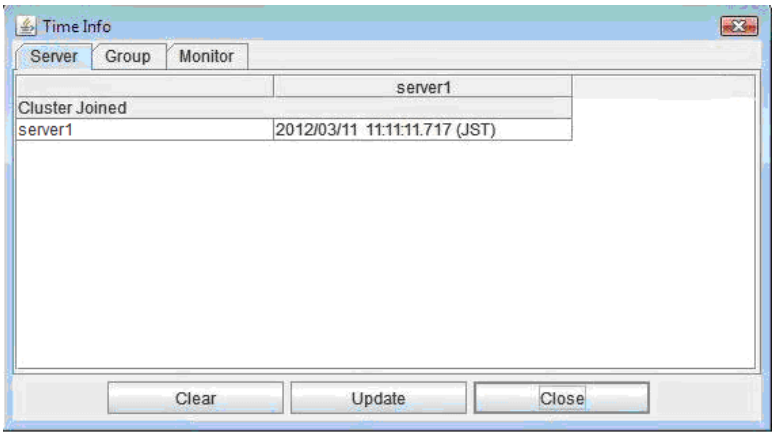
The following dialog is displayed. Check items you want to display.



Checking the time information from the WebManager

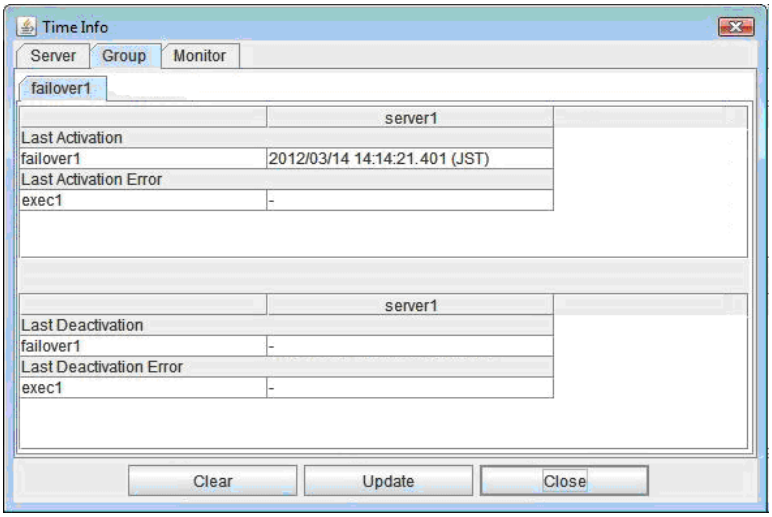
Check the time information from the WebManager by clicking **Time info** on the **Tool** menu or by clicking the time information icon ( ) on the toolbar.

Time information displayed on the Server tab



Cluster joined
Displays the most recent time at which server joined the cluster.

Time information displayed on the Group tab



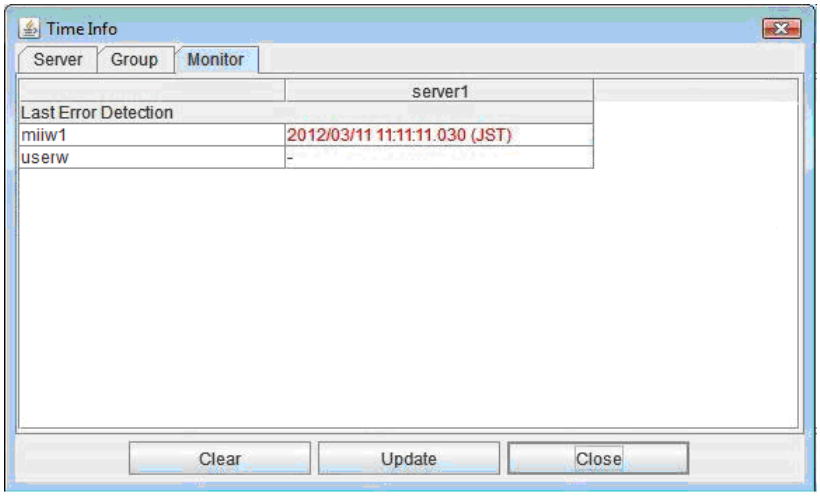
Last activation
Displays the time at which the failover group was last activated on server.

Last activation error
Displays the time at which an activation failure of a group resource was last detected on server.

Last deactivation
Displays the time at which the failover group was last deactivated on server.

Last deactivation error
Displays the time at which a deactivation failure of a group resource was last detected on server.

Time information displayed on the Monitor tab



Last error detection
Displays the time at which each monitor resource last transitioned from normal status to abnormal status on server.

Clear

Deletes the time information displayed on the current tab.

Update

Acquires the time information for all the tabs.

Close

Closes the time information dialog box.

Note:

When **Client Data Update Method** is set to **Polling**, the time information icon on the toolbar may be blinked if you push **Clear** button. But it's not a problem.

Executing Integrated WebManager from the WebManager

To execute Integrated WebManager from the WebManager, click **Integrated WebManager** on the **Tool** menu or Integrated WebManager icon ( ) on the tool bar.

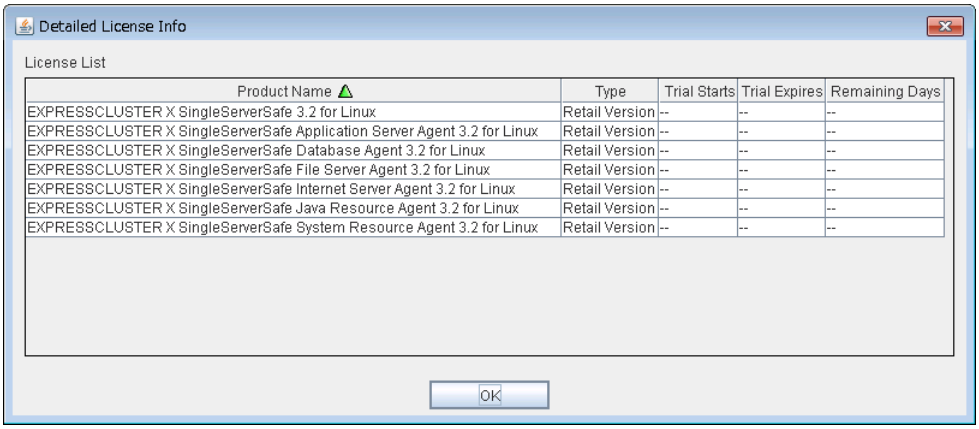
Operating cluster services from the WebManager

To operate cluster services from the WebManager, select each item from the following **Service** menu:

- **Suspend Cluster**
  Suspends the server. This item can be selected only when the server is running.
- **Resume Cluster**
  Resumes a suspended server. This item can be selected only when the server is suspended.
- **Start Cluster**
  Starts the server. This item can be selected only when the server is stopped.
- **Stop Cluster**
  Stops the server. This item can be selected only when the server is running.
- **Restart Manager**
  Restarts a manager.

Confirming the license from the WebManager

To confirm the license from the WebManager, click **License Info** on the **Help** menu.



- **Registered License List**
  Displays the licenses registered on the connection destination server.
  You can rearrange each item by selecting the field name from the list.
  By default, the items are arranged in descending order of **Product Name**.
- **OK button**
  Closes the **License Info** dialog box.

Checking the status of each object in the tree view of WebManager

You can visually check the status of each object in the WebManager window.

1. Start the webManager.
2. On the left pane of the window, a tree is displayed. Check the status by looking at each icon and object color. The following is the brief overview of a tree.

Note:

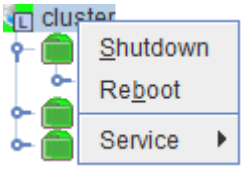
The tree configuration depends on the version of and optional products used with ExpressCluster X SingleServerSafe.

Operations that can be executed from the WebManager

You can operate a server by right-clicking **Cluster**, **Individual server, Individual group**, or **VM resource**.

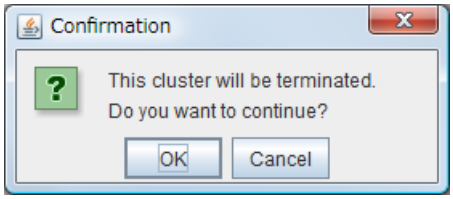
Object of the cluster

When you right-click the **cluster** object, the following shortcut menu is displayed.



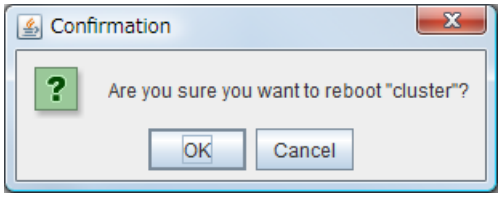
- **Shut down**

  Shuts down the running server. When you select this operation, the following dialog box is displayed for confirmation.



- **Reboot**

  Reboots the running server. When you selected this operation, the following dialog box is displayed for confirmation.

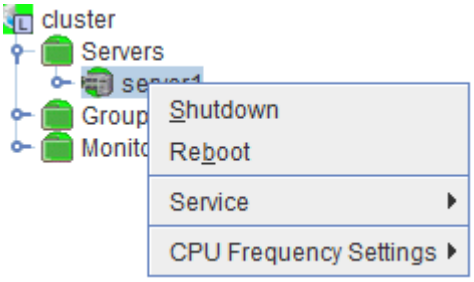


- **Service**

  If you select Service, Suspend Cluster, Resume Cluster, Start Cluster, Stop Cluster and Restart Manager are displayed on the shortcut menu.

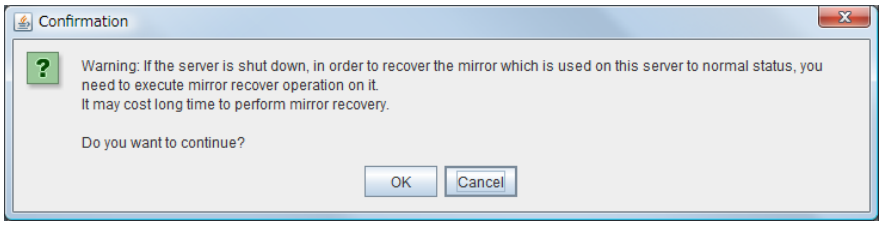
Individual server objects

When you right-click an individual server object, the following shortcut menu is displayed.



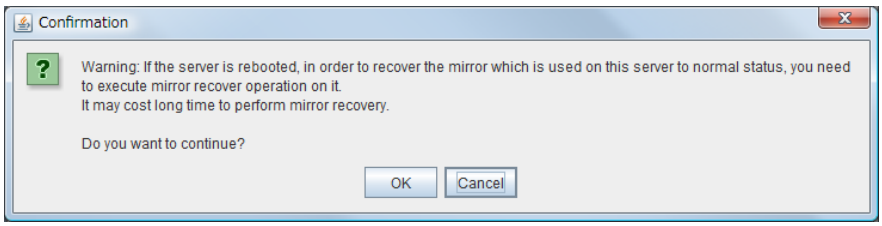
- **Shut down**

  Shuts down the server. When you execute this command, the following confirmation dialog box is displayed:



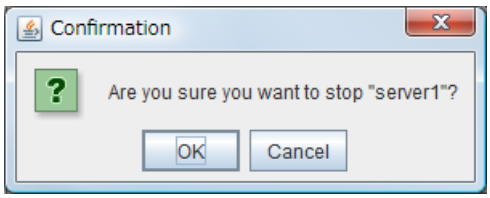
- **Reboot**

  Reboots the selected server. When you selected this operation, the following dialog box is displayed for confirmation.



- **Service**

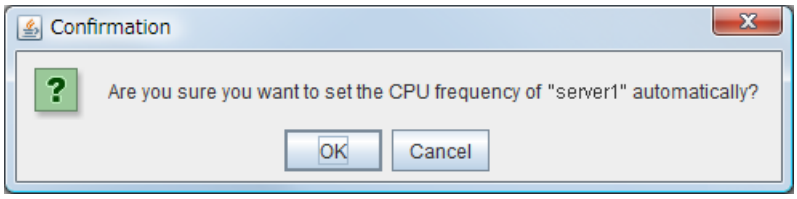
  Starts and stops the selected service. When you select this operation, the following dialog box is displayed for confirmation.



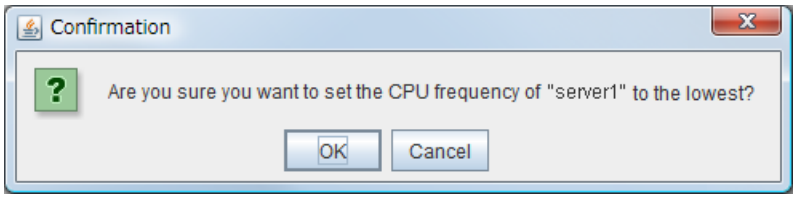
◆ **CPU frequency control**

Configures the CPU frequency control function of the selected server.

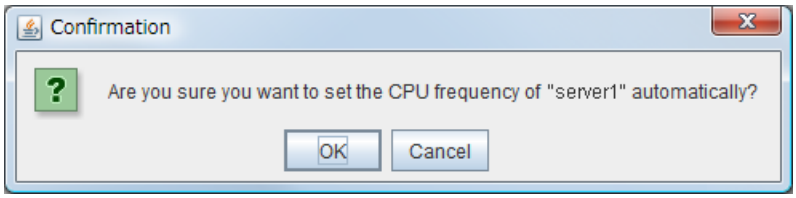
- **Highest Frequency**
  Sets the CPU frequency to the highest.



- **Lowest Frequency**
  Lowers the frequency to turn it to power-saving mode.



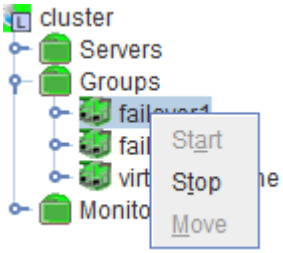
- **Auto**
  Restores the CPU frequency control to the control by ExpressCluster.



This function cannot be used when the **Use CPU Frequency Control** check box is not selected in the power saving settings in the **Cluster Properties**.

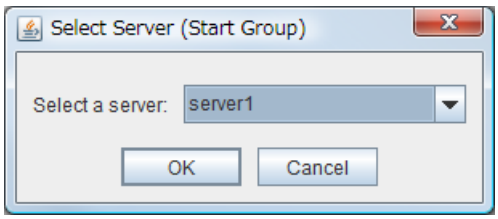
Individual group objects (when Failover group is selected)

When you right-click a monitor resource object, the following shortcut menu is displayed.



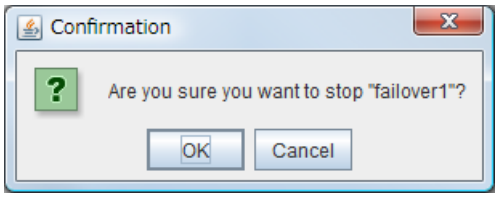
- **Start** (enabled only when the group is stopped)

  Starts up the selected group. The dialog box for choosing a server that starts up the selected group is displayed.



- **Stop** (enabled only when the group has been started up or when it has an error)

  Stops the selected group resource. When you selected this operation, the following dialog box is displayed for confirmation.

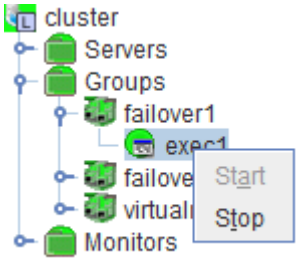


- **Move**

  Not used.

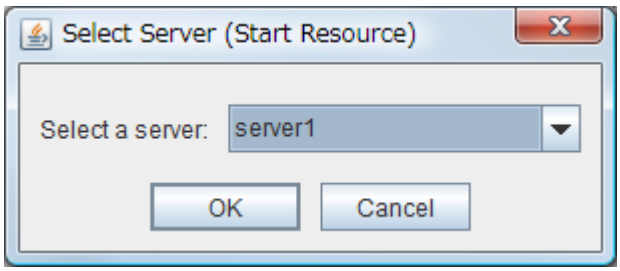
Individual group resource objects (except VM resources)

When you right-click a monitor resource object, the following shortcut menu is displayed.



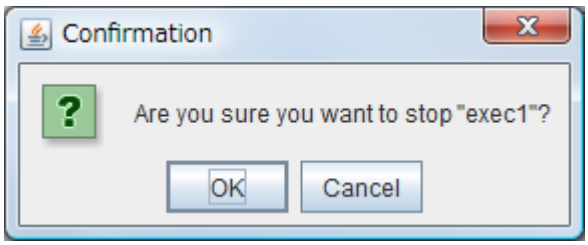
- **Start** (enabled only when the group is stopped)

  Starts up the selected group resource. The dialog box for choosing a server that starts up the selected group is displayed.



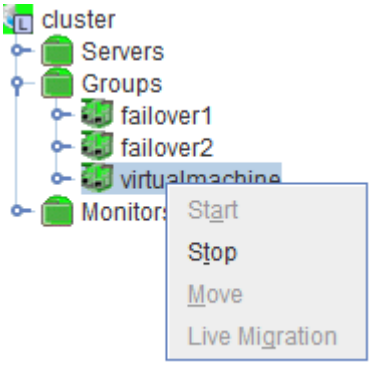
- **Stop** (enabled only when the group has been started up or when it has an error)

  Stops the selected group resource. When you selected this operation, the following dialog box is displayed for confirmation.



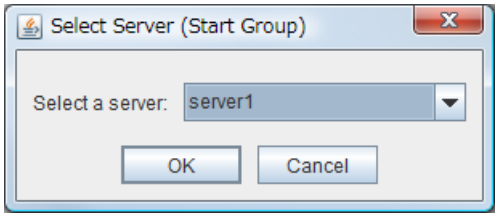
Individual group objects (when Virtual Machine is selected)

When you right-click a monitor resource object, the following shortcut menu is displayed.



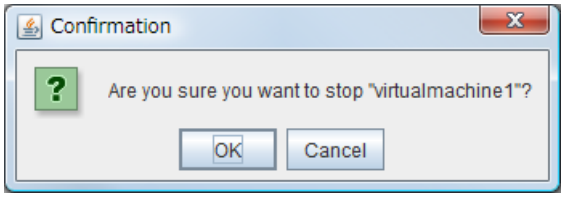
- **Start** (enabled only when the group is stopped)

  Starts up the selected group resource. The dialog box for choosing a server that starts up the selected group is displayed.



- **Stop** (enabled only when the group has been started up or when it has an error)

  Stops the selected group resource. When you select this operation, the following dialog box is displayed for confirmation.



- **Move**

  Not used.

- **Live Migration**

  Not used.

Monitors object

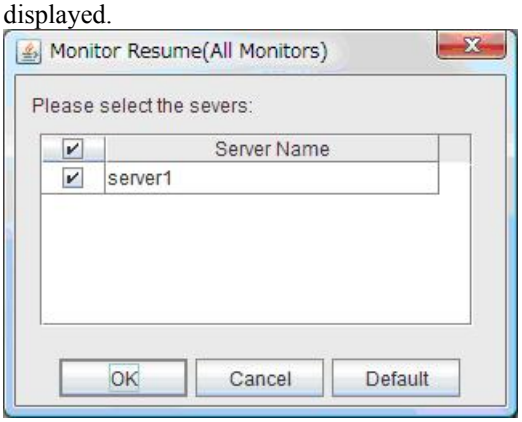
When you right-click the **Monitors** object, the following shortcut menu is displayed.

When operation mode is selected

When verification mode is selected

- **Resume** (enabled only when the monitor is suspended)

  Resumes all the monitor resources that are configured. This operation is not performed on the monitor resources where suspending/resuming the monitoring is not possible. The following dialog box for selecting the server where monitor resources are resumed is displayed.

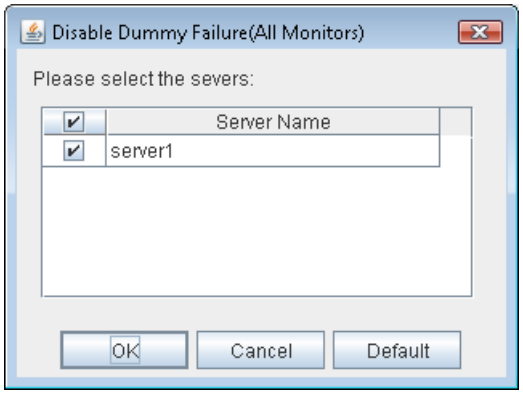


- **Suspend** (enabled only when the monitor is running)

  Suspends all the monitor resources that are configured. This operation is not performed on the monitor resources where suspending/resuming the monitoring is not possible. The following dialog box for selecting the server where monitor resources are suspended is displayed.

- **Disable Dummy Failure** (available only when dummy failure is enabled)

  Disable dummy failure for all monitor resources. Select the server on which dummy failure for monitor resources is to cleared from the dialog box shown below.

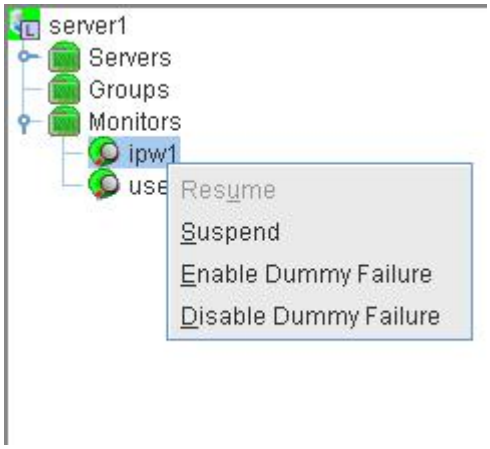


Individual monitor resource objects

When you right-click an individual monitor resource object, the following shortcut menu is displayed.

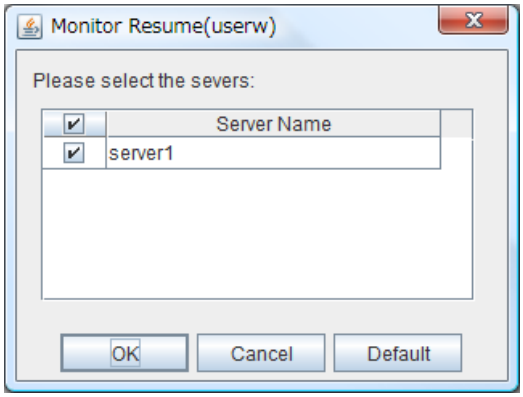
When operation mode is selected

When verification mode is selected



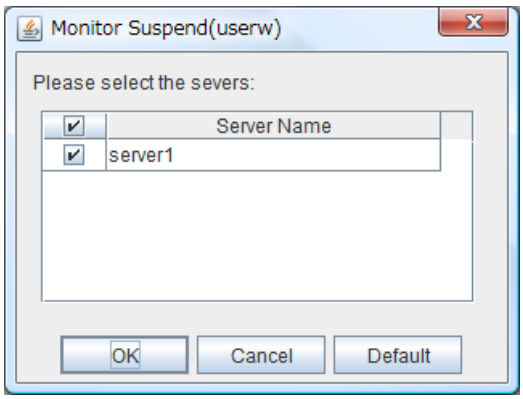
- **Resume** (enabled when the resource is stopped temporarily)

  Resumes a selected monitor resource. The dialog box for choosing the server on which the selected monitor resource is resumed.



- **Suspend** (enabled when the resource is monitoring)

  Resumes the selected monitor resource. The dialog box for choosing the server on which the selected monitor resource is stopped temporarily.



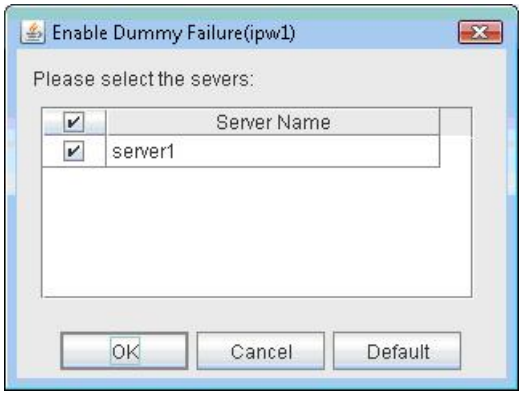
◆ **Enable Dummy Failure** (available only in verification mode)

Enable dummy failure for a selected monitor resource. Dummy failure can be enabled only on a server on which **Resource Status on Each Server** of the relevant monitor resource indicates a status other than **Error** or Dummy Failure.

Note, however, that the following monitor resources cannot be selected:

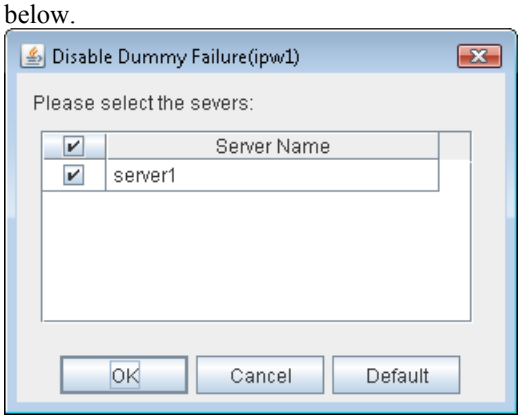
- User space monitor resources
- External coordination monitor resources
- VM monitor resource

Select the server on which to enable dummy failure for the selected monitor resource from the following dialog box.



◆ **Disable Dummy Failure** (available only in verification mode)

Dummy failure is disabled for the selected monitor resource. Select the server on which the dummy failure is to be disabled for the selected monitor resource from the dialog box shown below.

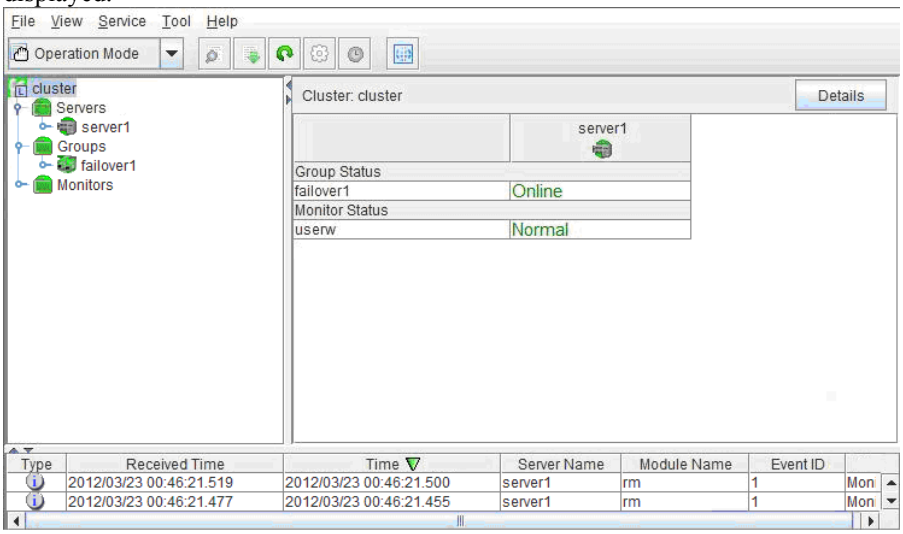


Checking the cluster status by using the WebManager list view

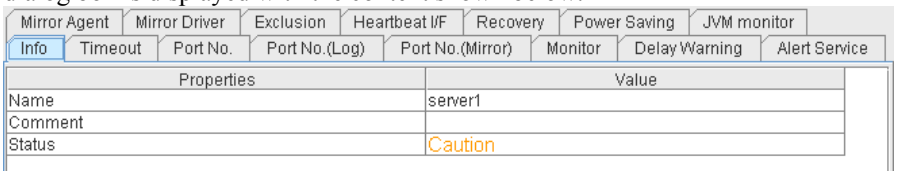
Details about the object selected in the WebManager tree view can be displayed in the list view.

Displaying detailed information on the whole server in the WebManager list view

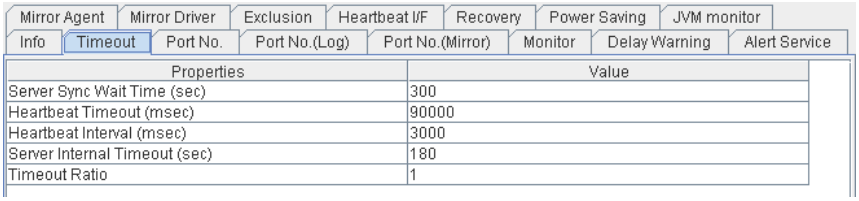
1. Start the WebManager.
2. In this tree view, click the object icon for the whole server. In the list view in the right pane of the window, the **group status** and **monitor resource status** of each server are displayed.



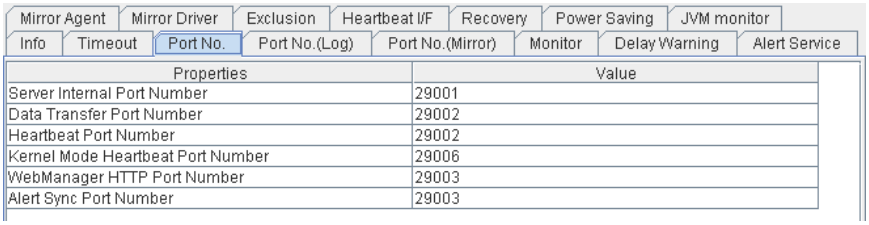
3. In the following dialog box, click the **Details** button to display the following information. A dialog box is displayed with the content shown below.



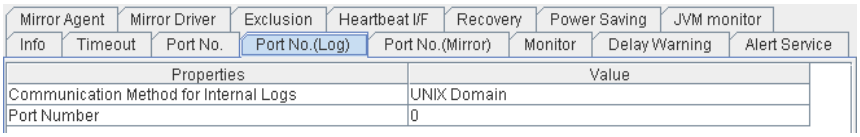
Name: Cluster name
Comment: Comment for the cluster
Status: Status of the cluster



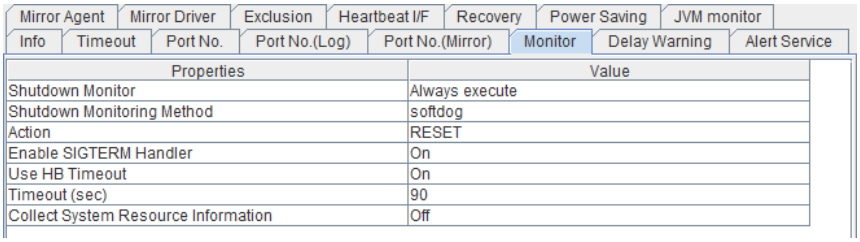
Server Sync Wait Time (sec): Time to wait for the other servers to start up (in seconds)
Heartbeat Timeout (msec): Heartbeat time-out (in milliseconds)
Heartbeat Interval (msec): The interval for sending heartbeats (in milliseconds)
Server Internal Timeout (sec): Internal communication time-out (in seconds)
Timeout Ratio: Current time-out ratio



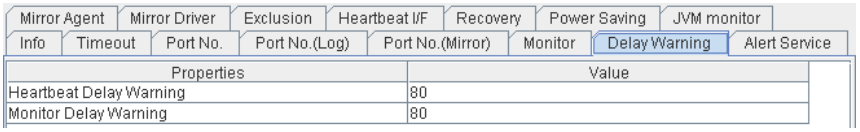
Server Internal Port Number: Port number for internal communication
Data Transfer Port Number: Port number for data transfer
Heartbeat Port Number: Port number for heartbeat
Kernel Mode Heartbeat Port Number: Port number for kernel-mode heartbeat
WebManager HTTP Port Number: Port number for WebManager
Alert Sync Port Number: Port number for alert synchronization



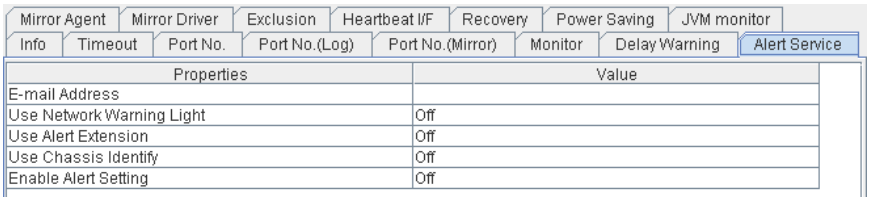
Communication method for Internal Logs:
Communication method used for logs
Port Number: Port number used for logs



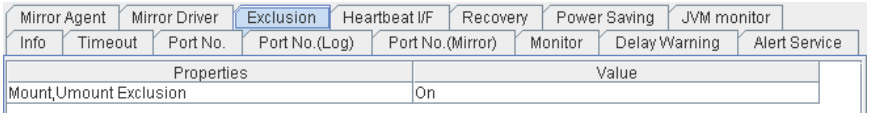
Shutdown Monitor: Whether or not to monitor shutdown
Shutdown Monitoring Method: Method for monitoring shutdown
Action: Operation at time-out
Enable SIGTERM Handler: Whether or not to enable SIGTERM
Use HB Timeout: Whether or not to use HB time-out
Timeout (sec): Timeout (in seconds)
Collect System Resource Information:
Whether or not to collect System Resource Information



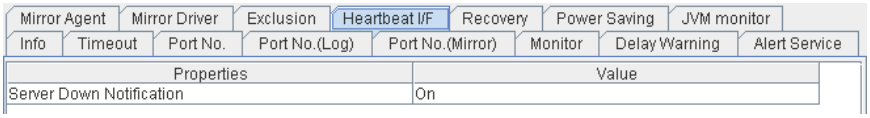
Heartbeat Delay Warning: Heartbeat delay warning (%)
Monitor Delay Warning: Monitor delay warning (%)



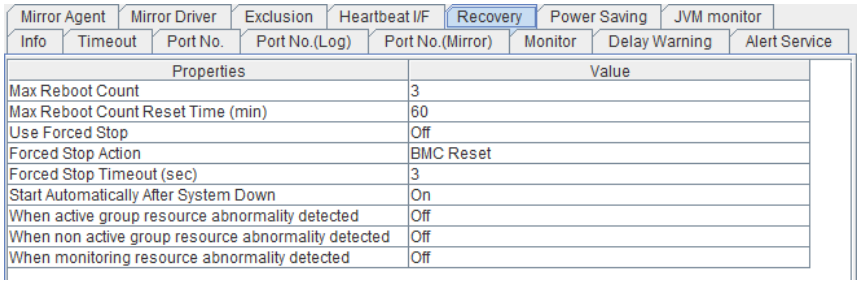
E-mail Address: Destination e-mail address for sending alerts
Use Network Warning Light: Whether or not to use a network warning light
Use Alert Extension: Whether or not to use an alert extension function
Use Chassis Identify Whether or not to use a chassis identify function
Enable Alert Setting Whether or not to use the alert setting



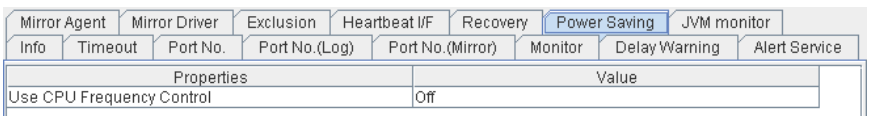
Mount, Umount Exclusion: Whether or not to exclude a mount or unmount command



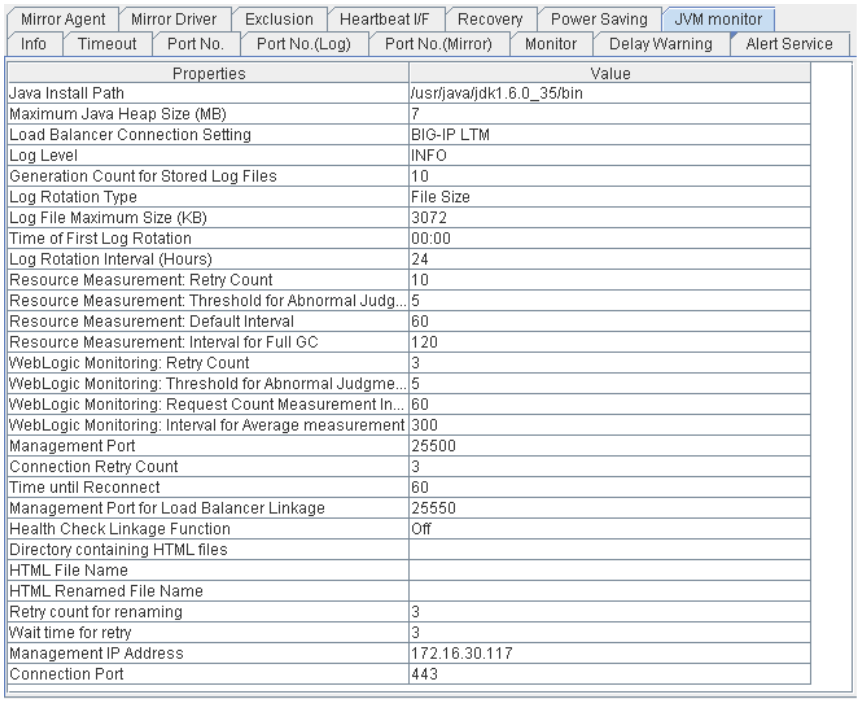
Server Down Notification Server down notification



Max Reboot Count: Maximum reboot count
Max Reboot Count Reset Time (min):
Maximum reboot count reset time (in minutes)
Use forced stop: Whether or not to use a forced stop function
Max Reboot Count: Maximum reboot count
Forced stop timeout (sec): Wait time till the activation of failover group is started after a forced stop function is performed (in seconds)
Start Automatically After System Down:
Whether or not to prohibit automatic startup of the cluster service when it is stopped abnormally
When active group resource abnormality detected:
Disable the Final Action When Activation Failure Detected
When non active group resource abnormality detected:
Disable the Final Action When Deactivation Failure Detected
When monitoring resource abnormality detected:
Disable the Final Action When Failure Detected



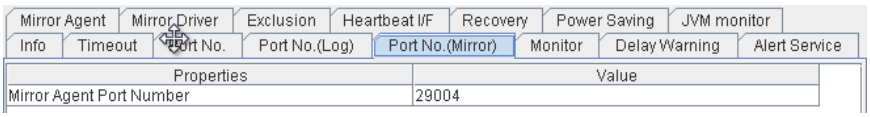
Use CPU Frequency Control: Whether or not to use CPU frequency control



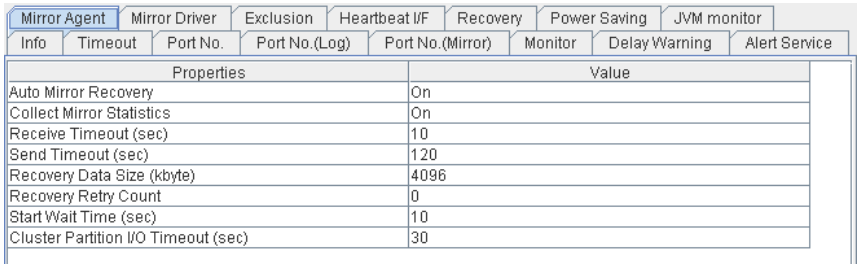
Properties	Value
Java Install Path	/usr/java/jdk1.6.0_35/bin
Maximum Java Heap Size (MB)	7
Load Balancer Connection Setting	BIG-IP LTM
Log Level	INFO
Generation Count for Stored Log Files	10
Log Rotation Type	File Size
Log File Maximum Size (KB)	3072
Time of First Log Rotation	00:00
Log Rotation Interval (Hours)	24
Resource Measurement: Retry Count	10
Resource Measurement: Threshold for Abnormal Judg...	5
Resource Measurement: Default Interval	60
Resource Measurement: Interval for Full GC	120
WebLogic Monitoring: Retry Count	3
WebLogic Monitoring: Threshold for Abnormal Judgme...	5
WebLogic Monitoring: Request Count Measurement In...	60
WebLogic Monitoring: Interval for Average measurement	300
Management Port	25500
Connection Retry Count	3
Time until Reconnect	60
Management Port for Load Balancer Linkage	25550
Health Check Linkage Function	Off
Directory containing HTML files	
HTML File Name	
HTML Renamed File Name	
Retry count for renaming	3
Wait time for retry	3
Management IP Address	172.16.30.117
Connection Port	443

Java Install Path: Java installation path
Maximum Java Heap Size (MB): Maximum Java heap size (MB)
Load Balancer Linkage Settings Load balancer linkage settings
Log Level: Log level
Generation Count for Stored Log Files:
Number of generations of log files to be stored
Log Rotation Type: Log rotation type
Log File Maximum Size (KB): Maximum log file size (KB)
Time of First Log Rotation: Time of the first log rotation
Log Rotation Interval (Hours): Log rotation interval (hours)
Resource Measurement: Retry Count:
Measurement retry count
Resource Measurement: Threshold for Abnormal Judgment:
Threshold for abnormal judgment
Resource Measurement: Default Interval:
Interval for memory and thread measurement (sec)
Resource Measurement: The time and count in Full GC:
Interval for Full GC measurement (sec)
WebLogic Monitoring: Retry Count:
Measurement retry count
WebLogic Monitoring: Threshold for Abnormal Judgment:
Threshold for abnormal judgment
WebLogic Monitoring: Request Count Measurement Interval:
Interval for measuring the number of requests (sec)
WebLogic Monitoring: Interval for Average measurement:
Interval for measuring the average (sec)
Management Port: Management port number
Connection Retry Count: Connection retry count
Time until Reconnect: Time to wait for reconnection (sec)
Management Port for Load Balancer Linkage:
Management port number for load balancer linkage
Health Check Linkage Function: Whether or not to use the health check linkage function
HTML Path: HTML storage directory
HTML File Name: HTML file name
HTML Renamed File Name: Renamed HTML file name

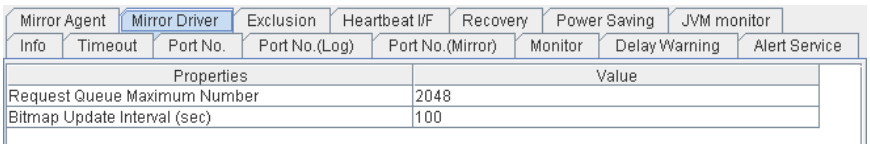
Retry Count: Retry count if renaming fails
Retry Interval: Time to wait for a renaming retry (sec)
Management IP address: BIG-IP LTM management IP address
Connection Portr: Communication port number for BIG-IP LTM



Mirror Agent Port Number: Not used



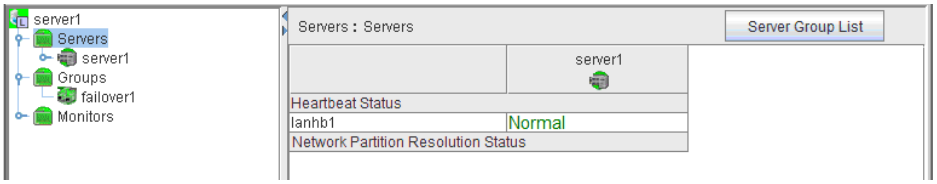
Auto Mirror Recovery: Not used
Collect Mirror Statistics: Not used
Receive Timeout (sec): Not used
Send Timeout (sec): Not used
Recovery Data Size (kbyte): Not used
Recovery Retry Count: Not used
Start Wait Time (sec): Not used
Cluster Partition I/O Timeout (sec) :
Not used



Request Queue Maximum Number:
Not used
Bitmap Update Interval (sec): Not used

Checking an overview of the server status by using the WebManager list view

In the tree view, select the object icon  . In the upper part of the list view in the right pane of the window, **Server Name**, **Type** (master or not), and **Status** are displayed. In the lower part, **Server Group Name** and **Server Name** are displayed.



Checking the detailed server status by using the WebManager list view

1. Start the WebManager.
2. In the tree view, select the object of the server  . The **Server Comment**, **Virtual Infrastructure**, **Product**, **Version**, **Platform**, **Status** of the server are displayed.

Server Name: server1 — Details

Properties	Value
Comment	
Virtual Infrastructure	
Product	EXPRESSCLUSTER X 3.1 SingleServerSafe 3.1 for Linux
Version	3.1.3-1
Platform	Red Hat Enterprise Linux Server release 5.7 (Tikanga)
Status	Online
Heartbeat Status	
lankhb1	Normal
lankhb2	Normal
Network Partition Resolution Status	

Comment: Comment for the server
Virtual Infrastructure: Virtual infrastructure name
Product: Product name
Version: Version (identical to the RPM version value)
Platform: Platform
Status: Status of the server

When you click **Details**, the following information is displayed.

Properties	Value
Name	server1
Edition	SSS
Mirror Disk Connect IP Address	
Network Warning Light IP Address(Type)	
Disk I/O Lockout Device	
BMC IP Address	
CPU Frequency Status	-
No shutdown when double activation detected	Off

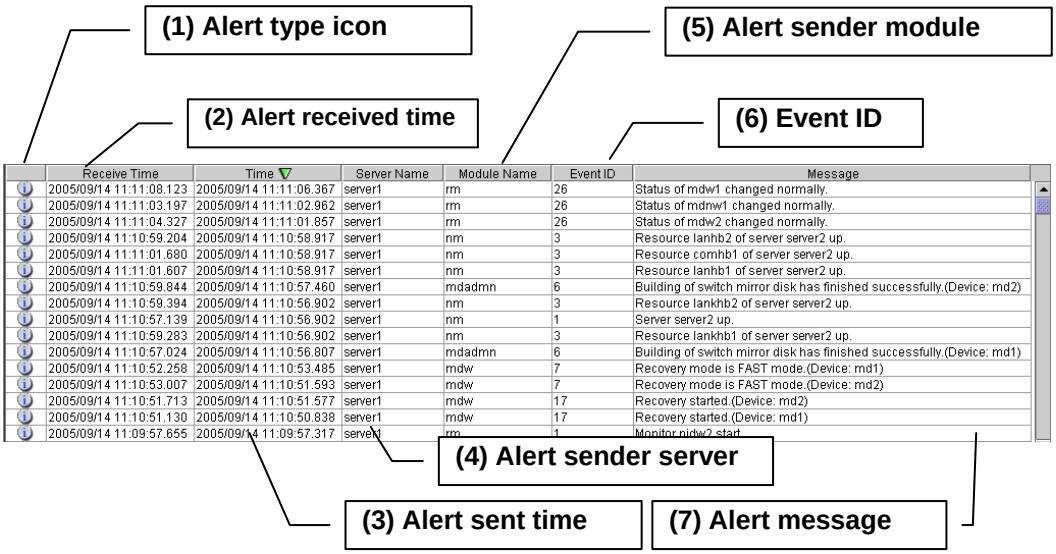
Name: Server name
Edition: Edition
Mirror Disk Connect IP Address mdc: Not used
Network Warning Light IP Address(Type): Not used
Disk I/O Lockout Device: Not used
BMC IP Address: Not used
CPU Frequency Status: Current setting status of CPU frequency control
No shutdown when double activation detected: Not used

Checking the status of the entire monitor in the WebManager list view

1. Start the WebManager.
2. In the tree view, select the object icon for the entire monitor  . In the list view, **Monitor Name** and a list of server statuses are displayed.

Checking alerts by using the WebManager

You can view alerts in the bottom part of the WebManager.
Each field of the alert view is configured as follows.



	Receive Time	Time	Server Name	Module Name	Event ID	Message
	2005/09/14 11:11:08.123	2005/09/14 11:11:06.367	server1	rm	26	Status of mdw1 changed normally.
	2005/09/14 11:11:03.197	2005/09/14 11:11:02.962	server1	rm	26	Status of mdnw1 changed normally.
	2005/09/14 11:11:04.327	2005/09/14 11:11:01.857	server1	rm	26	Status of mdw2 changed normally.
	2005/09/14 11:10:59.204	2005/09/14 11:10:58.917	server1	nm	3	Resource lanhb2 of server server2 up.
	2005/09/14 11:11:01.680	2005/09/14 11:10:58.917	server1	nm	3	Resource comhb1 of server server2 up.
	2005/09/14 11:11:01.607	2005/09/14 11:10:58.917	server1	nm	3	Resource lanhb1 of server server2 up.
	2005/09/14 11:10:59.844	2005/09/14 11:10:57.460	server1	mdadmn	6	Building of switch mirror disk has finished successfully.(Device: md2)
	2005/09/14 11:10:59.394	2005/09/14 11:10:56.902	server1	nm	3	Resource lankhb2 of server server2 up.
	2005/09/14 11:10:57.139	2005/09/14 11:10:56.902	server1	nm	1	Server server2 up.
	2005/09/14 11:10:59.283	2005/09/14 11:10:56.902	server1	nm	3	Resource lankhb1 of server server2 up.
	2005/09/14 11:10:57.024	2005/09/14 11:10:56.807	server1	mdadmn	6	Building of switch mirror disk has finished successfully.(Device: md1)
	2005/09/14 11:10:52.258	2005/09/14 11:10:53.485	server1	mdw	7	Recovery mode is FAST mode.(Device: md1)
	2005/09/14 11:10:53.007	2005/09/14 11:10:51.593	server1	mdw	7	Recovery mode is FAST mode.(Device: md2)
	2005/09/14 11:10:51.713	2005/09/14 11:10:51.577	server1	mdw	17	Recovery started.(Device: md2)
	2005/09/14 11:10:51.130	2005/09/14 11:10:50.838	server1	mdw	17	Recovery started.(Device: md1)
	2005/09/14 11:09:57.655	2005/09/14 11:09:57.317	server1	rm	1	Monitor ridw2 start

For meanings of alert messages, see Chapter 4, “Error messages.” For information about searching alert messages, see “Searching for an alert by using the WebManager” in this chapter.

Alert view fields

The meaning of each of the fields in the alert view of the WebManager are the following.

(1) Alert type icon

Alert type	Meaning
	Informational message
	Warning message
	Error message

(2) Alert received time

The time the alert was received. The time in the server to which the WebManager connects is applied.

(3) Alert sent time

The time the alert was sent from a server. The time in the alert sender server is used.

(4) Alert sender server

The name of a server that sent the alert.

(5) Alert sender module

The name of a module that sent the alert.

(6) Event ID

The event ID number set to each alert.

(7) Alert message

The alert messages.

Alert view operations

By clicking an item on the bar showing the name of each field, you can change the order of alerts.

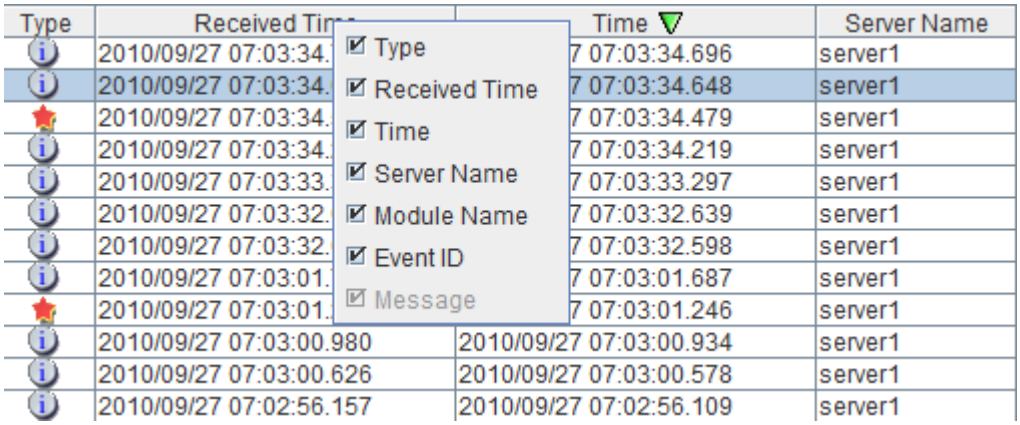
Whenever you select an item, the ▲ or ▼ mark is displayed in each field.

Mark	Meaning
▲	Sorts alerts in the ascending order of the selected field.
▼	Sorts alerts in the descending order of the selected field.

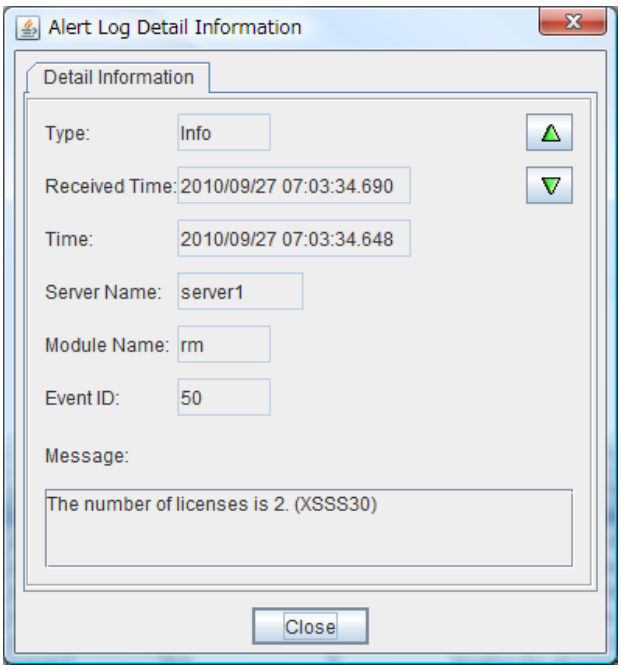
By default, alerts are displayed in the **Time** descending order.

By dragging a field name left or right, you can change the order in which the items are displayed.

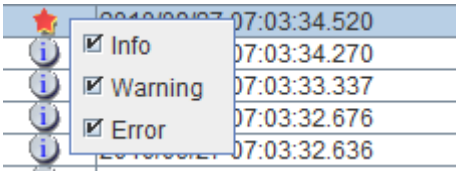
When you right-click this bar, the following pop-up window is displayed so that you can select the items to be displayed. All items are selected by default.



When you double-click the displayed alert, the following window is displayed where you can check the detail of the alert,



When you right-click the alert, the following pop-up window is displayed where you can select the type of the alert to be displayed. All items are selected by default.



Manually stopping and starting the WebManager

After ExpressCluster X SingleServerSafe is installed, the WebManager on the servers is set up to start up or stop as the OS starts up or stops.

Run the following commands from the server console to stop and start the WebManager manually.

To stop

```
[root@server1 root]# /etc/init.d/clusterpro_alertsync stop
Shutting down clusterpro webalert:              OK
[root@server1 root]# /etc/init.d/clusterpro_webmgr stop
Shutting down clusterpro webmanager server:     OK
```

To start

```
[root@server1 root]# /etc/init.d/clusterpro_webmgr start
Starting clusterpro webmanager server:          OK
[root@server1 root]# /etc/init.d/clusterpro_alertsync start
Starting clusterpro webalert:                   OK
```

Note:

For the above commands, only type the bold characters.

If you do not want to use the WebManager

If you do not want to use the WebManager for security reasons, change the settings of your OS or that of the Builder not to start the WebManager.

You can use the chkconfig command to control startup and stop of the WebManager-related daemon.

To prevent WebManager from starting up

```
[root@server1 root]# chkconfig --del clusterpro_alertsync
[root@server1 root]# chkconfig --del clusterpro_webmgr
```

To get WebManager to start up

```
[root@server1 root]# chkconfig --add clusterpro_webmgr
[root@server1 root]# chkconfig --add clusterpro_alertsync
```

Note:

For the above commands, only type the bold characters.

In **Cluster Properties**, you can specify the settings for using the WebManager. For details about these settings, see "WebManager tab" in Chapter 7, "Details about other settings" in the *ExpressCluster X SingleServerSafe Configuration Guide*.

Setting up connection limitations and operation limitations of the WebManager

The limitation in connection and operation of the WebManager can be configured in **Cluster Properties** in the Builder. For details about these settings, see “WebManager tab” in Chapter 7, “Details of other settings” in the *ExpressCluster X SingleServerSafe Configuration Guide*.

Types of usage limitations

There are two ways to set usage limitations:

- Limiting the access by using client IP addresses
- The limitation by using a password

Limiting the access by using client IP addresses

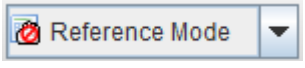
This function limits clients who can access the WebManager and operations on the WebManager by using client IP addresses.

Add IP addresses to **IP Addresses of the Accessible Clients** on the **WebManager** tab in the **Cluster Properties** of the Builder.

When setting the limitation of the connection of the WebManager, if you attempt to access to the WebManager from the IP address that is not added to **IP Addresses of the Accessible Clients**, the following error messages are displayed.

Example: when using the Internet Explorer

The following **Reference Mode** is displayed to the WebManager that is connected from the client registered to limit the operation.



The following operations cannot be performed from the WebManager when operations are limited.

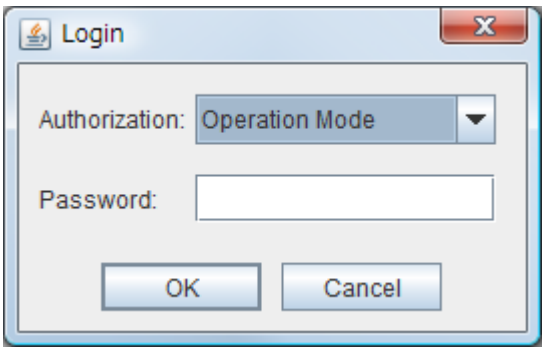
- Shutting down or shutting down and then rebooting servers
- Starting or stopping groups
- Change to operation mode
- Change to config mode
- Change to verification mode

The limitation by using a password

This function limits viewing and operations on the WebManager by using a password.

To configure this limitation: in **Cluster Properties** of the Builder, click the **WebManager** tab and then **Control connection by using password**.

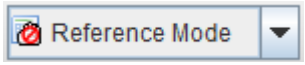
Once password limitation of the WebManager is set, the following authorization dialog box is displayed when trying to access the WebManager by setting a password.



You can log on to the WebManager by selecting **Operation Mode** or **Reference Only** in **Authorization** and entering a correct password.

- The authorization dialog box is not displayed when the password limitation is not configured (you can log on to the WebManager without authorization).
- You cannot log on to the WebManager if you enter a wrong password three consecutive times.

When you log on with a reference-only authorization, the following **Reference Only** message is displayed.



The following operations cannot be performed from the WebManager when operations are limited.

- Shutting down or shutting down and then rebooting servers
- Starting or stopping groups

For the information on switching the authorization after log on and/or log out, “Switching authorization of the WebManager” on page 58.

Combination of the IP address and password

The operational limitations when using both IP addresses and passwords are the following:

	Password limitation		
Client IP address limitation	**Operable mode**	**Reference only**	**Unable to operate/view (authorization failed)**
Operable mode	Operable mode	Reference only	Unavailable
Reference only	Reference only*	Reference only	Unavailable
Cannot access	Cannot access	Cannot access	Cannot access

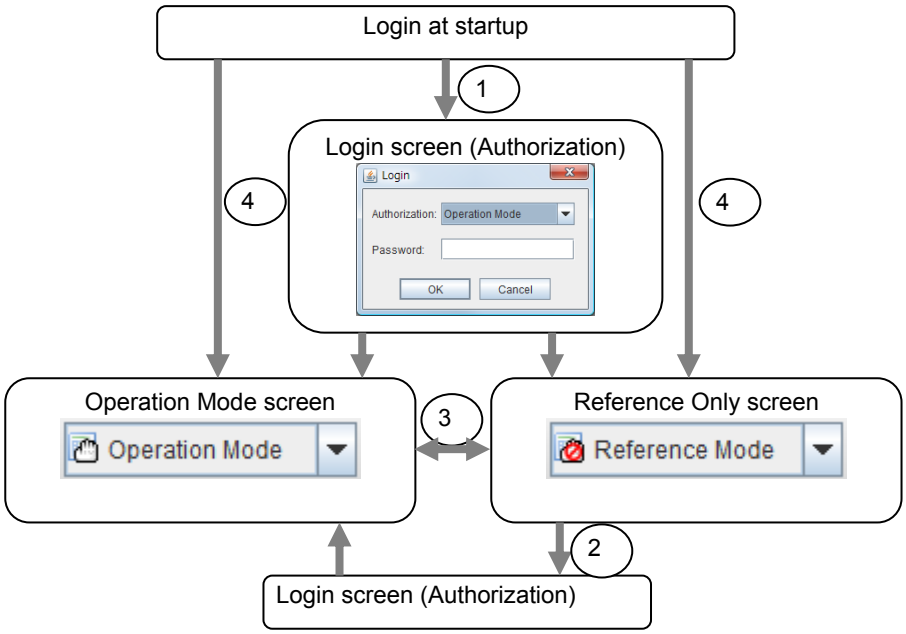
*Authorization cannot be selected.

Note:

Changing the configuration data with the online version Builder is possible only when the WebManager is on the operable mode.

Switching authorization of the WebManager

The chart below describes the flow of accessing the WebManager and switching authorization.



1. Log on to the WebManager

   The log on authorization dialog box is displayed when a password for operation mode or reference only is set. You can log on to the WebManager by selecting the authorization of either **Operation Mode** or **Reference Only** and entering the correct password.

2. Switch the authorization from the reference only screen to the operation mode screen

   The dialog box for password authorization is displayed. You can log on by entering the correct password. When password limitation is not configured, log on without entering a password.

3. Switch the authorization from the operation mode screen to the reference only screen.

   Authorization can be switched without authentication. You can do so even when the password limitation is configured

4. Login when a password for both operation mode and reference only is not set

   Log on by following the client IP limitation. If the client IP limitation is not configured, log on to the WebManager whose authorization is in the operation mode. In this case, you cannot switch the authorization to reference only.

Section II Command reference

This section 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.

- Chapter 2 ExpressCluster X SingleServerSafe command reference

Chapter 2 ExpressCluster X SingleServerSafe command reference

This chapter describes the commands available with ExpressCluster X SingleServerSafe.

This chapter covers:

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 WebManager. You can perform a greater number of operations by using the command line than by using the WebManager.

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 WebManager during recovery (reactivation -> final action).

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

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

However, you can perform them when the final action is completed.

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

ExpressCluster commands

Commands for construction		
command	**Explanation**	**Page**
clpcfctrl	Delivers the configuration data created by the Builder to servers. Backs up the configuration data to be used by the Builder.	82
clplcnsc	Registers and refers to the product or test version license of this product.	102

Commands for showing status		
command	**Explanation**	**Page**
clpstat:	Displays the status and configuration data of ExpressCluster X SingleServerSafe.	64

Commands for operation		
command	**Explanation**	**Page**
clpcl	Starts, stops, suspends, or resumes the daemon.	66
clpstdn	Stops and shuts down the ExpressCluster daemon.	70
clpgrp	Starts and stops groups.	71
clptoratio	Extends or displays thetimeout values.	92

clpmonctrl	Suspends and/or resumes monitor resources on a server.	82
clpregctrl	Displays and/or initializes reboot count on a single server.	134
clprsc	Suspends or resumes group resources.	119
clpcpufreq	Controls CPU frequency.	123
clptrnreq	Requests a server to execute a process.	125
clprexec	Requests that an ExpressCluster server execute a process from external monitoring.	128
clpbmccnf	Changes the information on BMC user name and password.	132

Commands for logs		
command	**Explanation**	**Page**
clplogcc	Collects logs and OS information.	77
clplogcf	Modifies and displays log level and log output file size.	95

Script-related commands		
command	**Explanation**	**Page**
clplogcmd	Write this command in the EXEC resource script to output messages to any destination.	107

System monitor-related commands (when the System Resource Agent is used)		
command	**Explanation**	**Page**
clpprer	Estimates the future value from the tendency of the given resource use amount data.	136

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.

Displaying the status (clpstat command)

clpstat: Displays the status and configuration data of ExpressCluster X SingleServerSafe.

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

Description Displays the server status and configuration information.

Option

-s None	Displays the status.
`-long`	Displays a name of the cluster name and resource name until the end.
-g	Displays a group map.
-m	Displays the status of each monitor resource.
-i	Displays the configuration data.
--cl	Displays the configuration data.
--sv	Displays the server configuration information.
--grp [*group_name*]	Displays server group configuration information. By specifying the name of a server group, you can display only the information on the specified server group.
--rsc [*resource_name*]	Displays group resource configuration information. By specifying the name of a group resource, you can display only the information on the specified group resource.
--mon [*monitor_name*]	Displays monitor resource configuration information. By specifying the name of a monitor resource, you can display only the information on the specified monitor resource.
--detail	Displays more detailed information on the setting.

Return Value

0	Success
Other than 0	Failure

Notes This command must be executed by a user with the root privilege.
The ExpressCluster daemon must be activated on the server that runs this command.
For the language used for this command output, see **Cluster Info** tab on **Cluster Properties**.

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

Error Messages

Message	Cause/Solution
Log in as root.	Log on as root user.
Invalid configuration file. Create valid cluster configuration data by using the Builder.	Create valid cluster configuration data by using the Builder.
Invalid option.	Specify a valid option.
Could not connect to the server. Check if the cluster daemon is active.	Check if the cluster daemon is activated.
Invalid server status.	Check if the cluster daemon is activated.
Server is not active. Check if the cluster daemon is active.	Check if the cluster daemon is activated.
Invalid server name. Specify a valid server name in the cluster.	Specify the valid name of a server in the cluster.
Invalid heartbeat resource name. Specify a valid heartbeat resource name in the cluster.	Specify the valid name of a heartbeat resource in the cluster.
Invalid network partition resource name. Specify a valid network partition resource name in the cluster.	Specify the valid name of a network partition resolution resource in the cluster.
Invalid group name. Specify a valid group name in the cluster.	Specify the valid name of a group in the cluster.
Invalid group resource name. Specify a valid group resource name in the cluster.	Specify the valid name of a group resource in the cluster.
Invalid monitor resource name. Specify a valid monitor resource name in the cluster.	Specify the valid name of a monitor resource in the cluster.
Connection was lost. Check if there is a server where the cluster daemon is stopped in the cluster.	Check if there is any server on which the cluster daemon has stopped in the cluster.
Invalid parameter.	The value specified as a command parameter may be invalid.
Internal communication timeout has occurred in the cluster server. If it occurs frequently, set a longer timeout.	A time-out occurred in the ExpressCluster internal communication. If time-out keeps occurring, set the internal communication time-out longer.
Internal error. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.
Invalid server group name. Specify a valid server group name in the cluster.	Specify the correct server group name in the cluster.

Operating the ExpressCluster daemon (clpcl command)

clpcl Operates the ExpressCluster daemon.

Command line:

```
clpcl –s
clpcl -t  [-w timeout]
clpcl -r  [-w timeout]
clpcl --suspend [--force] [-w timeout]
clpcl --resume
```

Description This command starts, stops, suspends, or resumes the ExpressCluster daemon.

Option

-s	Starts the ExpressCluster daemon.
-t	Stops the ExpressCluster daemon.
-r	Restarts the ExpressCluster daemon.
--suspend	Suspends the ExpressCluster daemon.
--resume	Resumes the ExpressCluster daemon.
-w *timeout*	Specifies the wait time to stop or suspend the cluster daemon to be completed when -t, -r, or --suspend option is used. The unit of time is second. When a timeout is not specified, it waits for unlimited time. When "0" is specified in timeout, it does not wait for the completion of stop or suspension of the ExpressCluster daemon. When the -w option is not specified, it waits for the completion of stop or suspension of the ExpressCluster daemon for (heartbeat timeout x 2) (seconds).
--force	When used with the --suspend option, this option forcefully suspends the service regardless of the server status.

Return Value

0	Success
Other than 0	Failure

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

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

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

Example **Example 1:** Activating the ExpressCluster daemon in the server

```
# clpcl -s
```

◆ Suspend and Resume

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

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

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

- All monitor resources stop.
- You cannot perform operations on groups or group resources (start/stop).
- You cannot display information or perform operations by using the WebManager or clpstat command.
- The following commands are disabled;
  - clpstat:
  - clpcl options other than --resume
  - clpstdn
  - clpgrp
  - clptoratio
  - clpmonctrl

Error Messages

Message	Cause/Solution
Log in as root.	Log on as root user.
Invalid configuration file. Create valid cluster configuration data by using the Builder.	Create valid cluster configuration data using the Builder.
Invalid option.	Specify a valid option
Performed stop processing to the stopped cluster daemon.	The stopping process has been executed on the stopped cluster daemon.
Performed startup processing to the active cluster daemon.	The startup process has been executed on the activated cluster daemon.
Could not connect to the server. Check if the cluster daemon is active.	Check if the cluster daemon is activated.
Could not connect to the data transfer server. Check if the server has started up.	Check if the server is running.
Failed to obtain the list of nodes. Specify a valid server name in the cluster.	Specify the valid name of a server in the cluster.
Failed to obtain the daemon name.	Failed to obtain the cluster name.
Failed to operate the daemon.	Failed to control the cluster.

Message	Cause/Solution
Resumed the daemon that is not suspended.	Performed the resume process for the HA Cluster daemon that is not suspended.
Invalid server status.	Check that the cluster daemon is activated.
Server is busy. Check if this command is already run.	This command may have already been run.
Server is not active. Check if the cluster daemon is active.	Check if the cluster daemon is activated.
There is one or more servers of which cluster daemon is active. If you want to perform resume, check if there is any server whose cluster daemon is active in the cluster.	When you execute the command to resume, check if there is no server in the cluster on which the cluster daemon is activated.
All servers must be activated. When suspending the server, the cluster daemon need to be active on all servers in the cluster.	When you execute the command to suspend, the cluster daemon must be 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 in the suspend status.
Invalid server name. Specify a valid server name in the cluster.	Specify the valid name of a sever in the cluster.
Connection was lost. Check if there is a server where the cluster daemon is stopped in the cluster.	Check if there is any server on which the cluster daemon is stopped in the cluster.
Invalid parameter.	The value specified as a command parameter may be invalid.
Internal communication timeout has occurred in the cluster server. If it occurs frequently, set the longer timeout.	A time-out occurred in the HA Cluster internal communication. If time-out keeps occurring, set the internal communication time-out longer.
Processing failed on some servers. Check the status of failed servers.	If stopping has been executed with all the servers specified, there is one of more server on which the stopping process has failed. Check the status of the server(s) on which the stopping process has failed.
Internal error. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.
There is a server that is not suspended in cluster. Check the status of each server.	There is a server that is not suspended in the cluster. Check the status of each server.
Suspend %s : Could not suspend in time.	The server failed to complete the suspending process of the cluster daemon within the time-out period. Check the status of the server.
Stop %s : Could not stop in time.	The server failed to complete the stopping process of the cluster daemon within the time-out period. Check the status of the server.

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

Shutting down the server (clpstdn command)

clpstdn Shuts down the server.

Command line:

```
clpstdn [-r]
```

Description Stops and shuts down the ExpressCluster daemon of the server.

Option

None	Shuts down the server.
-r	Shuts down and reboots the server.

Return Value

0	Success
Other than 0	Failure

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

Examples **Example 1:** Shutting down the server

```
# clpstdn
```

Example 2: Shutting down and rebooting the server

```
# clpstdn –r
```

Operating groups (clpgrp command)

clpgrp Operates groups.

Command line:

```
clpgrp -s [group_name]
clpgrp -t [group_name]
```

Description Starts and stops groups.

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

Return Value	0	Success
	Other than 0	Failure

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

The ExpressCluster daemon must be activated on the server that runs this command

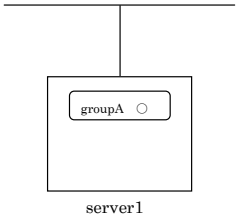
Examples

The following is a simple example of group operation.

The server has groupA.

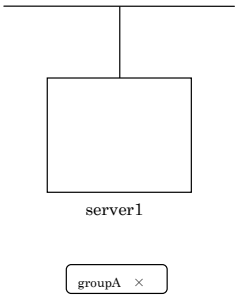
1. Run the following command on the server. Then groupA starts.

```
# clpgrp -s groupA
```



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

```
# clpgrp -t groupA
```



Error message

Message	Cause/Solution
Log in as root.	Log on as root user.
Invalid configuration file. Create valid cluster configuration data by using the Builder.	Create valid cluster configuration data using the Builder
Invalid option.	Specify a valid option
Could not connect to the server. Check if the cluster daemon is active.	Check if the cluster daemon is activated.
Invalid server status.	Check if the cluster daemon is activated.
Server is not active. Check if the cluster daemon is active.	Check if the cluster daemon is activated.
Invalid server name. Specify a valid server name in the cluster.	Specify the valid name of sever in the cluster.
Connection was lost. Check if there is a server where the cluster daemon is stopped in the cluster.	Check if there is any server on which the cluster daemon has stopped in the cluster.
Invalid parameter.	The value specified as a command parameter may be invalid.
Internal communication timeout has occurred in the cluster server. If it occurs frequently, set a longer timeout.	A time-out occurred in the ExpressCluster internal communication. If time-out keeps occurring, set the internal communication time-out longer.
Invalid server. Specify a server that can run and stop the group, or a server that can be a target when you move the group.	The server that starts/stops the group or to which the group is moved is invalid. Specify a valid server.
Could not start the group. Try it again after the other server is started, or after the Wait Synchronization time is timed out.	Start up the group after waiting for the remote server to start up, or after waiting for the time-out of the start-up wait time.
No operable group exists in the server.	Check if there is any group that is operable in the server which requested the process.
The group has already been started on the local server.	Check the status of the group by using the WebManager or the clpstat command.

Message	Cause/Solution
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 WebManager or the clpstat command. If you want to start up or stop a group which was started in a remote server from the local server, move the group or run the command with the -f option.
The group has already been started on the other server. To move the group, use “-h <hostname>” option.	Check the status of the group by using the WebManager or clpstat command. If you want to move a group which was started on a remote server, run the command with the "-h <hostname>" option.
The group has already been stopped.	Check the status of the group by using the WebManager or the clpstat command.
Failed to start one or more group resources. Check the status of group	Check the status of group by using WebManager or the clpstat command.
Failed to stop one or more group resources. Check the status of group	Check the status of group by using the WebManager or the clpstat command.
The group is busy. Try again later.	Wait for a while and then try again because the group is now being started up or stopped.
An error occurred on one or more groups. Check the status of group	Check the status of the group by using the WebManager or the clpstat command.
Invalid group name. Specify a valid group name in the cluster.	Specify the valid name of a group in the cluster.
Server is not in a condition to start group or any critical monitor error is detected.	Check the status of the server by using the WebManager or clpstat command. An error is detected in a critical monitor on the server on which an attempt was made to start a group.
There is no appropriate destination for the group. Other servers are not in a condition to start group or any critical monitor error is detected.	Check the status of the server by using the WebManager or clpstat command. An error is detected in a critical monitor on all other servers.
The group has been started on the other server. To migrate the group, use “-h <hostname>” option.	Check the status of the group by using the WebManager or clpstat command. If you want to move a group which was started on a remote server, run the command with the "-h <hostname>" option.
The specified group cannot be migrated.	The specified group cannot be migrated.
The specified group is not vm group.	The specified group is not a virtual machine group.
Migration resource does not exist.	Check the status of the group by using the WebManager or clpstat command. The resource to be migrated is not found.
Migration resource is not started.	Check the status of the group by using the WebManager or clpstat command. The resource to be migrated is not started.

Message	Cause/Solution
Some invalid status. Check the status of cluster.	Invalid status for some sort of reason. Check the status of the cluster.
Internal error. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.

Collecting logs (clplogcc command)

clplogcc Collects logs.

Command line:

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

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

Option

None	Logs are collected.
-t *collect_type*	Specifies a log collection pattern. When this option is omitted, a log collection pattern will be type1.
-r *syslog_rotate_number*	Specifies how many generations of syslog will be collected. When this option is omitted, two generations will be collected.
-o *path*	Specifies the output destination of collector files. When this option is skipped, logs are output under tmp of the installation path.

Return Value

0	Success
Other than 0	Failure

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

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

Make sure that the data transfer service is running.

Examples **Example 1:** Collecting logs from the server

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

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

Process *servername*: Result (server status)

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

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

The following results (server status) are displayed:

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

Error Message

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

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 3 for the log collection.

	type1	type2	type3
(1) Default collection information	y	y	y
(2) syslog	y	y	n
(3) core	y	n	y
(4) OS information	y	y	y
(5) script	y	n	n
(6) ESMPRO/AC	y	n	n

(y: yes, n: no)

Run this command from the command line as follows.

Example: When collecting logs using type2

```
# clplogcc -t type2
```

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

◆ Information to be collected by default

- Logs of each module in the ExpressCluster Server
- Alert logs
- Attribute of each module (ls -l) in the ExpressCluster Server
  - In bin, lib
  - In alert/bin, webmgr/bin
  - In drivers/md
  - In drivers/khb
  - In drivers/ka
- All installed packages (rpm -qa execution result)
- ExpressCluster X SingleServerSafe version (rpm -qi expresscls execution result)
- distribution (/etc/*-release)
- CPU license and node license
- Configuration data file
- Policy file
- Dump files in the shared memory used by ExpressCluster X SingleServerSafe
- Process and thread information (ps execution result)
- PCI device information (lspci execution result)
- Service start configuration information (chkconfig --list and ls -l execution results)
- Output result of kernel parameter (sysctl -a execution results)
- glibc version (rpm -qi glibc execution result)
- Kernel loadable module configuration (/etc/modules.conf. /etc/modprobe.conf)
- Kernel ring buffer (dmesg execution result)
- File system (/etc/fstab)
- IPC resource (ipcs execution result)
- System (uname -a execution result)
- Network statistics (netstat execution result IPv4/IPv6)
- All network interfaces (ethtool execution result)
- Information collected upon emergency OS shutdown
- libxml2 version (rpm -qi libxml2 execution result)
- Static host table (/etc/hosts)
- File system export table (exportfs –v execution result)

- User resource limitations (ulimit –a execution result)
- File system exported by kernel-based NFS (/etc/exports)
- OS locale
- Terminal session environment value (export execution result)
- Language locale (/etc/sysconfig/i18n)
- Time zone (env –date execution result)
- Work area of ExpressCluster server
- Monitoring options
  This information is collected if options are installed.
- Collected dump information when the monitor resource timeout occurred
- Collected Oracle detailed information when Oracle monitor resource abnormity was detected

◆ syslog

- syslog (/var/log/messages)
- Syslogs for the number of generations specified(/var/log/messages.x)

◆ core file

- core file of ExpressCluster module
  Stored in /opt/nec/clusterpro/log by the following archive names.
  Alert related:
  alt***yyyymmdd_x***.tar
  Directory for the WebManager
  wm***yyyymmdd_x***.tar
  ExpressCluster core related:
  cls***yyyymmdd_x***.tar

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

◆ OS information

- Kernel mode LAN heartbeat, keep alive
  - /proc/khb_moninfo
  - /proc/ka_moninfo
- /proc/devices
- /proc/mdstat
- /proc/modules
- /proc/mounts
- /proc/meminfo
- /proc/cpuinfo
- /proc/partitions
- /proc/pci
- /proc/version
- /proc/ksyms
- /proc/net/bond*
- all files of /proc/scsi/ all files in the directory
- all files of /proc/ide/ all files in the directory
- /etc/fstab
- /etc/syslog.conf
- /etc/syslog-ng/syslog-ng.conf
- /proc/sys/kernel/core_pattern
- /proc/sys/kernel/core_uses_pid
- Kernel ring buffer (dmesg execution result)
- ifconfig (ifconfig execution result)
- iptables (iptables -L execution result)
- ipchains (ipchains -L execution result)
- df (df execution result)
- raw device information (raw -qa execution result)

- kernel module load information (lsmod execution result)
- host name, domain information (hostname, domainname execution result)
- dmidecode (dmidecode execution result)
- LVM device information (vgdisplay -v execution result)

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

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

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

◆ Script

Start/stop script for a group that was created with the Builder.

If you specify a user-defined script other than the above (/opt/nec/clusterpro/scripts), it is not included in the log collection information. It must be collected separately.

◆ ESMPRO/AC Related logs

Files that are collected by running the acupslog command.

syslog generations (-r option)

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

Example: Collecting logs for the 3 generations

```
# clplogcc -r 3
```

The following syslogs are included in the collected logs.

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

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

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

Output paths of log files (-o option)

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

If not specifying -o option

Logs are output in tmp of installation path.

```
# clplogcc
Collect Log server-name: Success
# ls /opt/nec/clusterpro/tmp
server-name-log.tar.gz
```

When the -o option is specified:

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

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

Collecting information when a failure occurs

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

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

Information to be collected is as follows:

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

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

Applying and backing up configuration data (clpcfctrl command)

Applying configuration data (clpcfctrl --push)

clpcfctrl --push Applies the configuration data to servers.

Command line:

```
clpcfctrl --push [-l|-w] [-p portnumber]
                         [-d device] [-m mountpoint]
                         [-x directory] [--nocheck]
```

Description Applies the configuration data created by the Builder to servers.

Option

--push	Specify this option when applying the data. This option cannot be omitted.
-l	Specify this option when using the floppy disk with the data saved by the Builder on Linux. If you use the floppy disk with the data saved in the Windows format by the Builder on Linux, specify -w. You cannot specify -l and -w together. If you specify neither -l nor -w, the current configuration data is applied.
-w	Specify this option when using the floppy disk with the data saved by the Builder on Windows. When you use the floppy disk with the data saved for Windows with the Builder on Linux, use this option as well. You cannot specify both -l and -w together. If you specify neither -l nor -w, the current configuration data is applied.
-p *portnumber*	Specifies a port number of data transfer port. When this option is omitted, the default value is used. In general, it is not necessary to specify this option.
-d *device*	Specifies the floppy disk device file. Specify when the floppy disk device file is not /dev/fd0. When this option is omitted, /dev/fd0 is used.
-m *mountpoint*	Specifies a floppy disk mount point. Use this option with -w. When this option is omitted, /mnt/floppy is used.

	-x *directory*	Used only in an environment where floppy disks cannot be used. Specify this option to apply the configuration data in the specified directory. Use this option with either -l or -w. When -l is specified, configuration data saved on the file system by the Builder on Linux is used. When -w is specified, configuration data saved by the Builder on Windows is used.
	--nocheck	Configuration data is not checked. Use this option only when deleting a server.

Return Value

0	Success
Other than 0	Failure

Remarks

In some environments, /mnt/floppy does not exist. When this does not exist, make /mnt/floppy, or specify the mount point by the -m option.

When the supermount service is operating and /mnt/floppy is configured to be used, /mnt/floppy cannot be used. Stop the supermount service or specify another mount point by the -m option.

Notes

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

Examples

Example 1: Generating a server from the floppy disk with the data saved by the Builder on Linux

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

Example 2: Delivering configuration data from the floppy disk with the data saved by the Builder on Windows to a specified server

```
# clpcfctrl --push -w -h 10.0.0.11
 The upload is completed successfully.(cfmgr:0)
 Command succeeded.(code:0)
```

Example 3: Delivering configuration data that was saved on the file system using the Builder on Linux

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

Error Message

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

Message	Cause/Solution
Failed to get the list of group.	Failed to acquire the list of group.
Failed to get the list of resource.	Failed to acquire the list of resource.
Failed to initialize the trncl library. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to connect to server %1. Check if the other server is active and then run the command again.	Accessing the server has failed. Check if other server(s) has been started. Run the command again after the server has started up.
Failed to connect to trnsv. Check if the other server is active.	Accessing the server has failed. Check if other server(s) has been started.
File delivery failed. Failed to deliver the configuration data. Check if the other server is active and run the command again.	Delivering configuration data has failed. Check if other server(s) has been started. Run the command again after the server has started up.
Multi file delivery failed. Failed to deliver the configuration data. Check if the other server is active and run the command again.	Delivering configuration data has failed. Check if other server(s) has been started. Run the command again after the server has started up.
Failed to deliver the configuration data. Check if the other server is active and run the command again.	Delivering configuration data has failed. Check if other server(s) has been started. Run the command again after the server has started up.
The directory "/work" is not found. Reinstall the RPM.	Reinstall the ExpressCluster Server RPM.
Failed to make a working directory.	Memory or OS resources may not be sufficient. Check them.
The directory does not exist.	
This is not a directory.	
The source file does not exist.	
The source file is a directory.	
The source directory does not exist.	
The source file is not a directory.	
Failed to change the character code set (EUC to SJIS).	
Failed to change the character code set (SJIS to EUC).	
Command error.	
Failed to mount the floppy disk. Check if it is inserted. When using the Builder on Linux, check if the disk is saved for Windows. Also, check if mount point exists. When supermount service is running, stop the service or use -m option.	Failed to mount the floppy device. Check if the floppy disk has been inserted. If the Builder is used on Linux, check if the data was saved in the Windows format. Check that the mount point exists. When the supermount service is operating, stop it or use the -m option.

Message	Cause/Solution
Failed to unmount the floppy disk. Check if it is inserted.	Unmounting the floppy disk has failed. Check if the floppy disk has been inserted.
Command (tar –xf) failed. Check if the floppy disk is inserted. When using the Builder on Linux, check if the disk is saved for Linux.	Loading from the floppy disk has failed. Check if the floppy disk has been inserted. If the Builder is on Linux, check if the data was saved in the Linux format.
Floppy device was already mounted. Umount the floppy disk, and then perform operations.	The floppy device was already mounted. Unmount the floppy disk, and then perform operations.
Failed to mount the floppy disk. Check if mount point exists.	Failed to mount the floppy device. Check that the mount point exists.
Failed to initialize the cfmgr library. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to get size from the cfmgr library. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to allocate memory.	Memory or OS resources may not be sufficient. Check them.
Failed to change the directory.	
Failed to run the command.	
Failed to make a directory.	
Failed to remove the directory.	
Failed to remove the file.	
Failed to open the file.	
Failed to read the file.	
Failed to write the file.	
Internal error. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
The upload is completed successfully. To start the cluster, refer to "How to create a cluster" in the Installation and Configration Guide.	The upload is completed successfully. To start the ExpressCluster daemon, refer to “Creating a server” in the *Installation Guide*.
The upload is completed successfully. To apply the changes you made, shutdown and reboot the cluster.	The upload is completed successfully. To apply the changes you made, shut down the server, and then reboot it.
The upload was stopped. To upload the cluster configuration data, stop the cluster.	The upload was stopped. To upload the configuration data, stop the server.
The upload was stopped. To upload the cluster configuration data, stop the Mirror Agent.	The upload was stopped. To upload the configuration data, stop MirrorAgent.

Message	Cause/Solution
The upload was stopped. To upload the cluster configuration data, stop the resources to which you made changes.	The upload was stopped. To upload the configuration data, stop the resources you changed.
The upload was stopped. To upload the cluster configuration data, stop the groups to which you made changes.	The upload was stopped. To upload the configuration data, suspend the server. To upload, stop the group to which you made changes.
The upload was stopped. To upload the cluster configuration data, suspend the cluster.	The upload was stopped. To upload the configuration data, suspend the server.
The upload is completed successfully. To apply the changes you made, restart the Alert Sync. To apply the changes you made, restart the WebManager.	The upload is completed successfully. To apply the changes you made, restart the AlertSync service. To apply the changes you made, restart the WebManager service.
Internal error. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
The upload is completed successfully.	The upload is completed successfully.
The upload was stopped. Failed to deliver the configuration data. Check if the other server is active and run the command again.	The upload was stopped. Delivering configuration data has failed. Check if the other server is active and run the command again.
The upload was stopped. There is one or more servers that cannot be connected to. To apply cluster configuration information forcibly, run the command again with "--force" option.	The upload was stopped. The server that cannot connect exists. To forcibly upload the configuration data, run the command again with the --force option.

Backing up the configuration data (clpcfctrl --pull)

clpcfctrl --pull Backs up the configuration data.

Command line:

```
clpcfctrl --pull -[l|w] [-p portnumber]
                        [-d device] [-m mountpoint]
                        [-x directory]
```

Explanatio Backs up the configuration data to be used by the Builder.

Option

--pull	Specify this option when performing backup. This option cannot be omitted.
-l	Specify this option when backing up data to the floppy disk that is used for the Builder on Linux. You cannot specify both -l and -w together. You cannot omit both -l and –w.
-w	Specify this option when backing up data to the floppy disk that is used for the Builder on Windows. The floppy disk must be formatted by 1.44 MB (VFAT). You cannot specify both -l and -w together. You cannot omit both -l and –w.
-p *portnumber*	Specifies a port number of data transfer port. When this option is omitted, the default value is used. In general, it is not necessary to specify this option.
-d *device*	Specifies the floppy disk device file. Specify when the floppy disk device file is not /dev/fd0. When this option is omitted, /dev/fd0 is used.
-m *mountpoint*	Specifies a floppy disk mount point. Use this option with -w. When this option is omitted, /mnt/floppy is used.
-x *directory*	Used only in an environment where floppy disks cannot be used. Specify this option when backing up configuration data in the specified directory. Use this option with either -l or -w. When -l is specified, configuration data is backed up in the format which can be loaded by the Builder on Linux. When -w is specified, configuration data is saved in the format which can be loaded by the Builder on Windows.

Return Value

0	Success
Other than 0	Failure

Remarks

In some environments, /mnt/floppy does not exist. When this does not exist, make /mnt/floppy, or specify the mount point by the -m option.

When the supermount service is operating and /mnt/floppy is configured to be used, /mnt/floppy cannot be used. Stop the supermount service or specify another mount point by the -m option.

Notes

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

Examples

Example 1: Backing up on the floppy disk that is used by the Builder on Linux

```
# clpcfctrl --pull -l
 Command succeeded.(code:0)
```

Example 2: Backing up configuration information to the floppy disk that is used by the Builder on Windows

```
# clpcfctrl --pull -w
 Command succeeded.(code:0)
```

Example 3: Backing up configuration data to the specified directory so that the data can be loaded by the Builder on Linux

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

Error Message

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

Message	Cause/Solution
Failed to get the install path. Reinstall the RPM.	Reinstall the ExpressCluster Server RPM.
Failed to get the cfctrl path. Reinstall the RPM.	Reinstall the ExpressCluster Server RPM.
Failed to initialize the trncl library. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to connect to server %1. Check if the other server is active and then run the command again.	Accessing the server has failed. Check if other server(s) has been started. Run the command again after the server has started up.
Failed to connect to trnsv. Check if the other server is active.	Accessing the server has failed. Check if other server(s) has been started.
Failed to get configuration data. Check if the other server is active.	Acquiring configuration data has failed. Check if other server(s) has been started.
The directory "/work" is not found. Reinstall the RPM.	Reinstall the ExpressCluster Server RPM.
Failed to make a working directory.	Memory or OS resources may not be sufficient. Check them.
The directory does not exist.	
This is not a drirectory.	
The source file does not exist.	
The source file is a directory.	
The source directory does not exist.	
The source file is not a directory.	
Failed to change the character code set (EUC to SJIS).	
Failed to change the character code set (SJIS to EUC).	
Command error.	
Failed to mount the floppy disk. Check if it is inserted. When using the Builder on Linux, check if the disk is saved for Windows. Also, check if mount point exists. When supermount service is running, stop the service or use -m option.	Failed to mount the floppy device. Check if the floppy disk has been inserted. If the Builder is used on Linux, check if the data was saved in the Windows format. Check that the mount point exists. When the supermount service is operating, stop it or use the -m option.
Failed to unmount the floppy disk. Check if it is inserted.	Unmounting the floppy disk has failed. Check if the floppy disk has been inserted.
Command (tar –cf) failed. Check if the floppy disk is inserted.	Failed to back up the floppy device. Check if the floppy disk has been inserted.

Message	Cause/Solution
Floppy device was already mounted. Umount the floppy disk, and then perform operations.	Floppy device was already mounted. Unmount the floppy disk, and then perform operations.
Failed to mount the floppy disk. Check if mount point exists.	Failed to mount the floppy device. Check that the mount point exists.
Failed to initialize the cfmgr library. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to get size from the cfmgr library. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to allocate memory.	Memory or OS resources may not be sufficient. Check them.
Failed to change the directory.	
Failed to run the command.	
Failed to make a directory.	
Failed to remove the directory.	
Failed to remove the file.	
Failed to open the file.	
Failed to read the file.	
Failed to write the file.	
Internal error. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.

Adjusting time-out temporarily (clptoratio command)

clptoratio Extends or displays the current timeout ratio.

Command line:

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

Description Temporarily extends the following timeout values:

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

The current timeout ratio is displayed.

Option

-r *ratio*	Specifies the timeout ratio. Use 1 or larger integer. The maxim timeout ratio is 10,000. If you specify "1," you can return the modified timeout ratio to the original as you can do so when you are using the -i option.
-t *time*	Specifies the extension period. You can specify minutes for m, hours for h, and days for d. The maximum period of time is 30 days.Example: 2m, 3h, 4d
-i	Sets back the modified timeout ratio.
-s	Refers to the current timeout ratio.

Return Value

0	Success
Other than 0	Failure

Remarks When the server is shut down, the timeout ratio you have set will become ineffective. However, if the server is not shut down, the timeout ratio and the extension period that you have set will be maintained.

With the -s option, you can only refer to the current timeout ratio. You cannot see other information such as remaining time of extended period.

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

Heartbeat timeout

```
# clpstat --cl –-detail
```

Monitor resource timeout

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

Notes

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

Execute this command when the ExpressCluster daemon of the server is active.

When you set the timeout ratio, make sure to specify the extension period. However, if you set "1" for the timeout ratio, you cannot specify the extension period.

You cannot specify a combination such as "2m3h," for the extension period.

Examples

Example 1: Doubling the timeout ratio for three days

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

Example 2: Setting back the timeout ratio to original

```
# clptoratio -i
```

Example 3: Referring to the current timeout ratio

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

The current timeout ratio is set to 2.

Error Message

Message	Cause/Solution
Log in as root.	Log on as root user.
Invalid configuration file. Create valid cluster configuration data by using the Builder.	Create valid cluster configuration data by using the Builder.
Invalid option.	Specify a valid option.
Specify a number in a valid range.	Specify a number within a valid range.
Specify a correct number.	Specify a valid number.
Scale factor must be specified by integer value of 1 or more.	Specify 1 or larger integer for ratio.
Specify scale factor in a range less than the maximum scale factor.	Specify a ratio that is not larger than the maximum ratio.
Set the correct extension period.	Set a valid extension period.
Ex) 2m, 3h, 4d	Set the extension period which does not exceed the maximum ratio.
Set the extension period in a range less than the maximum extension period.	Check if the cluster daemon is activated.
Could not connect to the server. Check if the cluster daemon is active.	Check if the cluster daemon is activated.
Server is not active. Check if the cluster daemon is active.	Check if there is any server in the cluster with the cluster daemon stopped.
Connection was lost. Check if there is a server where the cluster daemon is stopped in the cluster.	Check if there is any server in the cluster with the cluster daemon stopped.

Invalid parameter.	The value specified as a parameter of the command may be invalid.
Internal communication timeout has occurred in the cluster server. If it occurs frequently, set the longer timeout.	Time-out has occurred in the internal communication of ExpressCluster. If it occurs frequently, set the internal communication time-out longer.
Processing failed on some servers. Check the status of failed servers.	There are servers that failed in processing. Check the status of server in the cluster. Operate it while all the servers in the cluster are up and running.
Internal error. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.

Modifying the log level and size (clplogcf command)

clplogcf Modifies and displays log level and log output file size.

Command line:

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

Description Modifies the settings of the log level and log output file size.
Displays the currently specified values.

Option

-t *type*	Specifies a module type whose settings will be changed. If both -l and -s are omitted, the information set to the specified module will be displayed. See the list of ”Types that can be specified to the -t option” for types which can be specified.
-l *level*	Specifies a log level. You can specify one of the following for a log level. 1, 2, 4, 8, 16, 32 You can see more detailed information as the log level increases. See the list of “Default log levels and log file sizes” for default values of each module type.
-s *size*	Specifies the size of a file for log output. The unit is byte.
None	Displays the entire configuration information currently set.

Return Value

0	Success
Other than 0	Failure

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

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

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

Examples

Example 1: Modifying the pm log level

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

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

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

Example 3: Displaying the values currently configured

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

Error Message

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

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

Type:	Module Type	Explanation	The ExpressCluster Server
apicl	libclpapicl.so.1.0	API client library	y
apisv	libclpapisv.so.1.0	API server	y
bmccnf	clpbmccnf	BMC information update command	y
cl	clpcl	Server startup and stop command	y
cfctrl	clpcfctrl	Server generation and server information backup command	y
cfmgr	libclpcfmgr.so.1.0	Configuration data operation library	y
cpufreq	clpcpufreq	CPU frequency control command	y
grp	clpgrp	Group startup and stop command	y
rsc	clprsc	Group resource startup and stop command	y
haltp	clpuserw	Shutdown stalling monitoring	y
lcns	libclplcns.so.1.0	License library	y

lcnsc	clplcnsc	License registration command	y
logcc	clplogcc	Collect logs command	y
logcf	clplogcf	Log level and size modification command	y
logcmd	clplogcmd	Alert producing command	y
mail	clpmail	Mail Report	y
mgtmib	libclpmgtmib.so.1.0	SNMP coordination library	y
monctrl	clpmonctrl	Monitoring control command	y
nm	clpnm	Node map management	y
pm	clppm	Process management	y
rc/rc_ex	clprc	Group and group resource management	y
reg	libclpreg.so.1.0	Reboot count control library	y
regctrl	clpregctrl	Reboot count control command	y
rm	clprm	Monitor management	y
roset	clproset	Disk control	y
relpath	clprelpath	Process kill command	y
scrpc	clpscrpc	Script log rotation command	y
stat	clpstat:	Status display command	y
stdn	clpstdn	Server shutdown command	y
toratio	clptoratio	Timeout ratio modification command	y
trap	clptrap	SNMP trap command	y
trncl	libclptrncl.so.1.0	Transaction library	y
rexec	clprexec	External monitoring link processing request command	y
trnsv	clptrnsv	Transaction server	y
volmgrc	clpvolmgrc	VxVM disk group import/deport command	y
alert	clpaltinsert	Alert	y
webmgr	clpwebmc	WebManager	y
webalert	clpaltd	Alert synchronization	y
exec	clpexec	Exec resource	y
vm	clpvm	VM resource	y
diskw	clpdiskw	Disk monitor resource	y
ipw	clpipw	IP monitor resource	y
miiw	clpmiiw	NIC link up/down monitor resource	y
mtw	clpmtw	Multi target monitor resource	y
pidw	clppidw	PID monitor resource	y
volmgrw	clpvolmgrw	Volume manager monitor resource	y
userw	clpuserw	User mode monitor resource	y
vmw	clpvmw	VM monitor resource	y
mrw	clpmrw	Message reception monitor resource	y
snmpmgr	libclp snmpmgr	SNMP trap reception library	y

lanhb	clplanhb	LAN heartbeat	y
oraclew	clp_oraclew	Oracle monitor resource	y
oracleasw	clp_oracleasw	OracleAS monitor resource	y
db2w	clp_db2w	DB2 monitor resource	y
psqlw	clp_psqlw	PostgreSQL monitor resource	y
mysqlw	clp_mysqlw	MySQL monitor resource	y
sybasew	clp_sybasew	Sybase monitor resource	y
sambaw	clp_sambaw	Samba monitor resource	y
nfsw	clp_nfsw	NFS monitor resource	y
httpw	clp_httpw	HTTP monitor resource	y
ftpw	clp_ftpw	FTP monitor resource	y
smtpw	clp_smtpw	SMTP monitor resource	y
pop3w	clp_pop3w	POP3 monitor resource	y
imap4w	clp_imap4w	IMAP4 monitor resource	y
tuxw	clp_tuxw	Tuxedo monitor resource	y
wlsw	clp_wlsw	WebLogic monitor resource	y
wasw	clp_wasw	WebSphere monitor resource	y
otxw	clp_otxw	WebOTX monitor resource	y
jraw	clp_jraw	JVM monitor resource	y
sraw	clp_sraw	System monitor resource	y
psw	clppsw	Process name monitor resource	y
vmctrl	libclpvmctrl.so.1.0	VMCtrl library	y
vmwcmd	clpvmwcmd	VMW command	y

Default log levels and log file sizes

Type	Level	Size (byte)
apicl	4	5000000
apisv	4	5000000
bmccnf	4	1000000
cfmgr	4	1000000
cl	4	1000000
cfctrl	4	1000000
cpufreq	4	1000000
down	4	1000000
grp	4	1000000
rsc	4	1000000
haltp	4	1000000
lcns	4	1000000
lcnsc	4	1000000
ledctrl	4	1000000
logcc	4	1000000
logcf	4	1000000
logcmd	4	1000000
mail	4	1000000
mgtmib	4	1000000
mm	4	2000000
monctrl	4	1000000
nm	4	2000000
pm	4	1000000
rc	4	5000000
rc_ex	4	5000000
rd	4	1000000
rdl	4	1000000
reg	4	1000000
regctrl	4	1000000
rm	4	5000000
roset	4	1000000
relpath	4	1000000
scrpc	4	1000000
stat	4	1000000
stdn	4	1000000
toratio	4	1000000
trap	4	1000000

Type	Level	Size (byte)
trncl	4	2000000
trnreq	4	1000000
rexec	4	1000000
trnsv	4	2000000
volmgr	4	1000000
alert	4	4000000
webmgr	4	1000000
webalert	4	1000000
exec	4	1000000
vm	4	1000000
bwctrl	4	1000000
arpw	4	1000000
db2w	4	1000000
diskw	4	1000000
ftpw	4	1000000
httpw	4	1000000
imap4w	4	1000000
ipw	4	1000000
miiw	4	1000000
mtw	4	1000000
mysqlw	4	1000000
nfsw	4	1000000
oraclew	4	1000000
oracleasw	4	1000000
otxw	4	1000000
pidw	4	1000000
pop3w	4	1000000
psqlw	4	1000000
volmgrw	4	1000000
sambaw	4	1000000
smtpw	4	1000000
sybasew	4	1000000
tuxw	4	1000000
userw	4	1000000
vipw	4	1000000
vmw	4	1000000
ddnsw	4	1000000
mrw	4	1000000
genw	4	1000000

Type	Level	Size (byte)
wasw	4	1000000
wlsw	4	1000000
jraw	4	1000000
sraw	4	1000000
psw	4	1000000
bmccmd	4	1000000
snmpmgr	4	1000000
lanhb	4	1000000
vmctrl	4	10000000
vmwcmd	4	1000000
clpka *1	-	0
clpkhb *1	-	0

* If the module's size is zero, its log will not be produced.

*1 Output destination of log is syslog.

Managing licenses (clplcnsc command)

clplcnsc

Manages licenses.

Command line:

```
clplcnsc -i [licensefile] -p productid
clplcnsc -l -p productid
clplcnsc -d -p productid
clplcnsc -d -p productid -t
clplcnsc -v
```

Description

Registers, refers to, and removes the licenses of the product version and trial version of this product.

Option

-i [*licensefile*]
Registers licenses.

When a license file is specified, license information is acquired from the file for registration. If nothing is specified, you need to enter license information interactively.

-l
Refers to the license.

-d
Deletes the license.

-t
Deletes the license of the trial version with the specified product ID. Specify it together with the -d option.

-v
Displays a list of all registered licenses.

-p *productid*
Specifies the product ID of a licensed product.

Product

Product ID	License product name
XSSS32	ExpressCluster X SingleServerSafe 3.2 for Linux
XSSS32	ExpressCluster X SingleServerSafe 3.2 for Linux VM
DBAG32	ExpressCluster X Database Agent 3.2 for Linux
ISAG32	ExpressCluster X Internet Server Agent 3.2 for Linux
FSAG32	ExpressCluster X File Server Agent 3.2 for Linux
ASAG32	ExpressCluster X Application Server Agent 3.2 for Linux
ALRT32	ExpressCluster X Alert Service 3.2 for Linux
JRAG32	ExpressCluster X Java Resource Agent 3.2 for Linux
SRAG32	ExpressCluster X System Resource Agent 3.2 for Linux

Return Value	0	Completed successfully.
	1	Normal termination (with licenses not synchronized) *This means that license synchronization failed in the server when the license was registered. For actions to be taken, see "Troubleshooting for licensing" in "Appendix A. Troubleshooting" in the *Installation and Configuration Guide.*
	2	Initialization error
	4	The option is invalid
	7	Other internal error

Examples Register Registering the license interactively

```
# clplcnsc -i -p XSSS32
Product version
  Select a product division.
    Selection of License Version
      1. Product Version
      2. Trial Version
    Select License Version. [1 or 2] ...
  Enter the number of licenses.
    Enter number of license [ 0(Virtual OS) or 1 to 99 (default:2) ] ...
  Enter a serial number.
    Enter serial number [ Ex. XXX0000000 ] ...
  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
    Select License Version. [1 or 2] ...
  Enter a user name.
    Enter user name [ 1 to 64byte ] ...
  Enter a trial start date.
    Enter trial start date [ Ex. yyyy/mm/dd ] ...
  Enter a trial expiration date.
    Enter trial end date [ Ex. yyyy/mm/dd ] ...
  Enter a license key.
    Enter license key
     [ Ex. XXXXXXXX-XXXXXXXX-XXXXXXXX-XXXXXXXX] ...
```

Specify a license file

```
# clplcnsc -i /tmp/cpulcns.key -p XSSS32
```

Browse # clplcnsc -l -p XSSS32

Product version

< Cluster CPU License EXPRESSCLUSTER X SingleServerSafe 3.2 for Linux <PRODUCT> >

Seq... 1

Key..... A1234567-B1234567-C1234567-D1234567
The number of license... 2
Status... valid

Trial version

< Cluster CPU License EXPRESSCLUSTER X SingleServerSafe 3.2 for Linux <TRIAL> >

Seq... 1
Key..... A1234567-B1234567-C1234567-D1234567
User name... NEC
Start date..... 2003/01/01
End date..... 2003/12/31
Status..... valid

Notes

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

When you register a license, verify that the data transfer server is started up and a server has been generated for license synchronization.

When synchronizing the licenses, access the server in the order below, and use one of the paths that allowed successful access:

1. via the IP address on the interconnect LAN
2. via the IP address on the public LAN
3. via the IP address whose name was resolved by the server name in the configuration data

When there are multiple pieces of license information on the product ID specified to be deleted, the entire license information of the product ID will be deleted.

Error Message

Message	Cause/Solution
Command succeeded.	The command ran successfully.
Command failed.	The command did not run successfully.
Command succeeded. But the license was not applied to all the servers in the cluster because there are one or more servers that are not started up.	There is a server that is down. Perform the server generation procedure. For details about generating servers, refer to Chapter 3, “Installing ExpressCluster” in the *Installation and Configuration Guide*.
Log in as root.	You are not authorized to run this command. Log in as a root user.
Invalid cluster configuration data. Check it by using the Builder.	The configuration data is invalid. Check the configuration data by using the Builder.
Initialization error. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
The command is already run.	The command has already been run. Check the running status by using a command such as ps command.
The license is not registered.	The license has not been registered yet. Register the license.
Could not opened 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.	
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 configuration data may be invalid or not registered. Check them.
Failed to terminate the library. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.
Failed to register the license. Check if the optional product ID and entered license information is correct.	Check to see if the optional product ID or entered license information is correct.
Failed to open the license. Check if the optional product ID and entered license information is correct.	
Internal error. Check if memory or OS resources are sufficient.	Memory or OS resources may not be sufficient. Check them.

Outputting messages (clplogcmd command)

clplogcmd — Registers the specified text with syslog and alert, or reports the text by mail.

Command line:

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

Note:

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

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

Option

-m *message*	Specifies text to be produced in message. This option cannot be omitted. The maximum size of message is 511 bytes. (When syslog is specified as an output destination, the maximum size is 485 bytes.) The text exceeding the maximum size will not be shown. You may use alphabets, numbers, and symbols[1].
--syslog --alert --mail --trap	Specify the output destination from syslog, alert, mail and trap. (You can specify multiple destinations.) This parameter can be omitted. The syslog and alert will be the output destinations when the parameter is omitted.
-i eventID	Specify an event ID. Specify event ID. The maximum value of event ID is 10,000. This parameter can be omitted. The default value 1 is set when the parameter is omitted.
-l level	Level of alert to output. Select a level of alert output from ERR, WARN, or INFO. The icon on the alert view of the WebManager 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. See “Checking alerts using the WebManager”in Chapter 1, “Functions of the WebManager” for more information.

Return Value

0	Success
Other than 0	Failure

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

When mail is specified as the output destination, you need to make the settings to send mails by using the mail command.

Examples

Example 1: When specifying only message (output destinations are syslog and alert):

When the following is written in the EXEC resource script, text is produced in syslog and alert.

```
clplogcmd -m test1
```

The following log is the log output in syslog:

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

The following alert is displayed on the alert view of the WebManager:

	Receive Time	Time	Server Name	Module Name	Event ID	Message
i	2004/09/01 14:00:00	2004/09/01 14:00:00	server1	logcmd	1	test1

Example 2: When specifying message, output destination, event ID, and level (output destination is mail):

When the following is written in the EXEC resource script, the text is sent to the mail address set in the **Cluster Properties** of the Builder.

```
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
```

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

When the following is written in the exec resource script, the text is set to the SNMP trap destination set in **Cluster Properties** of the Builder. For more information on the SNMP trap destination settings, see "Cluster properties Alert Service tab" in Chapter 2 "Functions of the Builder" in this guide.

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

The following information is sent to the SNMP trap destination:

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

*** Notes on using symbols in text:**

The symbols below must be enclosed in double quotes (“ ”):

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

The symbols below must have a backslash ¥ in the beginning:

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

The symbol that must be enclosed in double quotes (“ ”) and have a backslash ¥ in the beginning:

`

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

- When there is a space in text, it must be placed in enclosed in double quotes (“ ”).
- The symbol % cannot be used in text.

Controlling monitor resources (clpmonctrl command)

clpmonctrl Controls the monitor resources.

Command line:

```
clpmonctrl -s [-m resource_name ...] [-w wait_time]
clpmonctrl -r [-m resource_name ...] [-w wait_time]
clpmonctrl –c [-m resource_name ...]
clpmonctrl –v [-m resource_name ...]
clpmonctrl -e -m resource_name
clpmonctrl -n [-m resource_name]
```

Description Suspends and/or resumes monitor resources.

Option

-s	Suspends monitoring
-r	Resumes monitoring
-c	Resets the times counter of the recovery action.
-v	Displays the times counter of the recovery action.
-e	Enables the Dummy Failure. Be sure to specify a monitor resource name with the -m option.
-n	Disables the Dummy Failure. When a monitor resource name is specified with the -m option, the function is disabled only for the resource. When the -m option is omitted, the function is disabled for all monitor resources.
-m	Specifies one or more monitor resources to be controlled.
resource_name ...	This option can be omitted. All monitor resources are controlled when the option is omitted.
-w *wait_time*	Waits for control monitoring on a monitor resource basis. (in seconds) This option can be omitted. The default value 5 is set when the option is omitted.

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

Examples

Monitor resource configuration

```
# clpstat -m
=== MONITOR RESOURCE STATUS ===
        Cluster cluster
                *server0 : server1

                Monitor0 [ipw1 :  Normal]
                ----------------------------------------------------------------
                 server0 [o]:        Online

                Monitor1 [miiw1:  Normal]
                ----------------------------------------------------------------
                 server0 [o]:        Online

                Monitor2 [userw : Normal]
                ----------------------------------------------------------------
                 server0 [o]:        Online
==================================
```

In the example 1 to 4 below, the monitor resources of the server1 are controlled.

To control the monitor resources of the server2, run this command in the server2.

Example 1: When suspending all monitor resources:

```
# clpmonctrl -s
Command succeeded.
# clpstat -m
=== MONITOR RESOURCE STATUS ===
        Cluster cluster
                *server0 : server1

                Monitor0 [ipw1 :Caution]
                ----------------------------------------------------------------
                 server0 [o]:        Suspend
                Monitor1 [miiw1:Caution]
                ----------------------------------------------------------------
                 server0 [o]:        Suspend
                Monitor2 [userw :Caution]
                ----------------------------------------------------------------
                 server0 [o]:        Suspend
==================================
```

Example 2: When resuming all monitor resources:

```
# clpmonctrl -r
Command succeeded.
# clpstat -m
=== MONITOR RESOURCE STATUS ===
      Cluster cluster
            *server0 : server1
               Monitor0 [ipw1 :Normal]
               ----------------------------------------------------------
                  server0 [o]:       Online
               Monitor1 [miiw1:Normal]
               ----------------------------------------------------------
                  server0 [o]:       Online
               Monitor2 [userw :Normal]
               ----------------------------------------------------------
                  server0 [o]:       Online
==================================
```

Example 3: When displaying the times counter of the recovery action of all monitor resource.

```
# clpmonctrl -v
-----------------------------------------------------
      Resource              : ipw1
      Script Count          : 0/0
      Restart Count         : 1/1
      Failover Count        : 3/3
      FinalAction Count     : 0[No Operation]
-----------------------------------------------------
-----------------------------------------------------
      Resource              : miiw1
      Script Count          : 0/0
      Restart Count         : 0/0
      Failover Count        : 1/1
      FinalAction Count     : 0[No Operation]
-----------------------------------------------------
-----------------------------------------------------
      Resource              : userw
      Script Count          : 0/0
      Restart Count         : 0/0
      Failover Count        : 0/0
      FinalAction Count     : 0[-]
-----------------------------------------------------

    Command succeeded.
```

Example 4: When resetting the times counter of the recovery action of all monitor resource.

```
# clpmonctrl -c

Command succeeded.

# clpmonctrl -v
----------------------------------------------------
      Resource             : ipw1
      Script Count         : 0/0
      Restart Count        : 0/1
      Failover Count       : 0/3
      FinalAction Count    : 0 [No Operation]
----------------------------------------------------
----------------------------------------------------
      Resource             : miiw1
      Script Count         : 0/0
      Restart Count        : 0/0
      Failover Count       : 0/1
      FinalAction Count    : 0 [No Operation]
----------------------------------------------------
----------------------------------------------------
      Resource             : userw
      Script Count         : 0/0
      Restart Count        : 0/0
      Failover Count       : 0/0
      FinalAction Count    : 0 [-]
----------------------------------------------------

    Command succeeded.
```

Example 5: When suspending only the IP monitor resource (ipw1):

```
# clpmonctrl -s -m ipw1
Command succeeded.
# clpstat -m
=== MONITOR RESOURCE STATUS ===
          Cluster cluster
             *server0 : server1

             Monitor0 [ipw1 :Caution]
             ----------------------------------------------------------------
              server0 [o]:       Suspend

             Monitor1 [miiw1:Normal]
             ----------------------------------------------------------------
              server0 [o]:       Online

             Monitor2 [userw :Normal]
             ----------------------------------------------------------------
              server0 [o]:       Online
==================================
```

Example 6: When resuming only the IP monitor resource (ipw1):

```
# clpmonctrl -r -m ipw1
Command succeeded.
# clpstat -m
=== MONITOR RESOURCE STATUS ===
      Cluster cluster
            *server0 : server1

             Monitor0 [ipw1 :Normal]
             ----------------------------------------------------------------
              server0 [o]:       Online

             Monitor1 [miiw1:Normal]
             ----------------------------------------------------------------
              server0 [o]:       Online

             Monitor2 [userw :Normal]
             ----------------------------------------------------------------
              server0 [o]:       Online
==================================
```

Example 7: When displaying the times counter of the recovery action of IP monitor resource.

```
# clpmonctrl -v -m ipw1
-------------------------------------------------------
     Resource              : ipw1
     Script Count          : 0/0
     Restart Count         : 1/1
     Failover Count        : 3/3
     FinalAction Count     : 0[No Operation]
-------------------------------------------------------

    Command succeeded.
```

Example 8: When resetting the times counter of the recovery action of IP monitor resource.

```
# clpmonctrl -c -m ipw1

Command succeeded.

# clpmonctrl -v -m ipw1
-------------------------------------------------------
     Resource              : ipw1
     Script Count          : 0/0
     Restart Count         : 0/1
     Failover Count        : 0/3
     FinalAction Count     : 0[No Operation]
-------------------------------------------------------

    Command succeeded.
```

Remarks

If you suspend a monitor resource that is already suspended or resume that is already resumed, this command terminates successfully without changing the status of the monitor resource.

Notes

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

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

Before you run this command, use the clpstat command or WebManager to verify that the status of monitor resources is in either “Online” or “Suspend.”

When the recovery action of monitor resource uses one of the following settings, “Final Action Count” (which is displayed in the -v option) indicates the number of times to execute a script before the final action.
- Execute Script Before Final Action: Enable
- Final action: No Operation

Error Messages

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

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

Type	Suspending/resuming monitoring	Resetting the times counter of the recovery action	Enabling/disabling Dummy Failure
diskw	y	y	y
ipw	y	y	y
miiw	y	y	y
mtw	y	y	y
pidw	y	y	y
volmgrw	y	y	y
userw	y	y	n
vmw	y	y	n
mrw	y	y	n
genw	y	y	y
oraclew	y	y	y
oracleasw	y	y	y
db2w	y	y	y
psqlw	y	y	y
mysqlw	y	y	y
sybasew	y	y	y
sambaw	y	y	y
nfsw	y	y	y
httpw	y	y	y
ftpw	y	y	y
smtpw	y	y	y
pop3w	y	y	y
imap4w	y	y	y
tuxw	y	y	y
wlsw	y	y	y
wasw	y	y	y
otxw	y	y	y
jraw	y	y	y
sraw	y	y	y
psw	y	y	y

Controlling group resources (clprsc command)

clprsc Controls group resources

Command line:

```
clprsc -s resource_name [-f]
clprsc -t resource_name [-f]
```

Description Starts and stops group resources.

Option	-s	Starts group resources.
	-t	Stops group resources.
	-f	When the group resource is online, all group resources that the specified group resource depends starts up. When the group resource is offline, all group resources that the specified group resource depends stop.

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

Examples

Group resource configuration

```
# clpstat
========== CLUSTER STATUS   ==========
Cluster cluster
<server>
    *server1:.....Online
        lanhb1:                Normal
        lanhb2:                Normal
<group>
    ManagementGroup: .....Online
        Current:               server1
        ManagementIP:          Online
    failover1:.....Online
        current:               server1
        exec1:                 Online
<monitor>
    ipw1:                      Normal

==================================
```

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

```
# clprsc -t exec1
Command succeeded.
#clpstat
========== CLUSTER STATUS   ==========
<Abbreviation>
<group>
    ManagementGroup: ..... Online
        Current:               server1
        ManagementIP:          Online
    failover1:..... Online
        current:               server1
        exec1:                 Offline
<Abbreviation>
```

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

```
# clprsc -s exec1
Command succeeded.
# clpstat
========== CLUSTER STATUS   ==========
<Abbreviation>
<group>
    ManagementGroup: ..... Online
        Current:               server1
        ManagementIP:          Online
    failover1:..... Online
        current:               server1
        exec1:                 Online
<Abbreviation>
```

Notes

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

Check the status of the group resources by the status display or the WebManager.

Error Messages

Message	Causes/Solution
Log in as Administrator.	Run this command as a user with Administrator privileges.
Invalid cluster configuration data. Check it by using the Builder.	The cluster construction information is not correct. Check the cluster construction information by Builder.
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 WebManager or the clpstat command.
Could not start the group resource. Try it again after the other server is started, or after the Wait Synchronization time is timed out.	Wait until the other server starts or the wait time times out, and then start the group resources.
No operable group resource exists in the server.	Check there is a processable group resource on the specified server.
The group resource has already been started on the local server.	Check the group resource status by using the WebManager or clpstat command.
The group resource has already been started on the other server.	Check the group resource status by using the WebManager 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 WebManager or clpstat command.
Failed to start group resource. Check the status of group resource.	Check the group resource status by using the WebManager or clpstat command.
Failed to stop resource. Check the status of group resource.	Check the group resource status by using the WebManager or clpstat command.
Depended resource is not offline. Check the status of resource.	Because the status of the depended group resource is not offline, the group resource cannot be stopped. Stop the depended group resource or specify the -f option.

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

Controlling CPU frequency (clpcpufreq command)

clpcpufreq Controls CPU frequency.

Command line:

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

Description 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. • performance: The CPU frequency is at its highest. • powersave: Frequency is lowered and power-saving mode is set.

Return Value

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

Remarks If the driver for CPU frequency control is not loaded, an error occurs.

If the **Use CPU Frequency Control** checkbox is not selected in the power saving settings in server properties, this command results in error.

Notes This command must be executed by a user with the root 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 root.	Log in as root user.
This command is already run.	This command has already been run.
Invalid option.	Specify a valid option.
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 load the configuration file. Check if memory or OS resources are sufficient.	Check to see if the memory or OS resource is sufficient.
Failed to load the all.pol file. Reinstall the RPM.	Reinstall the ExpressCluster Server RPM.
Failed to load the cpufreq.pol file. Reinstall the RPM.	Reinstall the ExpressCluster Server RPM.
Failed to get the install path. Reinstall the RPM.	Reinstall the ExpressCluster Server RPM.
Failed to get the cpufreq path. Reinstall the RPM.	Reinstall the ExpressCluster Server RPM.
Failed to initialize the apicl library. Reinstall the RPM.	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.	Check the BIOS settings and the OS settings. Check if the cluster service is started. Check if the setting is configured so that CPU frequency control is used.
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.	Check the BIOS settings and the OS settings. Check if the cluster service is started. Check if the setting is configured so that CPU frequency control is used.
Internal error. Check if memory or OS resources are sufficient.	Check if the memory or OS resource is sufficient.

Processing inter-cluster linkage (clptrnreq command)

clptrnreq 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.	
	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 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 work¥trnreq 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.	
	If the -w option is not specified, the command waits 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 root privilege.

This command cannot be executed when the ExpressCluster Transaction service is not operating on the server with the IP address specified by -h.

When WebManager connection restriction is conducted by the client IP address on this target server, it is required that connection to the address of the server to execute the command is permitted.

Examples

Example 1: When performing a failover on the group having the exec1 resource of another cluster

clptrnreq -t GRP_FAILOVER -h 10.0.0.1,10.0.0.2 -r exec1

Command succeeded.

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

Command Succeeded.

Error messages

Message	Cause/solution
Log in as root.	Log in as root user.
Invalid option.	The command line option is invalid. Specify the correct option.
Could not connect to the data transfer server. Check if the server has started up.	Check if the server has started up.
Could not connect to all data transfer servers. Check if the servers have started up.	Check if all the servers in the cluster have started up.
Command timeout.	The cause may be heavy load on OS and so on. Check this.
All servers are busy. Check if this command is already run.	This command may be run already. Check it.
GRP_FAILOVER %s : Group that specified resource(%s) belongs to is offline.	Failover process is not performed because the group to which the specified resource belongs is not started.
EXEC_SCRIPT %s : Specified script(%s) does not exist.	The specified script does not exist. Check it.
EXEC_SCRIPT %s : Specified script(%s) is not executable.	The specified script could not be executed. Check that execution is permitted.
%s %s : 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 WebManager.
GRP_FAILOVER %s : Specified resource(%s) does not exist.	The specified resource does not exist. Check it.
%s %s : %s failed in execute.	request failed in execute.
Internal error. Check if memory or OS resource is sufficient.	Check if the memory or OS resource is sufficient.

Requesting processing to cluster servers (clprexec command)

clprexec — Issues a processing execution request to another server on which ExpressCluster is installed.

Command line:

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

Description 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

--failover	Requests group failover. Specify a group name for *group_name*. When not specifying the group name, specify the name of a resource that belongs to the group by using the -r option.
--script script_name	Requests script execution. For *script_name*, specify the file name of the script to execute (such as a shell script or executable file). The script must be created in the work/rexec folder, which is in the folder where ExpressCluster is installed, on each server specified using -h.
--notice	Sends an error message to the ExpressCluster server. Specify a message reception monitor resource name for *mrw_name*. When not specifying the monitor resource name, specify the category and keyword of the message reception monitor resource by using the -k option.
--clear	Requests changing the status of the message reception monitor resource from “Abnormal” to “Normal.” Specify a message reception monitor resource

		name for *mrw_name*. When not specifying the monitor resource name, specify the category and keyword of the message reception monitor resource by using the -k option.
	-h IP Address	Specify the IP addresses of ExpressCluster servers that receive the processing request. Up to 32 IP addresses can be specified by separating them with commas. * If this option is omitted, the processing request is issued to the local server.
	-r resource_name	Specify the name of a resource that belongs to the target group for the processing request when the --failover option is specified.
	-k category[.keyword]	For *category*, specify the category specified for the message receive monitor when the --notice or --clear option is specified. To specify the keyword of the message receive monitor resource, specify them by separating them with dot after *category*.
	-p port_number	Specify the port number. For *port_number*, specify the data transfer port number specified for the server that receives the processing request. The default value, 29002, is used if this option is omitted.
	-o logfile_path	In *logfile_path*, specify the path of the file to which to output the detailed log of this command. The file contains the log of one command execution. * If this option is not specified on a server where ExpressCluster is not installed, the log is always output to the standard output.
	-w timeout	Specify the command timeout time. The default, 180 seconds, is used if this option is not specified. A value from 5 to MAXINT can be specified.

Return Value

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

Notes

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

The command version is output to the standard output when the command is executed.

The command checks whether the character string specified for the --script option includes "¥", "/" or ".." because a relative path must not be specified. (This is because a relative path cannot be specified.)

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.
= mrw must be set up and running.
= TransactionServer must be running.

Examples

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

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

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

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

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

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

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

* mrw1 set, category: earthquake, keyword: scale3

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

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

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

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

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

* mrw1 set, category: earthquake, keyword: scale3

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

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

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

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

Error messages

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

Changing BMC information (clpbmccnf command)

clpbmccnf Changes the information on BMC user name and password.

Command line:

```
clpbmccnf [-u username] [-p password]
```

Description Changes the user name/password for the LAN access of the baseboard management controller (BMC) used by ExpressCluster.

Option

-u *username*	Specifies the user name for BMC LAN access used by ExpressCluster. A user name with root privilege needs to be specified. The -u option can be omitted. Upon omission, when the -p option is specified, the value currently set for user name is used. If there is no option specified, it is configured interactively.
-p *password*	Specifies the password for BMC LAN access used by ExpressCluster. The -p option can be omitted. Upon omission, when the -u option is specified, the value currently set for password is used. If there is no option specified, it is configured interactively.

Return Value

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

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

Execute this command when the server is in normal status.

BMC information update by this command is enabled when the server is started/resumed next time.

This command does not change the BMC settings. Use a tool attached with the server or other tools in conformity with IPMI standard to check or change the BMC account settings.

Examples When you changed the IPMI account password of the BMC in server1 to mypassword, execute the following on server1:

```
# clpbmccnf -p mypassword
```

Alternatively, enter the data interactively as follows:

```
# clpbmccnf
New user name:    <- If there is no change, press Return to skip
New password: **********
Retype new password: **********
Cluster configuration updated successfully.
```

Error messages

Message	Cause/solution
Log in as root	Log in as root user.
Invalid option.	The command line option is invalid. Specify the correct option.
Failed to download the cluster configuration data. Check if the cluster status is normal.	Downloading the cluster configuration data has been failed. Check if the cluster status is normal.
Failed to upload the cluster configuration data. Check if the cluster status is normal.	Uploading the cluster configuration data has been failed. Check if the cluster status is normal.
Invalid configuration file. Create valid cluster configuration data by using the Builder.	The cluster configuration data is invalid. Check the cluster configuration data by using the Builder.
Internal error. Check if memory or OS resources are sufficient.	Check if the memory or OS resource is sufficient.

Controlling reboot count (clpregctrl command)

clpregctrl Controls reboot count limitation.

Command line:

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

Description Displays or initializes the reboot count on a server.

Option	-g, --get	Displays reboot count information
	-c, --clear	Initializes reboot count
	-t ***type***	Specifies the type to initialize the reboot count. The type that can be specified is *rc* or *rm*
	-r ***registry***	Specifies the registry name. The registry name that can be specified is haltcount.

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

Examples Display of reboot count information

```
# clpregctrl –g

  ****************************
   -------------------------
    type    : rc
    registry  : haltcount
    comment : halt count
    kind    : int
    value   : 0
    default   : 0

   -------------------------
    type    : rm
    registry  : haltcount
    comment : halt count
    kind    : int
    value   : 3
    default   : 0

  ****************************
  Command succeeded.(code:0)
#
```

The reboot count is initialized in the following examples.

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

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

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

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

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

Error Messages

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

Estimating the amount of resource usage (clpprer command)

clpprer

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

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.

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.

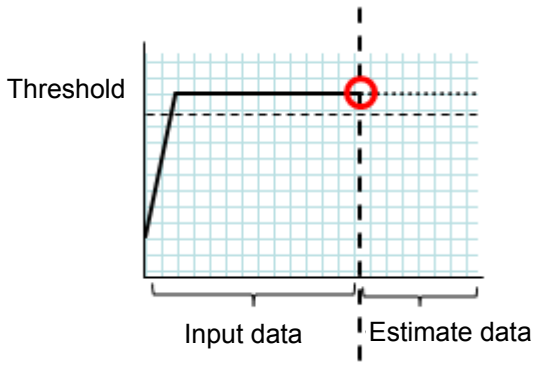


Figure: Error detection in the input data

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.

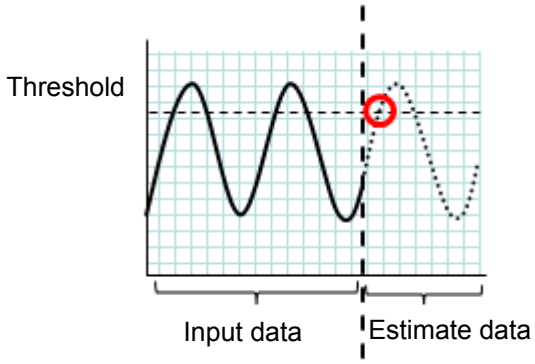


Figure: Error detection in the estimate data

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.

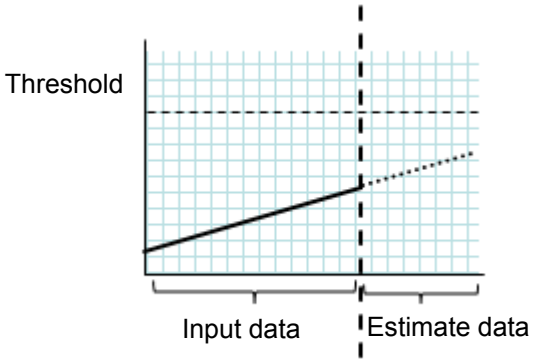


Figure: When no threshold error is detected

When the `-l` option is used:

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

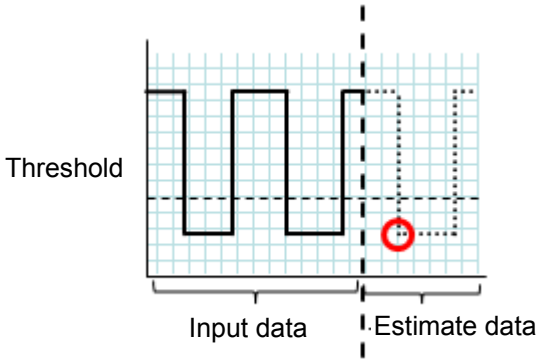


Figure: Use of the `-l` option

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.
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.

Section III Release notes

This section describes the restrictions on ExpressCluster X SingleServerSafe, as well as the known problems and how to prevent them.

- Chapter 3 Notes and restrictions
- Chapter 4 Error messages

Chapter 3 Notes and restrictions

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

This chapter covers:

After the system is put into operation

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

Messages displayed when the driver is loaded

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

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

ipmi messages

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

```
modprobe: modprobe: Can`t locate module char-major-10-173
```

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

Restrictions during recovery operation

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

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

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

However, you can perform them when the final action is completed.

Executable files and script files not described in the Command Reference

The installation directory contains executable files and script files that are not described in Chapter 3, “ExpressCluster command reference” in the 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.

Messages displayed when logs are collected

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

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

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

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

Service start/stop scripts

In the following cases, the service start/stop scripts outputs an error:

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

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

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

Script files used in EXEC resources

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

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

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

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

Old EXEC resource scripts can be deleted when unnecessary.

Monitor resources that monitor active resources

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

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

Notes on system monitor resources

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

Notes on JVM monitor resources

- When restarting the monitoring-target Java VM, suspend or shut down the cluster before restarting the Java VM.
- To change a setting, the cluster must be suspended.
- JVM monitor resources do not support a delay warning for monitor resources.

Notes on final action(stop group) when an error is detected by the monitor resource

- When the final action(stop group) is executed, execute suspend and resume cluster.
- When the group start manually on the server where final action(group stop) was executed, the recovery actions to the group aren't executed.

WebManager

- Information displayed by the WebManager does not always reflect the latest status. To acquire the latest information, click the **Reload** icon on the toolbar or **Reload** in the **Tool** menu.
- If a server fails while the WebManager is acquiring information, the information acquisition fails, which may result in the failure to show some objects.
  Wait for the next automatic update, or click the **Reload** icon on the toolbar or **Reload** in the **Tool** menu to reacquire the latest information.
- When using the browser on Linux, depending on the combination with the window manager, the dialog box might be placed behind other windows. Switch windows by pressing the **Alt** + **Tab** keys or by another means.
- You cannot simultaneously collect ExpressCluster X SingleServerSafe logs from multiple WebManagers.
- If you work on the WebManager when no connectivity is established, it may take a while to regain control.
- While the mouse pointer is the hourglass which indicates that the OS is processing something, moving the cursor outside the browser may return to the arrow icon even if the process is still underway.
- When you collect logs, the following message may be displayed in a server console:

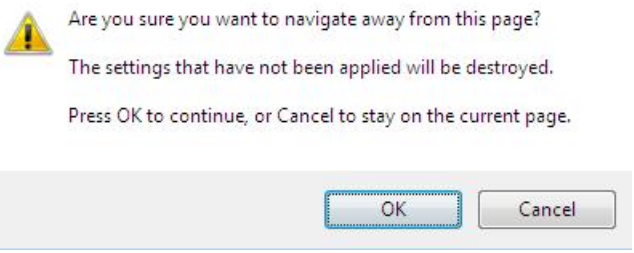
  ```
  hda: bad special flag: 0x03
  ip_tables: (C) 2000-2002 Netfilter core team
  ```

  You can ignore this message because it does not affect log collection.

- When going through the proxy server, configure the settings for the proxy server be able to relay the port number of the WebManager.
- When a reverse proxy server is used, the WebManager does not run normally.
- When you update ExpressCluster X SingleServerSafe, close the browser. Next, clear the Java cache, and then restart the browser.
- When updating Java, close all running browsers. Clear the Java cache (not browser cache) and open browsers.

Builder

- The configuration data of the following products is not compatible:
  - Builder other than ExpressCluster X SingleServerSafe 3.2 for Linux
- Cluster configuration data created using a later version of this product cannot be used with this product.
- Cluster configuration data of ExpressCluster X SingleServerSafe 1.0/2.0/2.1/3.0/3.1/3.2 for Linux can be used with this product.
  You can use such data by clicking **Import** from the **File** menu in the Builder.
- Closing the Web browser (by clicking **Exit** from the menu), the dialog box to confirm to save is displayed.

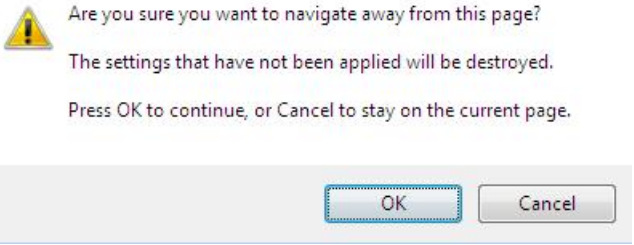


When you continue to edit, click the **Cancel** button.

Note:

This dialog box is not displayed if JavaScript is disabled.

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



When you continue to edit, click the **Cancel** button.

Note:

This dialog box is not displayed if JavaScript is disabled.

- When creating the cluster configuration data using the Builder, do not enter the value starting with 0 on the text box. For example, if you want to set 10 seconds for a timeout value, enter “10” but not “010.”
- The Builder does not run normally through the Reverse Proxy server.
- The mnemonic key may not work normally when Java™ Runtime Environment Version 7.0 Update2 (1.7.0_2) or later is being used.

Chapter 4 Error messages

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

This chapter covers:

Messages reported by syslog, alert, mail, and SNMP trap

The table below lists ExpressCluster X SingleServerSafe messages.

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

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
sss	Error	8	Failed to update config file.	The configuration file could not be updated.	Check the configuration data.	●	●		
sss	Info	10	Updated config file successfully.	The configuration file has been updated.	-		●		
sss	Error	12	Information in config file is invalid.	The content of the configuration file is invalid.	Check the configuration data.		●		
sss	Error	14	Failed to obtain server name.	The server name could not be acquired.	Memory or OS resources may not be sufficient. Check them.		●		
sss	Info	16	Server name is updated.	The server name has been updated.	-	●	●		
pm	Info	1	Starting the cluster daemon…	The ExpressCluster daemon has been successfully started.	-	●	●		
pm	Info	2	Shutting down the cluster daemon…	The ExpressCluster daemon is now being shut down.	-	●	●		
pm	Info	3	Shutdown monitoring is started…	Shutdown monitoring has been started.	-	●	●		
pm	Error	10	The cluster daemon has already started.	The ExpressCluster daemon has already been already started.	Check the ExpressCluster daemon status.	●	●		
pm	Error	11	A critical error occurred in the cluster daemon.	A critical error occurred in the ExpressCluster daemon.	The user executing the operation does not have root privileges, or there is an insufficiency of memory or OS resources. Check them.	●	●	●	●

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
pm	Error	12	A problem was detected in XML library.	A problem was detected in the XML library.	Memory or OS resources may not be sufficient. Check them.	●	●		
pm	Error	13	A problem was detected in cluster configuration data.	A problem was detected in configuration data.	Check the configuration data by using the Builder.	●	●	●	●
pm	Error	14	No cluster configuration data is found.	The configuration data does not exist.	Create a server configuration by using the Builder and upload it to the server.	●	●		
pm	Error	15	No information about this server is found in the cluster configuration data.	This server was not found in the configuration data.	Check the configuration data by using the Builder.	●	●		
pm	Error	20	Process %1 was terminated abnormally.	Process %1 terminated abnormally.	Memory or OS resources may not be sufficient. Check them.	●	●	●	●
pm	Error	21	The system will be stopped because the cluster daemon process terminated abnormally.	The system will now stop because the ExpressCluster daemon process terminated abnormally.	Deactivation of group resources may be failed. Troubleshoot by following the group resource message.	●	●		
pm	Error	22	An error occurred when initializing process %1.(retu rn code:%2)	An initialization error occurred in process %1.	The event process might not be running.	●	●	●	●
pm	Info	23	The system will be stopped.	The system will now stop.	-	●	●		
pm	Info	24	The cluster daemon will be stopped.	Stops the cluster daemon.	-	●	●		
pm	Info	25	The system will be rebooted.	System will be rebooted.	-	●	●		
pm	Info	26	Process %1 will be restarted.	Process %1 will now be restart.	-	●	●		
pm	Info	30	Received a request to stop the system from %1.	A request to stop the system was received from %1.	-	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
pm	Info	31	Received a request to stop the cluster daemon from %1.	A request to stop the ExpressCluster daemon was received from %1.	-	●	●		
pm	Info	32	Received a request to reboot the system from %1.	A request to reboot the system was received from %1.	-	●	●		
pm	Info	33	Received a request to restart the cluster daemon from %1.	A request to reboot the ExpressCluster daemon was received from %1.	-	●	●		
pm	Info	34	Received a request to resume the cluster daemon from %1.	A request to resume the server was received from %1.	-	●	●		
pm	Info	35	Received a request to suspend the cluster daemon from %1.	A request to suspend the server was received from %1.	-	●	●		
pm	Info	36	Received a request to panic by sysrq from %1.	A request for a panic by sysrq was received from %1.	-	●	●		
pm	Info	37	Received a request to reset by keepalive driver from %1.	A request for a reset by the keepalive driver was received from %1.	-	●	●		
pm	Info	38	Received a request to panic by keepalive driver from %1.	A request for a panic by the keepalive driver was received from %1.	-	●	●		
pm	Info	39	Received a request to reset by BMC from %1.	A request for a reset by BMC was received from %1.	-	●	●		
pm	Info	40	Received a request to power down by BMC from %1.	A request for a power down by BMC was received from %1.	-	●	●		
pm	Info	41	Received a request to power cycle by BMC from %1.	A request for a power cycle by BMC was received from %1.	-	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
pm	Info	42	Received a request to send NMI by BMC from %1.	A request for NMI transmission by BMC was received from %1.	-	●	●		
pm	Error	66	An attempt to panic by sysrq from %1 failed.	An attempt to perform a panic by sysrq from %1 failed.	Check whether the system is set up so that it can be used by sysrq.	●	●		
pm	Error	67	An attempt to reset by keepalive driver from %1 failed.	An attempt to perform a reset by the keepalive driver from %1 failed.	Check whether the keepalive driver can be used in this environment.	●	●		
pm	Error	68	An attempt to panic by keepalive driver from %1 failed.	An attempt to perform a panic by the keepalive driver from %1 failed.	Check whether the keepalive driver can be used in this environment.	●	●		
pm	Error	69	An attempt to reset by BMC from %1 failed.	An attempt to perform a reset by BMC from %1 failed.	Check whether the hwreset command can be used.	●	●		
pm	Error	70	An attempt to power down by BMC from %1 failed.	An attempt to perform a power down by BMC from %1 failed.	Check whether the hwreset command can be used.	●	●		
pm	Error	71	An attempt to power cycle by BMC from %1 failed.	An attempt to perform a power cycle by BMC from %1 failed.	Check whether the hwreset command can be used.	●	●		
pm	Error	72	An attempt to send NMI by BMC from %1 failed.	An attempt to send NMI by BMC from %1 failed.	Check whether the hwreset command can be used.	●	●		
nm	Info	1	Server %1 has started.	Server %1 has started.	-	●	●		
nm	Info	2	Server %1 has been stopped.	Server %1 has stopped.	-	●	●	●	●
nm	Info	3	Resource %1 of server %2 has started.	Resource %1 of server %2 has started.	-	●	●		
nm	Info	4	Resource %1 of server %2 has stopped.	Resource %1 of server %2 has stopped.	-	●	●		
nm	Info	5	Waiting for all servers to start.	Waiting for the server to start has started.	-	●	●		
nm	Info	6	All servers have started.	The server has started.	-	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
nm	Info	7	Timeout occurred during the wait for startup of all servers.	Waiting for all servers to start resulted in a timeout.	-	●	●		
nm	Error	8	Timeout occurred during the wait for startup of all servers. (Cannot communicate with some servers.)	Waiting for all servers to start resulted in a timeout. (Internal communication with some servers is not possible.)	Check that there is no error in the network adapter and the network is correctly connected.	●	●		
nm	Info	9	Waiting for startup of all servers has been canceled.	Waiting for all servers to start has been canceled.	-	●	●		
nm	Error	10	Status of resource %1 of server %2 is unknown.	Resource %1 of Server %2 is unknown.	Check whether the cable or network settings related to resource %1 are correct.	●	●	●	●
nm	Error	20	Process %1 was terminated abnormally.	Process %1 terminated abnormally.	Memory or OS resources may not be sufficient. Check them.	●	●	●	●
nm	Info	21	The system will be stopped.	The system will now stop.	-	●	●		
nm	Info	22	The cluster daemon will be stopped.	Stops the cluster daemon.	-	●	●		
nm	Info	23	The system will be rebooted.	System will be rebooted.	-	●	●		
nm	Info	24	Process %1 will be restarted.	%1 process will be restarted.	-	●	●		
nm	Error	30	Network partition was detected. Shut down the server %1 to protect data.	Network partition was detected. Shut down server %1 to protect data.	All heartbeat resources cannot be used. Check that there is no error in the network adapter and the network is correctly connected. If DISKHB is being used, check the shared disk status. If COMHB is being used, check whether the COM cable is correctly connected.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
nm	Error	31	An error occurred while confirming the network partition. Shut down the server %1.	An error occurred in confirming the network partition. Shut down the server %1.	Check whether an error occurred in the network partition resolution resource.	●	●		
nm	Error	32	Shut down the server %1. (reason:%2)	Shut down server %1. (Reason: %2)	No heartbeat can be used. Check that there is no error in the network adapter and the network is correctly connected. If DISKHB is being used, check the shared disk status. If COMHB is being used, check whether the COM cable is correctly connected.	●	●		
nm	Error	33	Cluster service will be stopped. (reason:%1)	Stop the service. (reason: %1)	Check the cause following the message.	●	●		
nm	Error	34	The combination of the network partition resources is invalid. (server name:%1)	The combination of the network partition resources is invalid. (erver name: %1)	Check the configuration data.	●	●		
nm	Error	35	Failed to start the resource %1. Server name:%2	Starting resource %1 failed. (Server name: %2)	Check whether an error occurred in the network partition resolution resource.	●	●		
nm	Info	36	The network partition %1 of the server %2 has been recovered to the normal status.	Network partition %1 of server %2 has been recovered to the normal status.	-	●	●		
nm	Error	37	The network partition %1 of the server %2 has an error.	The network partition %1 of the server %2 has an error.	Check whether an error occurred in the network partition resolution resource.	●	●		
nm	Error	38	The resource %1 of the server %2 is unknown.	The resource %1 of the server %2 is unknown.	Check the configuration data.	●	●		
nm	Info	39	The server %1 cancelled the pending failover.	The server %1 cancelled the pending failover.	-	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
nm	Error	80	Cannot communicate with server %1.	Internal communication with server %1 is not possible.	Check that there is no error in the network adapter and the network is correctly connected.	●	●		
nm	Info	81	Recovered from internal communication error with server %1.	Internal communication with server %1 has recovered from the abnormal status.	-	●	●		
rc	Info	10	Activating group %1 has started.	The activation processing of group %1 has started.	-	●	●		
rc	Info	11	Activating group %1 has completed.	The activation processing of group %1 has terminated.	-	●	●		
rc	Error	12	Activating group %1 has failed.	The activation processing of group %1 has failed.	Troubleshoot according to the group resource message.	●	●		
rc	Info	15	Waiting for group %1 to start has started.	Waiting for the group to start has started.	-	●	●		
rc	Info	16	Waiting for group %1 to start has been completed.	Waiting for the group to start has been normally completed.	-	●	●		
rc	Error	17	Group start was cancelled because waiting for group %1 to start was timed out.	Waiting for the group to start has timed out.	Check the status of the group waiting to start. If the group has not yet been started, re-perform the group operation after starting that group.	●	●		
rc	Warning	18	Waiting for group %1 to start has timed out. However, group start continues.	Waiting for the group to start has timed out. However, group start continues.	-	●	●		
rc	Info	20	Stopping group %1 has started.	The stop processing of group %1 has started.	-	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rc	Info	21	Stopping group %1 has completed.	The stop processing of group %1 has terminated.	-	●	●		
rc	Error	22	Stopping group %1 has failed.	The stop processing of group %1 has failed.	Troubleshoot according to the group resource message.	●	●		
rc	Warning	23	Server %1 is not in a condition to start group %2.	Server %1 cannot currently start group %2.	The server where a complete exclusion group is already active cannot start the group. Stop the complete exclusion group, and then re-execute the operation.	●	●		
rc	Info	25	Waiting for group %1 to stop has started.	Waiting for the group to stop has started.	-	●	●		
rc	Info	26	Waiting for group %1 to stop has been completed.	Waiting for the dependent group to stop has been normally completed.	-	●	●		
rc	Error	27	Group stop has been cancelled because waiting for group %1 to stop has timed out.	Waiting for the group to stop has timed out.	Check the status of the group waiting to stop. If the group has not yet been stopped, re-perform the group operation after stopping that group.	●	●		
rc	Warning	28	Waiting for group %1 to stop has timed out. However, group stop continues.	Stop waiting has timed out. However, group stop continues.	-	●	●		
rc	Info	30	Activating %1 resource has started.	The activation processing of resource %1 has started.	-		●		
rc	Info	31	Activating %1 resource has completed.	The activation processing of resource %1 has terminated.	-		●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rc	Error	32	Activating %1 resource has failed.(%2 : %3)	The activation processing of resource %1 has failed.	See "Detailed information on activating and deactivating group resources" on page 211.	●	●	●	●
rc	Info	40	Stopping %1 resource has started.	The stop processing of resource %1 has started.	-		●		
rc	Info	41	Stopping %1 resource has completed.	The stop processing of resource %1 has terminated.	-		●		
rc	Error	42	Stopping %1 resource has failed.(%2 : %3)	The stop processing of resource %1 has failed.	See "Detailed information on activating and deactivating group resources" on page 211.	●	●	●	●
rc	Info	50	Moving group %1 has started.	The movement processing of group %1 has started.	-	●	●		
rc	Info	51	Moving group %1 has completed.	The movement processing of group %1 has terminated.	-	●	●		
rc	Error	52	Moving group %1 has failed.	The movement processing of group %1 has failed.	Troubleshoot according to the group resource message.	●	●		
rc	Info	55	Migrating group %1 has started.	The migration processing of group %1 has started.	-	●	●		
rc	Info	56	Migrating group %1 has completed.	The migration processing of group %1 has terminated.	-	●	●		
rc	Error	57	Migrating group %1 has failed.	The migration processing of group %1 has failed.	Troubleshoot according to the group resource message.	●	●		
rc	Warning	58	Server %1 is not in a condition to migrate group %2	The server %1 is not ready for the migration of the group %2.	Check the status of the migration destination server. No server name is output for %1 if there is no migration destination server.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rc	Info	60	Failover group %1 has started.	The failover processing of group %1 has started.	-	●	●		
rc	Info	61	Failover group %1 has completed.	The failover processing of group %1 has terminated.	-	●	●		
rc	Error	62	Failover group %1 has failed.	The failover processing of group %1 has failed.	Troubleshoot according to the group resource message.	●	●		
rc	Warning	63	Server %1 is not in a condition to move group %2.	Server %1 cannot currently move group %2.	Check the status of the movement destination server. If the movement destination server does not exist, the server name is not output to %1.	●	●		
rc	Info	64	Server %1 has been set as the destination for the group %2 (reason: %3).	Server %1 has been set as the destination for the group %2 (reason: %3).	-	●	●		
rc	Error	65	There is no appropriate destination for the group %1 (reason: %2).	There is no appropriate destination for the group %1 (reason: %2).	Check if any monitor resources detects an error on the other servers.	●	●		
rc	Warning	66	Server %1 is not in a condition to start group %2 (reason: %3).	Server %1 is not in a condition to start group %2 (reason: %3).	Check if any monitor resource detects an error on the server.	●	●		
rc	Info	67	Server %1 in the same server group (%2) has been set as the destination for the group %3.	The destination found in the same server group.	-	●	●		
rc	Info	68	Server %1 not in the same server group (%2) has been set as the destination for the group %3.	The destination found in the other server group.	-	●	●		
rc	Warning	69	Can not failover the group %1 because there is no appropriate destination in the same server group %2.	The destination not found in the same server group.	Check if other servers in the same server group are stopped.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rc	Info	70	Restarting group %1 has started.	The restart processing of group %1 has started.	-	●	●		
rc	Info	71	Restarting group %1 has completed.	The restart processing of group %1 has terminated.	-	●	●		
rc	Error	72	Restarting group %1 has failed.	The restart processing of group %1 has failed.	Troubleshoot according to the group resource message.	●	●		
rc	Info	74	Failback group %1 has started.	Failback group %1 has started.	-	●	●		
rc	Info	75	Failback group %1 has completed.	Failback group %1 has been completed.	-	●	●		
rc	Error	76	Failback group %1 has failed.	Failback group %1 has failed.	Take appropriate action according to the group resource message.	●	●		
rc	Info	80	Restarting resource %1 has started.	The restart processing of resource %1 has started.	-	●	●		
rc	Info	81	Restarting resource %1 has completed.	The restart processing of resource %1 has terminated.	-	●	●		
rc	Error	82	Restarting resource %1 has failed.	The restart processing of resource %1 has failed.	Troubleshoot according to the group resource message.	●	●		
rc	Info	83	Starting a single resource %1.	Resource %1 is being started alone.	-	●	●		
rc	Info	84	A single resource %1 has been started.	Starting resource %1 alone has been completed.	-	●	●		
rc	Error	85	Failed to start a single resource %1.	Starting resource %1 alone has failed.	Troubleshoot according to the group resource message.	●	●		
rc	Warning	86	Server %1 is not in a condition to start a single resource %2.	Server %1 cannot currently start resource %2 alone.	Check the server and group status.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rc	Info	87	Stopping a single resource %1.	Resource %1 is being stopped alone.	-	●	●		
rc	Info	88	A single resource %1 has been stopped.	Stopping resource %1 alone has been completed.	-	●	●		
rc	Error	89	Failed to stop a single resource %1.	Stopping resource %1 alone has failed.	Troubleshoot according to the group resource message.	●	●		
rc	Info	90	All the servers in the cluster were shut down.	All the servers have been shut down.	-	●	●		
rc	Info	91	The server was shut down.	All the servers have been shut down.	-	●	●		
rc	Warning	100	Restart count exceeded the maximum value %1. Final action of resource %2 will not be executed.	The restart count exceeded the maximum value %1. The final action of resource %2 will not be taken.	Troubleshoot according to the group resource message.	●	●		
rc	Info	121	The CPU frequency has been set to high.	The CPU frequency has been set to the highest.	-	●	●		
rc	Info	122	The CPU frequency has been set to low.	The CPU frequency has been set to the lowest.	-	●	●		
rc	Info	124	CPU frequency setting has been switched to automatic control by cluster.	The CPU frequency setting has been switched to automatic control by the server.	-	●	●		
rc	Error	140	CPU frequency control cannot be used.	CPU frequency control cannot be used.	Check BIOS settings and kernel settings.	●	●		
rc	Error	141	Failed to set the CPU frequency to high.	The CPU frequency could not be set to the highest.	Check BIOS settings and kernel settings. Check whether the ExpressCluster daemon is running. Check whether the CPU frequency control function is set to "use".	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rc	Error	142	Failed to set the CPU frequency to low.	The CPU frequency could not be set to the lowest.	Same as above	●	●		
rc	Error	144	Failed to switch the CPU frequency setting to automatic control by cluster.	The CPU frequency could not be set to automatic control by the server.	Check whether the ExpressCluster daemon is running. Check whether the CPU frequency control function is set to "use".	●	●		
rc	Info	160	Script before final action upon activation failure in resource %1 started.	The script executed before the final action when an activation failure occurs for resource %1 has been started.	-	●	●		
rc	Info	161	Script before final action upon activation failure in resource %1 completed.	The script executed before the final action when an activation failure occurs for resource %1 has been completed.	-	●	●		
rc	Info	162	Script before final action upon deactivation failure in resource %1 started.	The script before the final action at deactivation failure in resource (%1) has started.	-	●	●		
rc	Info	163	Script before final action upon deactivation failure in resource %1 completed.	The script before the final action at deactivation failure in resource (%1) has been completed.	-	●	●		
rc	Error	180	Script before final action upon activation failure in resource %1 failed.	The script executed before the final action when an activation failure occurs for resource %1 has failed.	Check the cause of the script failure and take measures.	●	●		
rc	Error	181	Script before final action upon deactivation failure in resource %1 failed.	The script executed before the final action when a deactivation failure occurs for resource %1 has failed.	Same as above	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rc	Info	200	Resource(%1) will be reactivated since activating resource(%2) failed.	Resource %2 will now be reactivated because the activation processing of resource %2 failed.	Troubleshoot according to the group resource message.	●	●		
rc	Info	201	Group(%1) will be moved to server(%2) since activating resource(%3) failed.	Group %1 will now be moved to server %2 because resource %3 could not be activated.	Troubleshoot according to the group resource message.	●	●		
rc	Info	202	Group(%1) will be stopped since activating resource(%2) failed.	Group %1 will now be stopped because resource %2 could not be activated.	Troubleshoot according to the group resource message.	●	●		
rc	Info	203	Cluster daemon will be stopped since activating resource(%1) failed.	The ExpressCluster server daemon will now be stopped because resource %1 could not be activated.	Troubleshoot according to the group resource message.	●	●		
rc	Info	204	System will be halted since activating resource(%1) failed.	The OS will now be shut down because resource %1 could not be activated.	Troubleshoot according to the group resource message.	●	●		
rc	Info	205	System will be rebooted since activating resource(%1) failed.	The OS will now be rebooted because resource %1 could not be activated.	Troubleshoot according to the group resource message.	●	●		
rc	Info	206	Activating group(%1) will be continued since failover process failed.	The activation processing of group %1 will now be continued because the failover processing failed.	Troubleshoot according to the group resource message.	●	●		
rc	Info	220	Resource(%1) will be stopping again since stopping resource(%2) failed.	Resource %1 deactivation will now be retried because the deactivation processing of resource %2 failed.	Troubleshoot according to the group resource message.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rc	Info	222	Group(%1) will be stopped since stopping resource(%2) failed.	Group %1 will now be stopped because resource %2 could not be deactivated.	Troubleshoot according to the group resource message.	●	●		
rc	Info	223	Cluster daemon will be stopped since stopping resource(%1) failed.	The server daemon will now be stopped because resource %1 could not be deactivated.	Troubleshoot according to the group resource message.	●	●		
rc	Info	224	System will be halted since stopping resource(%1) failed.	The OS will now be shut down because resource %1 could not be deactivated.	Troubleshoot according to the group resource message.	●	●		
rc	Info	225	System will be rebooted since stopping resource(%1) failed.	The OS will now be rebooted because resource %1 could not be deactivated.	Troubleshoot according to the group resource message.	●	●		
rc	Info	240	System panic by sysrq is requested since activating resource(%1) failed.	A system panic by sysrq has been requested because resource %1 activation failed.	Troubleshoot according to the group resource message.	●	●		
rc	Info	241	System reset by keepalive driver is requested since activating resource(%1) failed.	A system reset by the keepalive driver has been requested because resource %1 activation failed.	Troubleshoot according to the group resource message.	●	●		
rc	Info	242	System panic by keepalive driver is requested since activating resource(%1) failed.	A system panic by the keepalive driver has been requested because resource %1 activation failed.	Troubleshoot according to the group resource message.	●	●		
rc	Info	243	System reset by BMC is requested since activating resource(%1) failed.	A system reset by BMC has been requested because resource %1 activation failed.	Troubleshoot according to the group resource message.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rc	Info	244	System power down by BMC is requested since activating resource(%1) failed.	A system power down by BMC has been requested because resource %1 activation failed.	Troubleshoot according to the group resource message.	●	●		
rc	Info	245	System power cycle by BMC is requested since activating resource(%1) failed.	A system power cycle by BMC has been requested because resource %1 activation failed.	Troubleshoot according to the group resource message.	●	●		
rc	Info	246	NMI send by BMC is requested since activating resource(%1) failed.	NMI transmission by BMC has been requested because resource %1 activation failed.	Troubleshoot according to the group resource message.	●	●		
rc	Error	260	An attempt to panic system by sysrq due to failure of resource(%1) activation failed.	An attempt to panic the system was made by sysrq because resource %1 could not be activated, but this attempt failed.	Check whether the system is set up so that it can be used by sysrq.	●	●		
rc	Error	261	An attempt to reset system by keepalive driver due to failure of resource(%1) activation failed.	An attempt to reset the system was made by the keepalive driver because resource %1 could not be activated, but this attempt failed.	Check whether the keepalive driver can be used in this environment.	●	●		
rc	Error	262	An attempt to panic system by keepalive driver due to failure of resource(%1) activation failed.	An attempt to panic the system was made by the keepalive driver because resource %1 could not be activated, but this attempt failed.	Check whether the keepalive driver can be used in this environment.	●	●		
rc	Error	263	An attempt to reset system by BMC due to failure of resource(%1) activation failed.	An attempt to reset the system was made by BMC because resource %1 could not be activated, but this attempt failed.	Check whether the hwreset command can be used.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rc	Error	264	An attempt to power down system by BMC due to failure of resource(%1) activation failed.	An attempt to power down the system was made by BMC because resource %1 could not be activated, but this attempt failed.	Check whether the hwreset command can be used.	●	●		
rc	Error	265	An attempt to power cycle system by BMC due to failure of resource(%1) activation failed.	An attempt to power cycle the system was made by BMC because resource %1 could not be activated, but this attempt failed.	Check whether the hwreset command can be used.	●	●		
rc	Error	266	An attempt to send NMI by BMC due to failure of resource(%1) activation failed.	An attempt to send NMI was made by BMC because resource %1 could not be activated, but this attempt failed.	Check whether the hwreset command can be used.	●	●		
rc	Info	280	System panic by sysrq is requested since deactivating resource(%1) failed.	A system panic by sysrq has been requested because resource %1 deactivation failed.	Troubleshoot according to the group resource message.	●	●		
rc	Info	281	System reset by keepalive driver is requested since deactivating resource(%1) failed.	A system reset by the keepalive driver has been requested because resource %1 deactivation failed.	Troubleshoot according to the group resource message.	●	●		
rc	Info	282	System panic by keepalive driver is requested since deactivating resource(%1) failed.	A system panic by the keepalive driver has been requested because resource %1 deactivation failed.	Troubleshoot according to the group resource message.	●	●		
rc	Info	283	System reset by BMC is requested since deactivating resource(%1) failed.	A system reset by BMC has been requested because resource %1 deactivation failed.	Troubleshoot according to the group resource message.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rc	Info	284	System power down by BMC is requested since deactivating resource(%1) failed.	A system power down by BMC has been requested because resource %1 deactivation failed.	Troubleshoot according to the group resource message.	●	●		
rc	Info	285	System power cycle by BMC is requested since deactivating resource(%1) failed.	A system power cycle by BMC has been requested because resource %1 deactivation failed.	Troubleshoot according to the group resource message.	●	●		
rc	Info	286	Sending NMI by BMC is requested since deactivating resource(%1) failed.	NMI transmission by BMC has been requested because resource %1 deactivation failed.	Troubleshoot according to the group resource message.	●	●		
rc	Error	300	An attempt to panic system by sysrq due to failure of resource(%1) deactivation failed.	An attempt to panic the system was made by sysrq because resource %1 could not be deactivated, but this attempt failed.	Check whether the system is set up so that it can be used by sysrq.	●	●		
rc	Error	301	An attempt to reset system by keepalive driver due to failure of resource(%1) deactivation failed.	An attempt to reset the system was made by the keepalive driver because resource %1 could not be deactivated, but this attempt failed.	Check whether the keepalive driver can be used in this environment.	●	●		
rc	Error	302	An attempt to panic system by keepalive driver due to failure of resource(%1) deactivation failed.	An attempt to panic the system was made by the keepalive driver because resource %1 could not be deactivated, but this attempt failed.	Check whether the keepalive driver can be used in this environment.	●	●		
rc	Error	303	An attempt to reset system by BMC due to failure of resource(%1) deactivation failed.	An attempt to reset the system was made by BMC because resource %1 could not be deactivated, but this attempt failed.	Check whether the hwreset command can be used.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rc	Error	304	An attempt to power down system by BMC due to failure of resource(%1) deactivation failed.	An attempt to power down the system was made by BMC because resource %1 could not be deactivated, but this attempt failed.	Check whether the hwreset command can be used.	●	●		
rc	Error	305	An attempt to power cycle system by BMC due to failure of resource(%1) deactivation failed.	An attempt to power cycle the system was made by BMC because resource %1 could not be deactivated, but this attempt failed.	Check whether the hwreset command can be used.	●	●		
rc	Error	306	An attempt to send NMI by BMC due to failure of resource(%1) deactivation failed.	An attempt to send NMI was made by BMC because resource %1 could not be deactivated, but this attempt failed.	Check whether the hwreset command can be used.	●	●		
rc	Error	340	Group start has been cancelled because waiting for group %1 to start has failed.	An error has occurred while waiting for the group to start.	Check the following possible causes: memory shortage or OS resource insufficiency.	●	●		
rc	Info	400	System power down by BMC is requested. (destination server : %1)	A system power down by BMC has been requested. (Target server: %1)	-	●	●		
rc	Info	401	System power cycle by BMC is requested. (destination server : %1)	A system power cycle by BMC has been requested. (Target server: %1)	-	●	●		
rc	Info	402	System reset by BMC is requested. (destination server : %1)	A system reset by BMC has been requested. (Target server: %1)	-	●	●		
rc	Info	403	Sending NMI by BMC is requested. (destination server : %1)	NMI sending by BMC has been requested. (Target server: %1)	-	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rc	Info	410	Forced stop of virtual machine is requested. (destination server : %s)	Forced stop of a virtual machine is requested. (Target server: %1)	-	●	●		
rc	Error	420	An attempt to power down system by BMC failed. (destination server : %1)	An attempt to power down the system by BMC has failed. (Target server: %1)	Check whether the ipmitool or hwreset command can be used.	●	●		
rc	Error	421	An attempt to power cycle system by BMC failed. (destination server : %1)	An attempt to power cycle the system by BMC has failed. (Target server: %1)	Check whether the ipmitool or hwreset command can be used.	●	●		
rc	Error	422	An attempt to reset system by BMC failed. (destination server : %1)	An attempt to reset the system by BMC has failed. (Target server: %1)	Check whether the ipmitool or hwreset command can be used.	●	●		
rc	Error	423	An attempt to send NMI by BMC failed. (destination server : %1)	An attempt to send NMI by BMC has failed. (Target server: %1)	Check whether the ipmitool or hwreset command can be used.	●	●		
rc	Error	430	An attempt to force stop virtual machine failed. (destination server : %s)	Forced stop of a virtual machine is requested, but this request failed. (Target server: %1)	Check whether VMware vSphere CLI can be used.	●	●		
rc	Warning	441	Waiting for group %1 to stop has failed. However, group stop continues.	An error has occurred while waiting for the group to stop.	Check the following possible causes: memory shortage or OS resource insufficiency.	●	●		
rc	Warning	500	Since there is no other normally running server, the final action for an activation error of group resource %1 was suppressed.	Suppression of final action for activation error.	-	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rc	Warning	501	Since there is no other normally running server, the final action for a deactivation error of group resource %1 was suppressed.	Suppression of final action for deactivation error.	-	●	●		
rm	Info	1	Monitoring %1 has started.	%1 monitoring has started.	-	●	●		
rm	Info	2	Monitoring %1 has stopped.	%1 monitoring has stopped.	-	●	●		
rm	Info	3	%1 is not monitored by this server.	%1 is not monitored by this server.	-	●	●		
rm	Warning	4	Warn monitoring %1. (%2 : %3)	There is a warning about %1 monitoring.	See "Details about monitor resource errors" on page 213. If a monitor resource is preparing for monitoring, the following message may be set in (). No action is required for this message. (100 : not ready for monitoring.)	●	●		
rm	Warning	5	The maximum number of monitor resources has been exceeded. (registered resource is %1)	The maximum number of monitor resources has been exceeded.	Check the configuration data by using the Builder.	●	●		
rm	Warning	6	Monitor configuration of %1 is invalid. (%2 : %3)	The monitor configuration of %1 is invalid.	Check the configuration data by using the Builder.	●	●		
rm	Error	7	Failed to start monitoring %1.	%1 monitoring could not be started.	Memory or OS resources may not be sufficient. Check them.	●	●	●	●
rm	Error	8	Failed to stop monitoring %1.	%1 monitoring could not be stopped.	Memory or OS resources may not be sufficient. Check them.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rm	Error	9	Detected an error in monitoring %1. (%2 : %3)	An error was detected during %1 monitoring.	See "Details about monitor resource errors" on page 213. If a monitoring timeout is detected, the following message is specified in the parentheses: (99 : Monitor was timeout.) If Dummy Failure is enabled, the following message is set in (). No action is needed in the latter case. (201 : Monitor failed for failure verification.) If no response is returned from a monitor resource for a certain period of time, the following message is set in (). (202: couldn't receive reply from monitor resource in time.)	●	●	●	●
rm	Info	10	%1 is not monitored.	%1 is not being monitored.	-	●	●		
rm / mm	Info	12	Recovery target %1 has stopped because an error was detected in monitoring %2.	Recovery target %1 has been stopped because an error was detected during %2 monitoring.	-	●	●		
rm / mm	Info	13	Recovery target %1 has restarted because an error was detected in monitoring %2.	Recovery target %1 has been restarted because an error was detected during %2 monitoring.	-	●	●		
rm / mm	Info	14	Recovery target %1 failed over because an error was detected in monitoring %2.	Recovery target %1 has been failed over because an error was detected during %2 monitoring.	-	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rm / mm	Info	15	Stopping the cluster has been required because an error was detected in monitoring %1.	Stopping the server has been requested because an error was detected during %1 monitoring.	-	●	●		
rm / mm	Info	16	Stopping the system has been required because an error was detected in monitoring %1.	Stopping the system has been requested because an error was detected during %1 monitoring.	-	●	●		
rm / mm	Info	17	Rebooting the system has been required because an error was detected in monitoring %1.	Rebooting the system has been requested because an error was detected during %1 monitoring.	-	●	●		
rm / mm	Error	18	Attempted to stop the recovery target %1 due to the error detected in monitoring %2, but failed.	An attempt to stop recovery target %1 was made because an error was detected during %2 monitoring, but this attempt failed.	Check the status of resource %1.	●	●		
rm / mm	Error	19	Attempted to restart the recovery target %1 due to the error detected in monitoring %2, but failed.	An attempt to restart recovery target %1 was made because an error was detected during %2 monitoring, but this attempt failed.	Check the status of resource %1.	●	●		
rm / mm	Error	20	Attempted to fail over %1 due to the error detected in monitoring %2, but failed.	An attempt to fail over recovery target %1 was made because an error was detected during %2 monitoring, but this attempt failed.	Check the status of resource %1.	●	●		
rm / mm	Error	21	Attempted to stop the cluster due to the error detected in monitoring %1, but failed.	An attempt to stop the server was made because an error was detected during %1 monitoring, but this attempt failed.	Memory or OS resources may not be sufficient. Check them.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rm / mm	Error	22	Attempted to stop the system due to the error detected in monitoring %1, but failed.	An attempt to stop the system was made because an error was detected during %1 monitoring, but this attempt failed.	Memory or OS resources may not be sufficient. Check them.	●	●		
rm / mm	Error	23	Attempted to reboot the system due to the error detected in monitoring %1, but failed.	An attempt to reboot the system was made because an error was detected during %1 monitoring, but this attempt failed.	Memory or OS resources may not be sufficient. Check them.	●	●		
rm	Error	24	The group of %1 resource is unknown.	The group of resource %1 is unknown.	The configuration data may be incorrect. Check them.	●	●		
rm / mm	Warning	25	Recovery will not be executed since the recovery target %1 is not active.	Recovery will not be performed because recovery target %1 is inactive.	-	●	●		
rm / mm	Info	26	%1 status changed from error to normal.	%1 monitoring has changed from "error" to "normal".	-	●	●		
rm / mm	Info	27	%1 status changed from error or normal to unknown.	%1 monitoring has changed from "error" or "normal" to "unknown".	Memory or OS resources may not be sufficient. Check them.	●	●		
rm	Error	28	Initialization error of monitor process. (%1 : %2)	A monitor process initialization error occurred.	Memory or OS resources may not be sufficient. Check them.	●	●		
rm	Info	29	Monitoring %1 was suspended.	%1 monitoring has been suspended.	-	●	●		
rm	Info	30	Monitoring %1 was resumed.	%1 monitoring has been resumed.	-	●	●		
rm	Info	31	All monitors were suspended.	All monitors were suspended.	-	●	●		
rm	Info	32	All monitors were resumed.	All monitors were resumed.	-	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rm / mm	Info	35	System panic by sysrq has been required because an error was detected in monitoring %1.	A system panic by sysrq has been requested because an error was detected during %1 monitoring.	-	●	●		
rm / mm	Error	36	Attempted to panic system by sysrq due to the error detected in monitoring %1, but failed.	An attempt to panic the system was made by sysrq because an error was detected during %1 monitoring, but this attempt failed.	Check whether the system is set up so that it can be used by sysrq.	●	●		
rm / mm	Info	37	System reset by keepalive driver has been required because an error was detected in monitoring %1.	A system reset by the keepalive driver has been requested because an error was detected during %1 monitoring.	-	●	●		
rm / mm	Error	38	Attempted to reset system by keepalive driver due to the error detected in monitoring %1, but failed.	An attempt to reset the system was made by the keepalive driver because an error was detected during %1 monitoring, but this attempt failed.	Check whether the keepalive driver can be used in this environment.	●	●		
rm / mm	Info	39	System panic by keepalive driver has been required because an error was detected in monitoring %1.	A system panic by the keepalive driver has been requested because an error was detected during %1 monitoring.	-	●	●		
rm / mm	Error	40	Attempted to panic system by keepalive driver due to the error detected in monitoring %1, but failed.	An attempt to panic the system was made by the keepalive driver because an error was detected during %1 monitoring, but this attempt failed.	Check whether the keepalive driver can be used in this environment.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rm / mm	Info	41	System reset by BMC has been required because an error was detected in monitoring %1.	A system reset by BMC has been requested because an error was detected during %1 monitoring.	-	●	●		
rm / mm	Error	42	Attempted to reset system by BMC due to the error detected in monitoring %1, but failed.	An attempt to reset the system was made by BMC because an error was detected during %1 monitoring, but this attempt failed.	Check whether the hwreset command can be used.	●	●		
rm / mm	Info	43	System power down by BMC has been required because an error was detected in monitoring %1.	A system power down by BMC has been requested because an error was detected during %1 monitoring.	-	●	●		
rm / mm	Error	44	Attempted to power down system by BMC due to the error detected in monitoring %1, but failed.	An attempt to power down the system was made by BMC because an error was detected during %1 monitoring, but this attempt failed.	Check whether the hwreset command can be used.	●	●		
rm / mm	Info	45	System power cycle by BMC has been required because an error was detected in monitoring %1.	A system power cycle by BMC has been requested because an error was detected during %1 monitoring.	-	●	●		
rm / mm	Error	46	Attempted to power cycle system by BMC due to the error detected in monitoring %1, but failed.	An attempt to power cycle the system was made by BMC because an error was detected during %1 monitoring, but this attempt failed.	Check whether the hwreset command can be used.	●	●		
rm / mm	Info	47	NMI send by BMC has been required because an error was detected in monitoring %1.	NMI of the system by BMC has been required because an error was detected in monitoring %1.	-	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rm / mm	Error	48	Attempted to send NMI by BMC due to the error detected in monitoring %1, but failed.	Attempted to NMI of the system by BMC due to the error detected in monitoring %1, but failed.	Check if the ipmitool command, the hwreset command or the ireset command can be used.	●	●		
rm	Info	50	The number of licenses is %1. (%2)	The number of server licenses is %1.	-	●	●		
rm	Info	51	The trial license is effective until %.4s/%.2s/ %.2s. (%1)	The trial license is effective until %1.	-	●	●		
rm	Warning	52	The number of licenses is insufficient. The number of insufficient licenses is %1. (%2)	There are insufficient licenses.	Purchase and register necessary licenses.	●	●		
rm	Error	53	The license is not registered. (%1)	The license is not registered.	Purchase and register the license.	●	●		
rm	Error	54	The trial license has expired in %.4s/%.2s/%.2 s. (%1)	The trial license has expired.	Register a valid license.	●	●		
rm	Error	55	The registered license is invalid. (%1)	The registered license is invalid.	Register a valid license.	●	●		
rm	Error	56	The registered license is unknown. (%1)	The registered license is unknown.	Register a valid license.	●	●		
rm	Error	57	Stopping the cluster is required since license (%1) is invalid.	Stopping the server has been requested because the license is invalid.	Register a valid license.	●	●	●	●
rm	Error	58	Stopping the cluster due to invalid license (%1) failed.	The server could not be stopped because the license is invalid.	Register a valid license.	●	●		
rm	Error	59	The trial license is valid from %.4s/%.2s/ %.2s. (%1)	The trial license has not yet expired.	Register a valid license.	●	●		
rm	Warning	71	Detected a monitor delay in monitoring %1. (timeout=%2*%3 actual-time=%4	A monitoring delay was detected during %1 monitoring. The current timeout	Check the load on the server where monitoring delay was detected and reduce the load.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
			delay warning rate=%5)	value is %2 (seconds) x %3 (ticks per second). The actual measurement value at delay detection has reached %4 (ticks), exceeding the delay warning rate %5 (%).	If monitoring timeouts are detected, the monitoring timeout time must be extended.				
rm / mm	Info	81	Script before %1 upon failure in monitor resource %2 started.	The script executed before the final action when a failure occurs for monitor resource %1 has been started.	-	●	●		
rm / mm	Info	82	Script before %1 upon failure in monitor resource %2 completed.	The script executed before the final action when a failure occurs for monitor resource %1 has been completed.	-	●	●		
rm / mm	Error	83	Script before %1 upon failure in monitor resource %2 failed.	The script executed before the final action when a failure occurs for monitor resource %1 has failed.	Check the cause of the script failure and take measures.	●	●		
rm	Warning	100	Restart count exceeded the maximum of %1. Final action of monitoring %2 will not be executed.	The final action of %2 has not been executed because restart count exceeded the maximum value %1.	-	●	●		
rm	Warning	120	The virtual machine (%1) has been migrated by an external operation.	The virtual machine managed by the resource %1 has been migrated by an external operation.	-	●	●		
rm	Warning	121	The virtual machine (%1) has been started by an external operation.	The virtual machine managed by the resource %1 has been started by an external operation.	-	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rm	Info	130	Collecting detailed information was triggered by error detection when monitoring monitor resource $1.	Collecting detailed information was triggered by error detection when monitoring monitor resource $1. The timeout time is %2 seconds.	-	●	●		
rm	Info	131	The collection of detailed information triggered by error detection when monitoring monitor resource $1 has completed.	The collection of detailed information triggered by error detection when monitoring monitor resource $1 has completed.	-	●	●		
rm	Warning	132	The collection of detailed information triggered by error detection when monitoring monitor resource $1 has failed.	The collection of detailed information triggered by error detection when monitoring monitor resource $1 has failed.	-	●	●		
rm	Info	140	Process %1 has started.	Process %1 has started.	-	●	●		
rm	Warning	141	Process %1 has restarted.	Process %1 has restarted.	-	●	●		
rm	Warning	142	Process %1 does not exist.	Process %1 does not exist.	-	●	●		
rm	Abnormal	143	Process %1 was restarted %2 times, but terminated abnormally.	Process %1 was restarted %2 times, but terminated abnormally.	Check the following possible causes: memory shortage or OS resource insufficiency.	●	●		
rm	Abnormal	150	The cluster is stopped since process %1 was terminated abnormally.	The cluster is stopped since process %1 was terminated abnormally.	Check the following possible causes: memory shortage or OS resource insufficiency.	●	●		
rm	Error	151	The server is shut down since process %1 was terminated abnormally.	The server is shut down since process %1 was terminated abnormally.	Check the following possible causes: memory shortage or OS resource insufficiency.	●	●		
rm	Error	152	The server is restarted since process %1 was terminated abnormally.	The server is restarted since process %1 was terminated abnormally.	Check the following possible causes: memory shortage or OS resource insufficiency.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rm	Error	160	Monitor resource %1 cannot be controlled since the license is invalid.	Monitor resource %1 cannot be controlled since the license is invalid.	Register a valid license.	●	●		
rm	Normal	170	Recovery script has been executed since an error was detected in monitoring %1.	Recovery script has been executed since an error was detected in monitoring %1.	-	●	●		
rm	Error	171	An attempt was made to execute the recovery script due to a %1 monitoring failure, but failed.	An attempt was made to execute the recovery script due to a %1 monitoring failure, but failed.	Check the cause of the recovery script failure and take appropriate action.	●	●		
rm	Info	180	Dummy Failure of monitor resource %1 is enabled.	Dummy Failure of monitor resource %1 is enabled.	-	●	●		
rm	Info	181	Dummy Failure of monitor resource %1 is disabled.	Dummy Failure of monitor resource %1 is disabled.	-	●	●		
rm	Info	182	Dummy Failure of all monitor will be enabled.	Dummy Failure of all monitor will be enabled.	-	●	●		
rm	Info	183	Dummy Failure of all monitor will be disabled.	Dummy Failure of all monitor will be disabled.		●	●		
rm	Warning	184	An attempt was made to enable Dummy Failure of monitor resource %1, but failed.	An attempt was made to enable Dummy Failure of monitor resource %1, but failed.	Check whether monitor resource %1 corresponds to Dummy Failure.	●	●		
rm	Warning	185	An attempt was made to disable Dummy Failure of monitor resource %1, but failed.	An attempt was made to disable Dummy Failure of monitor resource %1, but failed.	Check whether monitor resource %1 corresponds to Dummy Failure.	●	●		
rm	Info	190	Recovery action caused by monitor resource error is disabled.	Recovery action caused by monitor resource error is disabled.	-	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
rm	Info	191	Recovery action caused by monitor resource error is enabled.	Recovery action caused by monitor resource error is enabled.	-	●	●		
rm	Warning	192	Ignored the recovery action in monitoring %1 because recovery action caused by monitor resource error is disabled.	Ignored the recovery action in monitoring %1 because recovery action caused by monitor resource error is disabled.	-	●	●		
rm	Warning	200	Since there is no other normally running server, the final action(%1) for the error detection of monitor resource %2 was suppressed.	Suppression of final action for error detection.	-	●	●		
mm	Info	901	Message monitor has been started.	Message monitor (external linkage monitor module) has been started.	-	●	●		
mm	Error	902	Failed to initialize message monitor. (%1 : %2)	Message monitor (external linkage monitor module) could not be initialized.	Check the following possible causes: memory shortage or OS resource insufficiency.	●	●		
mm	Warning	903	An error of %1 type and %2 device has been detected. (%3)	External error %3 of category %1 and keyword %2 has been received.	-	●	●		
mm	Error	905	An error has been detected in monitoring %1. (%2)	An error was detected in monitor resource %1 monitoring.	Take appropriate action according to the %2 message.	●	●	●	●
mm	Error	906	Message monitor was terminated abnormally.	Message monitor (external linkage monitor module) has been terminated abnormally.	Check the following possible causes: memory shortage or OS resource insufficiency.	●	●		
mm	Error	907	Failed to execute action. (%1)	Executing recovery action has failed.	Check the following possible causes: memory shortage or OS resource insufficiency.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
mm	Info	908	The system will be stopped.	The OS will be shut down.	-	●	●		
mm	Info	909	The cluster daemon will be stopped.	The cluster will be stopped.	-	●	●		
mm	Info	910	The system will be rebooted.	The OS will be rebooted.	-	●	●		
mm	Info	911	Message monitor will be restarted.	Message monitor (external linkage monitor module) will be restarted.	-	●	●		
mm	Info	912	Received a message by SNMP Trap from external. (%1 : %2)	Received a message by SNMP Trap from external.	-	●	●		
trnsv	Error	1	There was a notification from external (IP=%1), but it was denied.	The notification from %1 was received, but it was denied.	-	●	●		
trnsv	Info	10	There was a notification (%1) from external (IP=%2).	The notification (%1) from %2 was received.	-	●	●		
trnsv	Info	20	Recovery action (%1) of monitoring %2 has been executed because a notification arrived from external.	Recovery action when an error is detected (%1) of the monitor resource %2 has been executed due to an notification from external arrived.	-	●	●		
trnsv	Info	21	Recovery action (%1) of monitoring %2 has been completed.	Execution of recovery action when an error is detected (%1) of the monitor resource %2 succeeded.	-	●	●		
trnsv	Error	22	Attempted to recovery action (%1) of monitoring %2, but it failed.	Executed recovery action when an error is detected (%1) of the monitor resource %2, but it failed.	Check if recovery action when an error is detected is executable.	●	●		
trnsv	Info	30	Action (%1) has been completed.	Execution of action (%1) succeeded.	-	●	●		
trnsv	Error	31	Attempted to execute action (%1), but it failed.	Executed action (%1), but it failed.	Check if recovery action when an error is detected is executable.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
trnsv	Info	40	Script before action of monitoring %1 has been executed.	Script before action when an error is detected of the monitor resource (%1) has been executed.	-	●			
trnsv	Info	41	Script before action of monitoring %1 has been completed.	Execution of script before action when an error is detected of the monitor resource (%1) succeeded.	-	●			
trnsv	Error	42	Attempted to execute script before action of monitoring %1, but it failed.	Executed script before action when an error is detected of the monitor resource (%1), but it failed.	Check if script before action when an error is detected is executable.	●			
lanhb	Warning	71	Heartbeats sent from HB resource %1 of server %2 are delayed.(timeout =%3*%4 actual-time=%5 delay warning rate=%6)	A delay occurred in the heartbeat from HB resource %1 of server %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	Check the load on server %2 and reduce the load.	●			
					If an HB timeout occurs, the HB timeout time must be extended.		●		
lanhb	Warning	72	Heartbeats sent from HB resource %1 are delayed.(server= %2	A delay occurred during the heartbeat transmission of HB resource %1.	Check the load on the server to which the delay warning was issued and reduce the load.				

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
			timeout=%3*%4 actual-time=%5 delay warning rate=%6)	The transmission destination server is %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	If an HB timeout occurs, the HB timeout time must be extended.				
lanhb	Warning	73	Heartbeats received by HB resource %1 are delayed.(server= %2 timeout=%3*%4 actual-time=%5 delay warning rate=%6)	A delay occurred during the heartbeat reception of HB resource %1. The transmission source server is %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	Check the load on the server to which the delay warning was issued and reduce the load.				
					If an HB timeout occurs, the HB timeout time must be extended.				
lankhb	Warning	71	Heartbeats sent from HB resource %1 of server %2 are delayed.(timeout =%3*%4 actual-time=%5 delay warning rate=%6)	A delay occurred in the heartbeat from HB resource %1 of server %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	Check the load on server %2 and reduce the load.	•	•		
					If an HB timeout occurs, the HB timeout time must be extended.				

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
lankhb	Warning	73	Heartbeats received from HB resource %1 is delayed.(timeout =%2*%3 actual-time=%4 delay warning rate=%5)	A delay occurred during the heartbeat reception of HB resource %1. The transmission source server is %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	Check the load on the server to which the delay warning was issued and reduce the load. If an HB timeout occurs, the HB timeout time must be extended.				
diskhb	Error	10	Device(%1) of resource(%2) does not exist.	The specified device does not exist.	Check the configuration data.	●	●		
diskhb	Error	11	Device(%1) of resource(%2) is not a block device.	The specified device does not exist.	Check the configuration data.	●	●		
diskhb	Error	12	Raw device(%1) of resource(%2) does not exist.	The specified device does not exist.	Check the configuration data.	●	●		
diskhb	Error	13	Binding device(%1) of resource(%2) to raw device(%3) failed.	The specified device does not exist.	Check the configuration data.	●	●		
diskhb	Error	14	Raw device(%1) of resource(%2) has already been bound to other device.	Raw device %1 of resource %2 is bound to another device.	Specify an unused raw device.	●	●		
diskhb	Error	15	File system exists on device(%1) of resource(%2).	A file system exists in device %1 of resource %2.	To use device %1, delete the file system.	●	●		
diskhb	Info	20	Resource %1 recovered from initialization error.	Resource %1 has recovered from the initialization error.	-	●	●		
diskhb	Warning	71	Heartbeats sent from HB resource %1 of	A delay occurred in the heartbeat from HB	Check the load on server %2 and reduce the load.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
			server %2 are delayed.(timeout =%3*%4 actual-time=%5 delay warning rate=%6)	resource %1 of server %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	If an HB timeout occurs, the HB timeout time must be extended.				
diskhb	Warning	72	Heartbeat write of HB resource %1 is delayed.(server= %2 timeout=%3*%4 actual-time=%5 delay warning rate=%6).	A delay occurred during the heartbeat write of HB resource %1. The write destination server is %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	Check the load on the server to which the delay warning was issued and reduce the load.				
					If an HB timeout occurs, the HB timeout time must be extended.				
diskhb	Warning	73	Heartbeat read of HB resource %1 is delayed.(server= %2 timeout=%3*%4 actual-time=%5 delay warning rate=%6)	A delay occurred during the heartbeat read of HB resource %1. The read source server is %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	Check the load on the server to which the delay warning was issued and reduce the load.				
					If an HB timeout occurs, the HB timeout time must be extended.				

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
comhb	Info	1	Device (%1) does not exist.	The specified device does not exist.	Check the configuration data.	●	●		
comhb	Info	2	Failed to open the device (%1).	The specified device could not be opened.	Memory or OS resources may not be sufficient. Check them.	●	●		
comhb	Warning	71	Heartbeats sent from HB resource %1 of server %2 are delayed.(timeout =%3*%4 actual-time=%5 delay warning rate=%6)	A delay occurred in the heartbeat from HB resource %1 of server %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	Check the load on server %2 and reduce the load.	●			
					If an HB timeout occurs, the HB timeout time must be extended.		●		
comhb	Warning	72	Heartbeat write of HB resource %1 is delayed.(server= %2 timeout=%3*%4 actual-time=%5 delay warning rate=%6).	A delay occurred during the heartbeat write of HB resource %1. The transmission destination server is %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	Check the load on the server to which the delay warning was issued and reduce the load.				
					If an HB timeout occurs, the HB timeout time must be extended.				
comhb	Warning	73	Heartbeat read of HB resource %1 is delayed.(server= %2	A delay occurred during the heartbeat read of HB resource %1. The transmission	Check the load on the server to which the delay warning was issued and reduce the load.				

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
			timeout=%3*%4 actual-time=%5 delay warning rate=%6)	source server is %2. The current timeout value is "%3 (seconds) x %4 (ticks per second)". The actual measurement value when the delay occurred became %5 (ticks), exceeding the delay warning percentage %6 (%).	If an HB timeout occurs, the HB timeout time must be extended.				
bmchb	Error	10	Failed to initialize to BMC.	BMC initialization failed.	Check whether the hardware can use the BMC linkage function.	●	●		
bmchb	Warning	71	Heartbeats sent from HB resource %1 of server %2 are delayed.(timeout =%3*%4 actual-time=%5 delay warning rate=%6)	Heartbeats from HB resource %1 of server %2 are delayed. The current timeout value is %3 (second) x %4 (tick count per second). The actual measurement value at delay generation is %5 (tick count) and exceeded the delay warning rate %6 (%).	Check the load status of the server %2 and remove the load.	●	●		
					If an HB timeout occurs, extend it.				
monp	Error	1	An error occurred when initializing monitored process %1. (status=%2)	An initialization error occurred in monitored process %1.	Memory or OS resources might not be sufficient, or the configuration data might be inconsistent. Check them.	●	●		
					If the configuration data is not registered, the process message below is output. This message output, however, does not indicate a problem.				
					+ mdagnt				
					+ webmgr				

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
					+ webalert				
monp	Error	2	Monitor target process %1 terminated abnormally. (status=%2)	Monitor target process %1 terminated abnormally.	Memory or OS resources may not be sufficient. Check them.	●	●		
monp	Info	3	Monitor target process %1 will be restarted.	Monitor target process %1 will now be restarted.	-	●	●		
monp	Info	4	The cluster daemon will be stopped since the monitor target process %1 terminated abnormally.	The server will now be stopped because monitor target process %1 terminated abnormally.	-	●	●		
monp	Error	5	Attempted to stop the cluster daemon, but failed.	Stopping the server has failed.	The server might not be running or memory or OS resources might not be sufficient. Check them.	●	●		
monp	Info	6	The system will be stopped since the monitor target process %1 terminated abnormally.	The system will now stop because monitor target process %1 terminated abnormally.	-	●	●		
monp	Error	7	Attempted to stop the system, but failed. (status=%#x)	Stopping the system has failed.	The server might not be running or memory or OS resources might not be sufficient. Check them.	●	●		
monp	Info	8	System will be rebooted since monitor target process %1 terminated abnormally.	The system will now be rebooted because monitor target process %1 terminated abnormally.	-	●	●		
monp	Error	9	Attempted to reboot the system, but failed. (status=%#x)	Rebooting the system has failed.	The server might not be running or memory or OS resources might not be sufficient. Check them.	●	●		
disk	Info	10	%1 of %2 has started.	Command %1 of device %2 has been started.	-	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
disk	Info	11	%1 of %2 was successful.	Command %1 of device %2 has succeeded.	-	●	●		
disk	Error	12	%1 of %2 failed (ret=%3).	Command %1 of device %2 has failed with the return value %3.	Refer to the manual for command %1.	●	●		
disk	Warning	13	Executing %1 of %2 with %3 option is necessary. Execute the command manually.	It is necessary to specify option %3 and execute command %1 of device %2. Manually execute the command.	Manually specify option %3 and execute command %1.	●	●		
disk	Info	14	%1 of %2 with %3 option has started.	Option %3 has been specified and command %1 of device %2 has been started.	-	●	●		
cl	Info	1	There was a request to start %1 from the %2.	A request to start %1 has been issued from %2.	-	●	●		
cl	Info	2	There was a request to stop %1 from the %2.	A request to stop %1 has been issued from %2.	-	●	●		
cl	Info	3	There was a request to suspend %1 from the %2.	A request to suspend %1 has been issued from %2.	-	●	●		
cl	Info	4	There was a request to resume %s from the %s.	A request to resume %1 has been issued from %2.	-	●	●		
cl	Error	11	A request to start %1 failed(%2).	A request to start %1 has failed.	Check the server status.	●	●		
cl	Error	12	A request to stop %1 failed(%2).	A request to stop %1 has failed.	Check the server status.	●	●		
cl	Error	13	A request to suspend %1 failed(%2).	A request to suspend %1 has failed.	Check the server status.	●	●		
cl	Error	14	A request to resume %1 failed(%2).	A request to resume %1 has failed.	Check the server status.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
cl	Error	15	A request to %1 cluster failed on some servers(%2).	Request %1 has failed on some servers.	Check the server statuses.	●	●		
cl	Error	16	A request to start %1 failed on some servers(%2).	Starting %1 failed on some servers.	Check the status of %1.	●	●		
cl	Error	17	A request to stop %1 failed on some servers(%2).	Stopping %1 failed on some servers.	Check the status of %1.	●	●		
cl	Warning	18	Automatic start is suspended because the cluster service was not stopped according to the normal procedure.	Automatic start has been suspended since **Automatic startup after the system down** was not set.	To start the cluster service, use the WebManager or clpcl command.	●	●		
cl	Warning	20	A request to start %1 failed because cluster is running(%2).	Starting %1 has failed since the cluster is running.	Check the status of the cluster.	●	●		
cl	Warning	21	A request to stop %1 failed because cluster is running(%2).	Stopping %1 has failed since the cluster is running.	Check the status of the cluster.	●	●		
mail	Error	1	The license is not registered. (%1)	Purchase and register the license.	-	●	●		
mail	Error	2	The trial license has expired in %1. (%2)	Register a valid license.	-	●	●		
mail	Error	3	The registered license is invalid. (%1)	Register a valid license.	-	●	●		
mail	Error	4	The registered license is unknown. (%1)	Register a valid license.	-	●	●		
mail	Error	5	mail failed(%s).(SMTP server: %s)	Mail reporting has failed.	Check if an error has occurred on the SMTP server, or a trouble occurred in communicating with the SMTP server.	●	●		
mail	Info	6	mail successed.(SMTP server: %s)	mail succeed.	-	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
userw	Warning	1	Detected a monitor delay in monitoring %1. (timeout=%2*%3 actual-time=%4 delay warning rate=%5)	A monitoring delay was detected during %1 monitoring. The current timeout value is "%2 (seconds) x %3 (ticks per second)". The actual measurement value when the delay was detected became %4 (ticks), exceeding the delay warning percentage %5 (%).	-	●	●		
vipw	Warning	1	Detected a monitor delay in monitoring %1. (timeout=%2*%3 actual-time=%4 delay warning rate=%5)	A monitoring delay was detected during %1 monitoring. The current timeout value is "%2 (seconds) x %3 (ticks per second)". The actual measurement value when the delay was detected became %4 (ticks), exceeding the delay warning percentage %5 (%).	-	●	●		

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

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
apisv	Info	4	There was a request to suspend cluster from the %1(IP=%2).	A request to suspend the server has been issued from %1.	-	●	●		
apisv	Info	10	There was a request to stop server from the %1(IP=%2).	A request to stop the server has been issued from %1.	-	●	●		
apisv	Info	11	There was a request to shutdown server from the %1(IP=%2).	A request to shut down the server has been issued from %1.	-	●	●		
apisv	Info	12	There was a request to reboot server from the %1(IP=%2).	A request to reboot the server has been issued from %1.	-	●	●		
apisv	Info	30	There was a request to start group(%1) from the %2(IP=%3).	A request to start group %1 has been issued from %2.	-	●	●		
apisv	Info	31	There was a request to start all groups from the %1(IP=%2).	A request to start all groups has been issued from %1.	-	●	●		
apisv	Info	32	There was a request to stop group(%1) from the %2(IP=%3).	A request to stop group %1 has been issued from %2.	-	●	●		
apisv	Info	33	There was a request to stop all groups from the %1(IP=%2).	A request to stop all groups has been issued from %1.	-	●	●		
apisv	Info	34	There was a request to restart group(%1) from the %2(IP=%3).	A request to restart group %1 has been issued from %2.	-	●	●		
apisv	Info	35	There was a request to restart all groups from the %1(IP=%2).	A request to restart all groups has been issued from %1.	-	●	●		
apisv	Info	36	There was a request to move group(%1) from the %2(IP=%3).	A request to move group %1 has been issued from %2.	-	●	●		
apisv	Info	37	There was a request to move group from the %1(IP=%2).	A request to move a group has been issued from %1.	-	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
apisv	Info	38	There was a request to failover group(%1) from the %2(IP=%3).	A request to fail over group %1 has been issued from %2.	-	●	●		
apisv	Info	39	There was a request to failover group from the %1(IP=%2).	A request to fail over a group has been issued from %1.	-	●	●		
apisv	Info	40	There was a request to migrate group(%1) from the %2(IP=%3).	A request to migrate group %1 has been issued from %2.	-	●	●		
apisv	Info	41	There was a request to migrate group from the %1(IP=%2).	A request to migrate a group has been issued from %2.	-	●	●		
apisv	Info	42	There was a request to failover all groups from the %1(IP=%2).	A request to provide failover for all groups was issued from %2.	-	●	●		
apisv	Info	43	There was a request to cancel waiting for the dependence destination group of group the %1 was issued from %2.	A request to cancel waiting for the dependence destination group of group %1 was issued from %2.	-	●	●		
apisv	Info	50	There was a request to start resource(%1) from the %2(IP=%3).	A request to start resource %1 has been issued from %2.	-	●	●		
apisv	Info	51	There was a request to start all resources from the %1(IP=%2).	A request to start all resources has been issued from %1.	-	●	●		
apisv	Info	52	There was a request to stop resource(%1) from the %2(IP=%3).	A request to stop resource %1 has been issued from %2.	-	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
apisv	Info	53	There was a request to stop all resources from the %1(IP=%2).	A request to stop all resources has been issued from %1.	-	●	●		
apisv	Info	54	There was a request to restart resource(%1) from the %2(IP=%3).	A request to restart resource %1 has been issued from %2.	-	●	●		
apisv	Info	55	There was a request to restart all resources from the %1(IP=%2).	A request to restart all resources has been issued from %1.	-	●	●		
apisv	Info	60	There was a request to suspend monitor resources from the %1(IP=%2).	A request to suspend monitor resources has been issued from %1.	-	●	●		
apisv	Info	61	There was a request to resume monitor resources from the %1(IP=%2).	A request to resume monitor resources has been issued from %1.	-	●	●		
apisv	Info	62	There was a request to enable Dummy Failure of monitor resources from the %1(IP=%2).	A request to enable Dummy Failure of monitor resource was issued from %1.	-	●	●		
apisv	Info	63	There was a request to disable Dummy Failure of monitor resources from the %1(IP=%2).	A request to disable Dummy Failure of monitor resource was issued from %1.	-	●	●		
apisv	Info	70	There was a request to set CPU frequency level from the %1(IP=%2).	A request to set a CPU frequency level has been issued from %1.	-	●	●		
apisv	Error	101	A request to stop cluster was failed(0x%08x).	A request to stop the server has failed.	Check the server status.	●	●		
apisv	Error	102	A request to shutdown cluster was failed(0x%08x).	A request to shut down the server has failed.	Check the server status.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
apisv	Error	103	A request to reboot cluster was failed(0x%08x).	A request to reboot the server has failed.	Check the server status.	●	●		
apisv	Error	104	A request to suspend cluster was failed(0x%08x).	A request to suspend the server has failed.	Check the server status.	●	●		
apisv	Error	110	A request to stop server was failed(0x%08x).	A request to stop the server has failed.	Check the status of the server.	●	●		
apisv	Error	111	A request to shutdown server was failed(0x%08x).	A request to shut down the server has failed.	Check the status of the server.	●	●		
apisv	Error	112	A request to reboot server was failed(0x%08x).	A request to reboot the server has failed.	Check the status of the server.	●	●		
apisv	Error	113	A request to server panic was failed(0x%08x).	Server panic has failed.	Check the status of the server.	●	●		
apisv	Error	114	A request to server reset was failed(0x%08x).	Server reset has failed.	Check the status of the server.	●	●		
apisv	Error	115	A request to server sysrq was failed(0x%08x).	SYSRQ panic has failed.	Check the status of the server.	●	●		
apisv	Error	116	A request to KA RESET was failed(0x%08x).	Keepalive reset has failed.	Check the status of the server.	●	●		
apisv	Error	117	A request to KA PANIC was failed(0x%08x).	Keepalive panic has failed.	Check the status of the server.	●	●		
apisv	Error	118	A request to BMC RESET was failed(0x%08x).	BMC reset has failed.	Check the status of the server.	●	●		
apisv	Error	119	A request to BMC PowerOff was failed(0x%08x).	BMC power-off has failed.	Check the status of the server.	●	●		
apisv	Error	120	A request to BMC PowerCycle was failed(0x%08x).	BMC power cycle has failed.	Check the status of the server.	●	●		
apisv	Error	121	A request to BMC NMI was failed(0x%08x).	BMC NMI has failed.	Check the status of the server.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
apisv	Error	130	A request to start group(%1) was failed(0x%08x).	A request to start group %1 has failed.	Take appropriate action according to the message output by rc indicating the unsuccessful group start.	●	●		
apisv	Error	131	A request to start all groups was failed(0x%08x).	A request to start all groups has failed.	Same as above	●	●		
apisv	Error	132	A request to stop group(%1) was failed(0x%08x).	A request to stop group %1 has failed.	Take appropriate action according to the message output by rc indicating the unsuccessful group stop.	●	●		
apisv	Error	133	A request to stop all groups was failed(0x%08x).	A request to stop all groups has failed.	Same as above	●	●		
apisv	Error	134	A request to restart group(%1) was failed(0x%08x).	Restarting group (%1) has failed.	Take appropriate action according to the group stop failure message issued by rc.	●	●		
apisv	Error	135	A request to restart all groups was failed(0x%08x).	Restarting all groups has failed.	Same as above.	●	●		
apisv	Error	136	A request to move group(%1) was failed(0x%08x).	A request to move group %1 has failed.	Take appropriate action according to the message output by rc indicating the unsuccessful group movement.	●	●		
apisv	Error	137	A request to move all groups was failed(0x%08x).	Moving all groups has failed.	Same as above.	●	●		
apisv	Error	138	A request to failover group(%1) was failed(0x%08x).	A request to fail over group %1 has failed.	Take appropriate action according to the message output by rc indicating the unsuccessful group failover.	●	●		
apisv	Error	139	A request to failover group was failed(0x%08x).	A request to fail over all groups has failed.	Same as above	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
apisv	Error	140	A request to migrate group(%1) was failed(0x%08x).	Migration of group (%1) has failed.	Take appropriate action according to the group failover failure message issued by rc.	●	●		
apisv	Error	141	A request to migrate all groups was failed(0x%08x).	Migration of all groups has failed.	Same as above.	●	●		
apisv	Error	142	A request to failover all groups was failed(0x%08x).	Failover for all groups has failed.	Same as above.	●	●		
apisv	Error	143	A request to cancel waiting for the dependency destination group of group %1 has failed(0x%08x).	Canceling waiting for the dependency destination group of group %1 has failed.	Same as above.	●	●		
apisv	Error	150	A request to start resource(%1) was failed(0x%08x).	A request to start resource %1 has failed.	Take appropriate action according to the message output by rc indicating the unsuccessful resource start.	●	●		
apisv	Error	152	A request to stop resource(%1) was failed(0x%08x).	A request to stop resource %1 has failed.	Take appropriate action according to the message output by rc indicating the unsuccessful resource stop.	●	●		
apisv	Error	154	A request to restart resource(%1) was failed(0x%08x).	A request to restart resource %1 has failed.	Take appropriate action according to the message output by rc indicating the unsuccessful resource restart.	●	●		
apisv	Error	155	A request to restart all resources was failed(0x%08x).	A request to start all resources has failed.	Same as above	●	●		
apisv	Error	160	A request to suspend monitor resource was failed(0x%08x).	A request to suspend the monitor resources has failed.	Check the status of the monitor resources.	●	●		
apisv	Error	161	A request to resume monitor resource was failed(0x%08x).	A request to resume the monitor resources has failed.	Same as above	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
apisv	Error	162	A request to enable Dummy Failure of monitor resource was failed(0x%08x).	The monitor resource failed to start Dummy Failure.	Check the status of the monitor resource.	●	●		
apisv	Error	163	A request to disable Dummy Failure of monitor resource was failed(0x%08x).	The monitor resource failed to stop Dummy Failure.	Same as above.	●	●		
apisv	Error	170	A request to set CPU frequency was failed(0x%08x).	A request to specify the CPU frequency has failed.	Take appropriate action according to the message output by rc indicating the unsuccessful CPU frequency specification.	●	●		
cfmgr	Info	1	The cluster configuration data has been uploaded by %1.	The configuration data has been uploaded.	-	●	●		
sra	Error	1	system monitor closed because reading the SG file failed.	An error occurred in reading the SG file.	Check the message separately issued.		●		
sra	Error	2	Opening an ignore file failed. file name = %1, errno = %2. %1:File name %2:errno	The SG file (%1) failed to be opened.	Restart the cluster, or execute the suspend and resume.		●		
sra	Error	3	Reading a configuration file failed.	An error occurred in reading the SG file.	Check the message separately issued.		●		
sra	Error	4	Trace log initialization failed.	The internal log file could not be initialized.	Restart the cluster, or execute the suspend and resume.		●		
sra	Error	5	Creating a daemon process failed.	An external error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.		●		
sra	Error	6	Reading a service configuration file failed.	An error occurred in reading the SG file.	Check the message separately issued.		●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
sra	Error	7	mlock() failed.	An external error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.		●		
sra	Error	8	A daemon process could not be created.	SystemResourceAgent has failed to start (turning the process into a daemon).	Check the following possible causes: memory shortage or OS resource insufficiency.		●		
sra	Error	9	stdio and stderr could not be closed.	SystemResourceAgent has failed to start (closing the standard I/O).	Check the following possible causes: memory shortage or OS resource insufficiency.		●		
sra	Error	10	A signal mask could not be set up.	SystemResourceAgent has failed to start (setting the signal mask).	Check the following possible causes: memory shortage or OS resource insufficiency.		●		
sra	Error	11	A configuration file error occurred. (1) [line = %1, %2] %1:Line %2:Setting value	SystemResourceAgent has failed to start (reading the SG file).	Restart the cluster, or execute the suspend and resume.		●		
sra	Error	12	A configuration file error occurred. (2) [line=%1, %2] %1:Line %2:Setting value	SystemResourceAgent has failed to start (reading the SG file).	Restart the cluster, or execute the suspend and resume.		●		
sra	Error	13	A plugin event configuration file error occurred. The DLL pointer was not found. [line = %1, %2] %1:Line %2:Setting value	SystemResourceAgent has failed to start (registering the plugin event).	Restart the cluster, or execute the suspend and resume.		●		
sra	Error	14	malloc failed. [event structure]	SystemResourceAgent has failed to start (registering the plugin event).	Restart the cluster, or execute the suspend and resume.		●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
sra	Error	15	A service configuration file error occurred due to an invalid event. [%1] %1:Setting value	SystemResourceAgent has failed to start (reading the service file).	Restart the cluster, or execute the suspend and resume.		●		
sra	Error	16	A plugin event configuration file error occurred due to %1. %1:Cause of error	SystemResourceAgent has failed to start (reading the plugin event file).	Restart the cluster, or execute the suspend and resume.		●		
sra	Error	17	Internal error occurred.	A shared memory access error has occurred.	-		●		
sra	Warning	101	Opening an SG file failed. file name = %1, errno = %2 %1:File name %2:errno	The SG file (%1) failed to be opened.	Recreate the SG file and restart the cluster, or execute the suspend and resume.		●		
sra	Warning	102	malloc(3) fail(1) . [%1] %1:Function name	An external error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.		●		
sra	Warning	103	malloc(3) fail(2). [%1] %1:Function name	An external error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.		●		
sra	Warning	104	An internal error occurred. rename(2) error (errno = %1) %1:errno	This product has terminated abnormally.	See the most recently issued system log message.		●		
sra	Warning	105	realloc(3) fail. [%1]. %1:Function name	An external error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.		●		
sra	Warning	106	A script timed out. (%1 %2) %1:Script file name %2:Argument	An external error has occurred.	Check the load status of the server and remove the load.		●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
sra	Warning	107	[%1] execvp(2) fail (%2). %1:Script file name %2:errno	An external error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.		●		
sra	Warning	108	[%1] fork fail (%2). Suspended. %1:Script file name %2:errno	An external error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.		●		
sra	Warning	109	malloc(3) fail. [%1] %1:Function name	An external error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.		●		
sra	Info	201	A script was executed. (%1) %1:Script name	Script (%1) has been executed.	-		●		
sra	Info	202	Running a script finished. (%1) %1:Script name	Script has ended normally.	-		●		
sra	Info	203	An %1 event succeeded. %1:Executed event type	The operation management command has been executed. The executed event type (boot, shutdown, stop, start, or flush) is output.	-		●		
sra	Error	301	Process resource error was detected(type = %1, pid = %2, %3). %1: Resoruce type %2: Process ID %3: Process name	A process resource error was detected.	Check the possible causes of the monitoring failure.	●	●		
sra	Error	302	System resource error was detected(type = %1). %1: Resoruce type	A system resource error was detected.	Check the possible causes of the monitoring failure.	●	●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
sra	Error	303	Disk resource error was detected(type = %1, level = %2, %3). %1: Resoruce type %2: Monitor level %3: Mountpoint name	A disk resource error was detected.	Check the possible causes of the monitoring failure.	●	●		
jra	Info	1	%1: The JVM status changed to normal.	The status of Java VM to be monitored is normal. %1: Name of the Java VM to be monitored	-		●		
jra	Error	2	%1: The JVM status changed to abnormal. cause = %2.	The status of Java VM to be monitored is abnormal. %1: Name of the Java VM to be monitored %2: Error generation location at abnormality occurrence	Review the Java application that runs on Java VM to be monitored.		●		
jra	Error	3	%1: Connecting to JVM was not possible.	Connection to Java VM to be monitored is invalid. %1: Name of the Java VM to be monitored	Check that Java VM to be monitored is running.		●		
jra	Warning	4	Writing jragent.log failed. %1,code = %2.	An error occurred in writing the log file. %1: Exception contents %2: Error code	Check whether the disk free space is sufficient.		●		
jra	Warning	5	Opening jragent.log failed.	An error occurred in opening the log file.	Check whether the disk free space is sufficient.		●		

Module Type	Event Type	Event ID	Message	Explanation	Solution	Information Addressee			
						alert	syslog	mail	SNMP Trap
jra	Warning	6	%1: Creating a monitor status file failed.	An error occurred in creating a file. %1: Name of the Java VM to be monitored	Check whether the disk free space and the maximum number of volume files are sufficient.		●		
jra	Warning	7	%1: Deleting a monitor status file failed.	An error occurred in deleting a file. %1: Name of the Java VM to be monitored	Check whether there is a problem with the hard disk.		●		
jra	Info	8	JRAgent was started.	Java Resource Agent has started.	-		●		
jra	Error	9	Setting is wrong.[Java install path]	The Java install path is invalid.	Check the cluster configuration data.		●		

Driver syslog messages

Kernel mode LAN heartbeat driver

Module Type	Event type	Event ID	Message	Description	Solution
clpkhb	Info	101	Kernel Heartbeat was initialized successfully. (major=%1, minor=%2)	The clpkhb driver was successfully loaded.	-
clpkhb	Info	102	Kernel Heartbeat was released successfully.	The clpkhb driver was successfully unloaded.	-
clpkhb	Error	103	Can not register miscdev on minor=%1. (err=%2)	Failed to load the clpkhb driver.	-
clpkhb	Error	104	Can not deregister miscdev on minor=%1. (err=%2)	Failed to unload the clpkhb driver.	-
clpkhb	Info	105	Kernel Heartbeat was initialized by %1.	The clpkhb driver was successfully initialized by [%1] module.	-
clpkhb	Info	106	Kernel Heartbeat was terminated by %1.	The clpkhb driver was successfully terminated by [%1] module.	-
clpkhb	Error	107	Can not register Kernel Heartbeat proc file!	Failed to create proc file for the clpkhb driver.	-
clpkhb	Error	108	Version error.	The inside version information of the clpkhb driver is invalid.	Reinstall ExpressCluster.
clpkhb	Info	110	The send thread has been created. (PID=%1)	The send thread of the clpkhb driver was successfully created. The process ID is [%1].	-
			The recv thread has been created. (PID=%1)	The receive thread of the clpkhb driver was successfully created. The process ID is [%1].	
clpkhb	Error	111	Failed to create send thread. (err=%1)	Failed to create the send thread of the clpkhb driver due to the error [%1].	-
			Failed to create recv thread. (err=%1)	Failed to create the receive thread of the clpkhb driver due to the error [%1].	
clpkhb	Info	112	Killed the send thread successfully.	The send thread of clpkhb driver was successfully stopped.	-
			Killed the recv thread successfully.	The receive thread of clpkhb driver was successfully stopped.	
clpkhb	Info	113	Killed the recv thread successfully.	Killing the clpkhb driver.	-
clpkhb	Info	114	Killed the recv thread successfully.	Killing the clpkhb driver.	-
clpkhb	Info	115	Kernel Heartbeat has been stopped|	The clpkhb driver successfully stopped.	-
clpkhb	Error	120	Failed to create socket to send %1 packet. (err=%2)	Failed to create the socket for sending the [%1] (HB/DOWN/KA) packet due to the error [%2].	-

Module Type	Event type	Event ID	Message	Description	Solution
			Failed to create socket to receive packet. (err=%2)	Failed to create the socket for receiving the packet due to the error [%2].	
clpkhb	Error	121	Failed to create sending %1 socket address. (err=%2)	Failed to set the socket for sending the [%1] (HB/DOWN/KA) packet.	The physical memory may be running out. Add physical memories, or terminate unnecessary applications.
clpkhb	Error	122	Failed to create %1 socket address. (err=%2)	Failed to set the socket for sending the [%1] (HB/DOWN/KA) packet.	The physical memory may be running out. Add physical memories, or terminate unnecessary applications.
clpkhb	Error	123	Failed to bind %1 socket. (err=%2)	Failed to bind the socket for [%1] (HB/DOWN/KA).	Check the status of the operating system. The communication port for clpkhb may be used already by other applications or others. Check the usage status of the communication port. Check the cluster configuration information server property if the IP address set for the interconnect LAN I/F is correct.
clpkhb	Error	125	Failed to send %1 data to %2. (err=%3)	Failed to send [%1] (HB/DOWN/KA) data to [%2].	Check the status of the network for the clpkhb communication. Check the status of the remote server. Check that the setting information is correct.
clpkhb	Error	126	Failed to receive data. (err=%3)	Failed to receive data.	The remote server may be down. Check if the server is active. If the server is not down, check the status of the network for clpkhb.
clpkhb	Info	127	Received an invalid packet. magic is not correct!	Received an invalid packet. Ignore the packet.	Other applications may be sending the data to the port for clpkhb. Check the usage status of the port.
clpkhb	Error	128	Received an invalid packet. %1 is not correct!	Received an invalid packet. The invalid part of the packet is [%1] (Resource priority/Source ip address).	Same as above.
clpkhb	Info	129	Receiving operation was interrupted by ending signal!	The receive thread ends by termination signal.	-
clpkhb	Info	130	clpka: <server priority: %1> <reason: %2> <process name: %3> system reboot.	A reset message was received from another server. The priority [%1] server was reset because the reason [%2] problem occurred in the process [%3].	Check the status of the server where the reset occurred.

Module Type	Event type	Event ID	Message	Description	Solution
clpkhb	Info	131	clpka: <server priority: %1> <reason: %2> <process name: %3> system panic.	A panic message was received from another server. The priority [%1] server was panicked because the reason [%2] problem occurred in the process [%3].	Check the status of the server where the panic occurred.
clpkhb	Error	140	Reference an inaccessible memory area!	Failed to pass data to an application by ioctl().	Check the status of the operating system.
clpkhb	Error	141	Failed to allocate memory!	Failed to allocate memory.	The physical memory may be running out. Add physical memories, or terminate unnecessary applications.
clpkhb	Error	142	Invalid argument, %1!	The parameter passed to the clpkhb driver is not correct.	Check if the settings are correct.
clpkhb	Warning	143	Local node has nothing with current resource.	The heartbeat resource information passed to the clpkhb driver is not correct.	Same as above.

Keepalive driver

Module Type	Event type	Event ID	Message	Description	Solution
clpka	Info	101	Kernel Keepalive was initialized successfully. (major=%1, minor=%2)	The clpka driver was successfully loaded.	-
clpka	Info	102	Kernel Keepalive was released successfully.	The clpka driver was successfully unloaded.	-
clpka	Error	103	Can not register miscdev on minor=%1. (err=%2)	Failed to load the clpka driver.	Check the distribution and kernel support the kernel mode LAN heartbeat.
clpka	Info	105	Kernel Keepalive was Initialized by %1.	The clpka driver was successfully initialized.	-
clpka	Error	107	Can not register Kernel Keepalive proc file!	Failed to create proc file for the clpka driver.	The kernel may not be running normally because of lack of memory or other reasons. Add physical memories, or terminate unnecessary applications.
clpka	Error	108	Version error.	The version of the clpka driver is invalid.	Check if the installed clpka driver is legitimate.
clpka	Error	111	Failed to create notify thread. (err=%1)	Failed to create the thread of the clpka driver.	The kernel may not be running normally because of lack of memory or other reasons. Add physical memories, or terminate unnecessary applications.
clpka	Info	130	Reboot tried.	In keeping with the settings, the clpka driver tried to restart the machine.	-
clpka	Info	132	Kernel do nothing.	In keeping with the settings, the clpka driver did nothing.	-

clpka	Error	140	Reference an inaccessible memory area!	Failed to pass the version information of the clpka driver to the cluster main body.	Check if the installed clpka driver is legitimate.
clpka	Error	141	Failed to allocate memory!	The size of physical memory is not sufficient	The physical memory is running out. Add physical memories, or terminate unnecessary applications.
clpka	Error	142	Invalid argument, %1!	Invalid information was passed from the cluster main body to the clpka driver.	Check if the installed clpka driver is legitimate.
clpka	Error	144	Process (PID=%1) is not set.	A process other than cluster main body tried operation to the clpka driver.	Check if there is any application trying to access to the clpka driver erroneously.

Detailed information on activating and deactivating group resources

EXEC resources

Module Type	Type	Return Value	Message	Explanation	Solution
exec	Error	1	Termination code %1 was returned.	A termination code other than 0 has been returned as the execution result of a synchronous script or application.	If this message appears for a script, the contents of the script might be incorrect. Check whether the script is correctly specified. If this message appears for an application, the application might have terminated abnormally. Check the application operation.
exec	Error	1	Command was not completed within %1 seconds.	Execution of a synchronous script or application has not terminated within the specified time.	If this message appears for a script, the contents of the script might be incorrect. Check whether the script is correctly described. If this message appears for an application, the application might have stalled. Check the application operation. The cause of this error might be identifiable from the logs. For details about log output settings, refer to “Parameter details” in Chapter 3, “Function of the Builder”.
exec	Error	1	Command was aborted.	A synchronous script or application has been aborted.	If this message appears for an application, the application might have been aborted. Check the application operation. Memory or OS resources may not be sufficient. Check them.
exec	Error	1	Command was not found. (error=%1)	The application was not found.	The application path might be incorrect. Check the path of the application in the configuration data.
exec	Error	1	Command string was invalid.	The application path is invalid.	Check the path of the application in the configuration data.

Module Type	Type	Return Value	Message	Explanation	Solution
exec	Error	1	Log string was invalid.	The path of the log output destination is incorrect.	Check the path of the data log output destination in the configuration data.
exec	Error	1	Internal error. (status=%1)	Another internal error occurred.	Memory or OS resources may not be sufficient. Check them.

VM resources

Module Type	Type	Return value	Message	Description	Solution
vm	Error	1~6,8	Initialize error occured.	An error was detected while initialization.	Check if the cluster configuration information is correct.
vm	Error	7	Parameter is invalid.	The parameter is invalid.	Check if the cluster configuration information is correct.
vm	Error	9~13	Failed to %s virtual machine %s.	Failed to control the virtual machine.	Check the status of the virtual machine.
vm	Error	22	Datastore must be setted.	Datastore name must be setted in the Builder.	Click the [Details] tab of VM Resources Properties in the Builder, enter the name of data store containing the virtual machine configuration information to [Data Store Name]. And then click [Apply the Configuration File].
vm	Error	23	VM configuration file path must be setted.	VM configuration file path must be setted in the Builder.	Click the [Details] tab of VM Resources Properties in the Builder, enter the path where the virtual machine configuration information is stored to [VM Configuration File Path]. And then click [Apply the Configuration File].
vm	Error	Other	Internal error occured.	Another internal error occurred.	Memory or OS resources may not be sufficient. Check them.

Details about monitor resource errors

Software RAID monitor resources

Module Type	Type	Return Value	Message	Explanation	Solution
lmdw	Warning	100	Device=(%1): Mirror disk is in recovery process (%2).	The mirror disk is now in the [recovery] process.	-
lmdw	Warning	101	Device=(%1): Bad disks(%2) are detected in mirror disk.	Some physical disks under the mirror disk are damaged and now have the [warning] status.	The mirror disk can be used but the damaged physical disks must be replaced.
lmdw	Error	3	Device=(%1): Mirror disk has a problem.	All the physical disks under the mirror disk are damaged and now have the [error] status.	The mirror disk cannot be used. The damaged physical disks must be replaced.
lmdw	Error	4	Soft RAID module has a problem. (err=%1)	The kernel module related to software RAID is faulty.	-
lmdw	Error	5	Options or parameters are invalid.	A command parameter error occurred.	Check whether the configuration data is correct.
lmdw	Error	6	Failed to read config file.(err=%1)	The configuration file could not be read.	Check whether the configuration data is correct.
lmdw	Error	7	Config file error.(err=%1)	The contents of the configuration data are incorrect.	Check whether the configuration data is correct.
lmdw	Error	9	Internal error.err=%1	An internal error other than the above occurred.	There might not be enough memory space or OS resources. Check them.

IP monitor resources

Module Type	Type	Return Value	Message	Explanation	Solution
ipw	Error	1	Ping cannot reach. (ret=%1) IP=%2...	The packet transmitted by the ping command has not arrived.	Check whether the ping command to the corresponding IP address succeeds. If the command fails, check the status of the device that has the IP address or status of the network interface.
ipw	Error	2	Ping was failed. (ret=%1) IP=%2...	The ping command has failed.	Memory or OS resources may not be sufficient. Check them.
ipw	Error	5	Ping was failed by timeout. IP=%s...	The ping command has failed due to a timeout.	The system may be under high load, or memory or OS resources may not be sufficient. Check them.
ipw	Error	6	Internal error. (status=%1)	Another internal error occurred.	Memory or OS resources may not be sufficient. Check them.

Disk monitor resources

Module Type	Type	Return Value	Message	Explanation	Solution
diskw	Error	11	Option was invalid.	The option is invalid.	Check the cluster configuration data by using the Builder.
diskw	Error	12	Ioctl was failed. (err=%1) Device=%2	Failed to control the device.	Check if the monitoring target disk is connected properly, the disk is powered on, or no other errors are occurred on the disk.
diskw	Error	13	Ioctl was failed by timeout. Device=%1	Device control has failed due to a timeout.	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	14	Open was failed. (err=%1) File=%2	The file could not be opened.	Check whether a directory that has the same name as the file exists, the monitoring target disk is connected properly, the disk is on, or other errors occurred on the disk. Memory or OS resources may not be sufficient. Check them.
			Open was failed. (err=%1) Device=%2	Opening the device failed.	
diskw	Error	15 48	Open was failed by timeout. File=%1	The file could not be opened due to a timeout.	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.
			Open was failed by timeout. Device=%1	Opening the device failed due to timeout.	
diskw	Error	16	Read was failed. (err=%1) Device=%2	Reading from the device has failed.	Check if the monitoring target disk is connected properly, the disk is powered on, or no other errors are occurred on the disk. Memory or OS resources may not be sufficient. Check them.

Module Type	Type	Return Value	Message	Explanation	Solution
diskw	Error	17	Read was failed by timeout. Device=%1	Reading from the device has failed due to a timeout.	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	18	Write was failed. (err=%1) File=%2	Writing to the file has failed.	Check if the monitoring target disk is connected properly, the disk is powered on, or no other errors are occurred on the disk. Memory or OS resources may not be sufficient. Check them.
diskw	Error	19	Write was failed by timeout. File=%1	Writing to the file has failed due to a timeout.	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	22 23 24 25 26 27 28 29 30 31 32 34 40 43 44	Internal error. (status=%1)	Another internal error occurred.	Memory or OS resources may not be sufficient. Check them.

Module Type	Type	Return Value	Message	Explanation	Solution
diskw	Error	41	SG_IO failed. (sg_io_hdr_t info:%1 SG_INFO_OK_MASK: %2)	SG_IO has failed.	Check if the monitoring target disk is connected properly, the disk is powered on, or no other errors are occurred on the disk.
diskw	Error	42	Parameter was invalid. File=%1	The specified file name is invalid.	Do not specify a device file beginning with /dev. Specify a normal file.
diskw	Error	47	Device was invalid. Device=%1	The specified real device is invalid.	Check the device name of the disk monitor resource on the Builder.
diskw	Error	49	Already bound for other. Rawdevice=%1 Device=%2	The RAW device has already been bound by another real device.	The set RAW device has already been bound by another real device. Change the RAW device name on the Builder.
diskw	Error	50	Popen was failed. (err=%1)	Popen failed.	Popen failed. Memory or OS resources may not be sufficient. Check them.
diskw	Error	51	Bind was failed. Rawdevice=%1 Device=%2	Bind failed.	Bind failed. Memory or OS resources may not be sufficient. Check them.
diskw	Error	52	Stat was failed. (err=%1) Device=%2	Stat failed.	Stat failed. Memory or OS resources may not be sufficient. Check them.
diskw	Warning	100	Ignored disk full error.	A disk full error has been ignored.	Check the usage of the device.

PID monitor resources

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

User space monitor resources

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

Custom monitor resource

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

Module Type	Type	Return Value	Message	Explanation	Solution
genw	Error	8	Create process failed.	Create process failed.	Memory or OS resources may not be sufficient. Check them.
genw	Error	9	Process does not exist. (pid=%d)	The process did not exist.	Check if the process exists.
genw	Error	10	Process aborted. (pid=%d)	The process did not exist.	Check if the process exists.
genw	Error	11	Asynchronous process does not exist. (pid=%d)	The process did not exist.	Check if the process exists.
genw	Error	12	Asynchronous process aborted. (pid=%d)	The process did not exist.	Check if the process exists.
genw	Error	13	Monitor path was invalid.	The path is invalid.	Check if the cluster configuration information is correct.
genw	Error	others	Internal error. (status=%d)	Another internal error occurred.	-

Multi target monitor resources

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

JVM monitor resources

Module Type	Type	Return value	Message	Description	Solution
jraw	Error	11	An error was detected in accessing the monitor target.	Java VM to be monitored cannot be connected.	Check that the Java VM to be monitored is running.
jraw	Error	12	JVM status changed to abnormal. cause = %1.	An error was detected in monitoring Java VM. %1: Error generation cause C-Heap GarbageCollection JavaMemoryPool Thread WorkManagerQueue WebOTXStall	Based on the message, check the Java application that is running on Java VM to be monitored.
jraw	Error	99	Internal error occurred.	An internal error has occurred.	Execute cluster suspend and cluster resume.

System monitor resources

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

NIC link up/down monitor resources

Module Type	Type	Return Value	Message	Explanation	Solution
miiw	Error	1	Option was invalid.	The option is invalid.	Check the configuration data by using the Builder.
miiw	Error	4	Config was invalid. (err=%1) %2	The configuration data is invalid.	Check the configuration data by using the Builder.
miiw	Error	10	Get address information was failed. (err=%1)	The socket address of the IPv4 or IPv6 address family could not be obtained.	Check whether the kernel configuration supports TCP/IP networking (IPv4 or IPv6).
miiw	Error	11	Socket creation was failed. (err=%1)	The socket could not be created.	Memory or OS resources may not be sufficient. Check them.
miiw	Error	12	ioctl was failed. (err=%1) Device=%2 Request=%3	The control request to the network driver has failed.	Check whether the network driver supports control request %3. For details about the verified NIC and network driver, see Chapter 6, "Details of monitor resources".
miiw	Error	13	MII was not supported or no such device. Device=%1	MII is not supported by NIC or the monitored object does not exist.	For details about the verified NIC and network driver, see Chapter 6, "Details of monitor resources". If the monitored target does not exist, check the network interface name, such as by using ifconfig.
miiw	Error	20	NIC %1 link was down.	The NIC link has gone down.	Check whether the LAN cable is connected properly.
miiw	Error	98	Internal error. (status=%d)	Another internal error occurred.	-

VM monitor resources

Module Type	Type	Return Value	Message	Explanation	Solution
vmw	Error	1	initialize error occured.	An error was detected while initialization.	Memory or OS resources may not be sufficient. Check them.
vmw	Error	11	monitor success, virtual machine is not running.	Stop of the virtual machine was detected.	Check the status of the virtual machine.
vmw	Error	12	failed to get virtual machine status.	Failed to get the status of the virtual machine.	Check if the virtual machine exists.
vmw	Error	13	timeout occured.	The monitoring timed out.	The OS may be highly loaded. Check it.

Volume manager monitor resources

Module Type	Type	Return value	Message	Description	Solution
volmgrw	Warning	100	%1 %2 is %3 !	The status of the target (%2) of the volume manager (%1) transferred to %3.	Check the status of the volume manager target.
volmgrw	Error	10	Command was failed. Command=%1	%1 command failed.	The command failed. Check the action status of the volume manager.
volmgrw	Error	11	Option was invalid.	The option is invalid.	Check the cluster configuration information on the Builder.
volmgrw	Error	Others	Internal error. (status=%1)	Another internal error occurred.	-

Process name monitor resources

Module Type	Type	Return value	Message	Description	Solution
psw	Error	11	Process[%1 (pid=%2)] Down	Deletion of a monitored process has been detected.	Check whether the monitored process is running normally.
psw	Error	12	Process count check error. Process count %1/%2 (%3)	The number of started processes for the monitor target process is less than the specified minimum count.	Check whether the monitored process is running normally.
psw	Error	13 to 51	Initialize error	An error has been detected during initialization.	Check the following possible causes: memory shortage or OS resource insufficiency.
psw	Error	13 to 51	Internal error	An internal error has occurred.	Check the following possible causes: memory shortage or OS resource insufficiency.
psw	Error	200	Monitoring timeout	Monitoring has timed out.	The OS may be highly loaded. Check that.

Monitoring option monitor resources

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

Monitoring Option Monitor Resource	Module Type
DB2 monitor resource	db2w
FTP monitor resource	ftpw
HTTP monitor resource	httpw
IMAP4 monitor resource	imap4w
MySQL monitor resource	mysqlw
NFS monitor resource	nfsw
Oracle monitor resource	oraclew
OracleAS monitor resource	oracleasw
POP3 monitor resource	pop3w
PostgreSQL monitor resource	psqlw
Samba monitor resource	sambaw
SMTP monitor resource	smtpw
Sybase monitor resource	sybasew
Tuxedo monitor resource	tuxw
Weblogic monitor resource	wlsw
Websphere monitor resource	wasw
WebOTX monitor resource	otxw

Module Type	Type	Return Value	Message	Explanation	Solution
(see the list above)	Error	1	Init error. [%1, ret=%2]	An error was detected during initialization. license, library, XML, share memory, or log is displayed where %1 is represented.	The OS might be heavily loaded. Check them.
(see the list above)	Error	2	Get config information error. [ret=%1]	Failed to obtain the configuration data.	Check the configuration data by using the Builder.
(see the list above)	Error	3	Invalid parameter.	The configuration data of the Config or Policy file is invalid. The command parameter is invalid.	Check the configuration data by using the Builder.
(see the list above)	Error	4	Detected function exception. [%1, ret=%2]	An error was detected. The monitoring target is displayed in place of %1.	Check the configuration data by using the Builder. The OS might be heavily loaded. Check them.

Module Type	Type	Return Value	Message	Explanation	Solution
(see the list above)	Error	5	Failed to connect to %1 server. [ret=%2]	Connecting to the monitoring target has failed. The application name is displayed in place of %1.	Check the status of the monitoring target.
(see the list above)	Error	6	Detected authority error.	User authentication has failed.	Check the user name, password, and access permissions.
(see the list above)	Error	7	Failed to execute SQL statement (%1). [ret=%2]	The SQL statement could not be executed The monitoring target is displayed in place of %1.	Check the configuration data by using the Builder.
(see the list above)	Error	8	Failed to access with %1.	Data access with the monitoring target has failed. The monitoring target is displayed in place of %1.	Check the status of the monitoring target.
(see the list above)	Error	9	Detected error in %1.	The monitoring target is abnormal. The monitoring target is displayed in place of %1.	Check the status of the monitoring target.
(see the list above)	Error	10	User was not superuser.	The user does not have root privileges.	The user executing the operation might not have root privileges, or the memory or OS resources might be insufficient. Check them.
(see the list above)	Error	11	Detected timeout error.	Communication with the monitoring target timed out.	The OS might be heavily loaded. Check them.
(see the list above)	Error	12	Can not found library. (libpath=%1, errno=%2)	The library could not be loaded from the specified location. The library path is displayed in place of %1.	Check the library location.
(see the list above)	Error	40	The license is not registered.	The license is not registered.	Check whether the correct license is registered.
(see the list above)	Error	41	The registration license overlaps.	The license you are attempting to register already exists.	Check whether the correct license is registered.
(see the list above)	Error	42	The license is invalid.	The license is invalid.	Check whether the correct license is registered.
(see the list above)	Error	43	The license of trial expired by %1.	The trial license has expired. The expiration date is displayed in place of %1.	-

Module Type	Type	Return Value	Message	Explanation	Solution
(see the list above)	Error	44	The license of trial effective from %1.	The date is not the starting date of the trial license. The starting date of the trial license is displayed in place of %1.	-
(see the list above)	Warning	71	Detected a monitor delay in monitoring %1. (timeout=%2*%3 actual-time=%4 delay warning rate=%5)	A monitoring delay was detected in monitoring %1. The current timeout value is %2 (second) x %3 (tick count per second). The actual measurement value at delay detection is %4 (tick count) and exceeded the delay warning rate %5 (%).	Check the load status of the server on which a monitoring delay was detected and remove the load. If a monitoring timeout is detected, extend it.
(see the list above)	Info	81	The collecting of detailed information triggered by monitor resource %1 error has been started (timeout=%2).	Collecting of detailed information triggered by the detection of a monitor resource $1 monitoring error has started. The timeout is %2 seconds.	-
(see the list above)	Info	82	The collection of detailed information triggered by monitor resource %1 error has been completed.	Collecting of detailed information triggered by the detection of a monitor resource %1 monitoring error has been completed.	-
(see the list above)	Warning	83	The collection of detailed information triggered by monitor resource %1 error has been failed (%2).	Collecting of detailed information triggered by the detection of a monitor resource %1 monitoring error has failed. (%2)	-
(see the list above)	Error	99	Internal error. (status=%1)	Internal error.	-

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.

JVM operation log

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

%1$s: Failed to connect to JVM.	The Java VM to be monitored could not be connected. %1$s: Name of the Java VM to be monitored	Check that the Java VM to be monitored is running.
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 JVMSaver.	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 Java Resource Agent.
JVMSaver already started.	The JVM monitor resource has already been started.	Execute cluster suspend/cluster resume and then restart the Java Resource Agent.
%1$s: GARBAGE_COLLECTOR_MXBEAN_DOMAIN_TYPE is invalid.	GC information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: GarbageCollectorMXBean is invalid.	GC information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: Failed to measure the GC stat.	GC information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: GC stat is invalid. last.getCount = %2$s, last.getTime = %3$s, now.getCount = %4$s, now.getTime = %5$s.	The GC generation count and GC execution time could not be measured for the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: GC generation count at last measurement %3$s: Total GC execution time at last measurement %4$s: GC generation count at this measurement %5$s: Total GC execution time at this measurement	Check whether the operating environment of the Java VM to be monitored is correct.

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

%1$s: GC count is too frequently compared with the last connection. count = %4$s last.getCount = %2$s, now.getCount = %3$s.	After the Java VM to be monitored was reconnected, the GC generation count has exceeded the threshold in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: GC generation count at last measurement %3$s: GC generation count at this measurement %4$s: GC generation count from the last measurement to this measurement	Review the Java application that runs on the Java VM to be monitored.
%1$s: RUNTIME_MXBEAN_NAME is invalid.	C heap information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: RuntimeMXBean is invalid.	Information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: Failed to measure the runtime stat.	Information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct. Check whether the processing load is high in the Java VM to be monitored.
%1$s: Process C-Heap capacity is too little. pname = %2$s, pid = %4$s, capacity = %3$s.	The C heap free space has fallen below the threshold in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Command line of the process to be monitored %3$s: C heap free space %4$s: ID of the process to be monitored	Review the Java application that runs on the Java VM to be monitored.
%1$s: Failed to measure C-Heap capacity. stdout = %2$s,stderr = %3$s.	The C heap free space could not be measured in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Standard output of the C heap measurement program %3$s: Standard error output of the C heap measurement program	Check whether the machine load is high.

%1$s: Failed to measure C-Heap capacity. timeout at gap_chk.	The C heap free space could not be measured in the Java VM to be monitored due to a timeout. %1$s: Name of the Java VM to be monitored	Check whether the machine load is high.
%1$s: Failed to measure C-Heap capacity. execute error at gap_chk.stderr = %2$s.	The C heap free space could not be measured in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Standard error output of the C heap measurement program	Check whether the machine load is high.
%1$s: Failed to measure C-Heap capacity. execute error at gap_chk. cause = %2$s.	The C heap free space could not be measured in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Detailed error information of C heap measurement program execution failure	Check whether the machine load is high.
%1$s: MEMORY_MXBEAN_NAME is invalid. %2$s, %3$s.	Memory information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Memory pool name %3$s: Memory name	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: MemoryMXBean is invalid.	Memory information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: Failed to measure the memory stat.	Memory information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct. Check whether the processing load is high in the Java VM to be monitored.
%1$s: MemoryPool name is undefined. memory_name = %2$s.	Memory information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Name of the Java memory pool to be measured	Check whether the operating environment of the Java VM to be monitored is correct.

%1$s: MemoryPool capacity is too little. memory_name = %2$s, used = %3$s, max = %4$s, ratio = %5$s%.	The Java memory pool free space has fallen below the threshold in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Name of the Java memory pool to be measured %3$s: Use amount of the Java memory pool %4$s: Maximum usable amount of the Java memory pool %5$s: Use rate of the Java memory pool	Review the Java application that runs on the Java VM to be monitored.
%1$s: THREAD_MXBEAN_NAME is invalid.	Thread information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: ThreadMXBean is invalid.	Thread information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: Failed to measure the thread stat.	Thread information could not be acquired from Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: Detect Deadlock. threads = %2$s.	Thread deadlock has occurred in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: ID of the deadlock thread	Review the Java application that runs on the Java VM to be monitored.
%1$s: Thread count is too much(%2$s).	The number of activated threads has exceeded the threshold in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of activated threads at measurement	Review the Java application that runs on the Java VM to be monitored.
%1$s: ThreadInfo is null.Thread count = %2$s.	Thread information could not be acquired in the Java VM to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of activated threads at measurement	Check whether the operating environment of the version of the Java VM to be monitored is correct.
%1$s: Failed to disconnect.	Disconnection from the Java VM to be monitored has failed. %1$s: Name of the Java VM to be monitored	-

%1$s: Failed to connect to WebLogicServer.	WebLogic Server to be monitored could not be connected. %1$s: Name of the Java VM to be monitored	Review the Java application that runs on the WebLogic Server to be monitored.
%1$s: Failed to connect to Sun JVM.	Java VM and WebOTX to be monitored could not be connected. %1$s: Name of the Java VM to be monitored	Review the Java application that runs on the Java VM and WebOTX to be monitored.
Failed to open the %1$s.	The JVM statistics log could not be output. %1$s: Name of the HA/JVMSaverJVM statistics log file	Check whether the disk has sufficient free space or whether the number of open files has exceeded the upper limit.
%1$s: Can't find monitor file.	No monitoring %1$s: Name of the Java VM to be monitored	-
%1$s: Can't find monitor file, monitor stopped[thread:%2$s].	Monitoring stops. %1$s: Name of the Java VM to be monitored %2$s: Type of the measurement thread	-
%1$s: Failed to create monitor status file.	An internal file could not be created. %1$s: Name of the Java VM to be monitored	Check whether the disk free space and the maximum number of volume files are sufficient.
%1$s: Failed to delete monitor status file.	An internal file could not be deleted. %1$s: Name of the Java VM to be monitored	Check whether there is a problem with the hard disk.
%1$s: com.bea:Type=ServerRuntime is invalid.	Information could not be acquired from the Java VM to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the Java VM to be monitored is correct.
%1$s: WorkManagerRuntimeMBean or ThreadPoolRuntimeMBean is invalid.	Information could not be acquired from the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the WebLogic Server to be monitored is correct.
%1$s: Failed to measure the WorkManager or ThreadPool stat.	Information could not be acquired from the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored	Check whether the operating environment of the WebLogic Server to be monitored is correct.
%1$s: ThreadPool stat is invalid. last.pending = %2$s, now.pending = %3$s.	The number of waiting requests could not be measured in the thread pool of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s:Number of waiting requests at last measurement %3$s:Number of waiting requests at this measurement	Check whether the operating environment of the version of the WebLogic Server to be monitored is correct.

%1$s: WorkManager stat is invalid. last.pending = %2$s, now.pending = %3$s.	The number of waiting requests could not be measured in the work manager of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of waiting requests at last measurement %3$s: Number of waiting requests at this measurement	Check whether the operating environment of the version of the WebLogic Server to be monitored is correct.
%1$s: PendingRequest count is too much. count = %2$s.	The number of waiting requests has exceeded the threshold in the thread pool of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of waiting requests at this measurement	Review the Java application that runs on the WebLogic Server to be monitored.
%1$s: PendingRequest increment is too much. increment = %4$s%%, last.pending = %2$s, now.pending = %3$s.	The increment of the number of waiting requests has exceeded the threshold in the thread pool of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of waiting requests at last measurement %3$s: Number of waiting requests at this measurement %4$s: Increment of the number of waiting requests from the last measurement to this measurement	Review the Java application that runs on the WebLogic Server to be monitored.

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

%1$s: Throughput increment is too much compared with the last connection. increment = %4$s, last.throughput = %2$s, now.throughput = %3$s.	After the WebLogic Server to be monitored was reconnected, the increment of the number of requests executed per unit time has exceeded the threshold in the thread pool of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of requests executed per unit time at last measurement %3$s: Number of requests executed per unit time at this measurement %4$s: Increment of the number of requests executed per unit time from the last measurement to this measurement	Review the Java application that runs on the WebLogic Server to be monitored.
%1$s: PendingRequest count is too much. appName = %2$s, name = %3$s, count = %4$s.	The number of waiting requests has exceeded the threshold in the work manager of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Application name %3$s: Work manager name %4$s: Number of waiting requests	Review the Java application that runs on the WebLogic Server to be monitored.
%1$s: PendingRequest increment is too much. appName = %2$s, name = %3$s, increment = %6$s%%, last.pending = %4$s, now.pending = %5$s.	The increment of the number of waiting requests has exceeded the threshold in the work manager of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Application name %3$s: Work manager name %4$s: Number of waiting requests at last measurement %5$s: Number of waiting requests at this measurement %6$s: Increment of the number of waiting requests from the last measurement to this measurement	Review the Java application that runs on the WebLogic Server to be monitored.

%1$s: PendingRequest increment is too much compared with the last connection. AppName = %2$s, Name = %3$s, increment = %6$s, last.pending = %4$s, now.pending = %5$s.	After the WebLogic Server to be monitored was reconnected, the increment of the number of waiting requests has exceeded the threshold in the work manager of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Application name %3$s: Work manager name %4$s: Number of waiting requests at last measurement %5$s: Number of waiting requests at this measurement %6$s: Increment of the number of waiting requests from the last measurement to this measurement	Review the Java application that runs on the WebLogic Server to be monitored.
%1$s: Can't find WorkManager. appName = %2$s, name = %3$s.	The work manager which was set could not be acquired from the WebLogic Server. %1$s: Name of the Java VM to be monitored %2$s: Application name %3$s: Work manager name	Review the setting of **Target WebLogic Work Managers**.
%1$s: analyze of average start[%2$s].	Analyzing of the average value has started. %1$s: Name of the Java VM to be monitored %2$s: Thread name	-
%1$s: analyze of average finish[%2$s].state = %3$s.	Analyzing of the average value has been completed. %1$s: Name of the Java VM to be monitored %2$s: Thread name %3$s: Status of the target to be monitored	-
%1$s: Average of PendingRequest count is too much. count = %2$s.	The average of the number of waiting requests has exceeded the threshold in the thread pool of the WebLogic Server to be monitored. %1$s: Name of the Java VM to be monitored %2$s: Number of waiting requests at this measurement	Review the Java application that runs on the WebLogic Server to be monitored.

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

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	-
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 Java Resource Agent.
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 Java Resource Agent.
format of stat log (%1) is wrong.	The contents of the JVM statistics log file are invalid. %1: JVM statistics log file name	After deleting the JVM statistics log file, execute cluster suspend/cluster resume and then restart the Java Resource Agent.
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 monitoring.

Appendix

Appendix A Index

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