

# FUJITSU Software PRIMECLUSTER



# Web-Based Admin View Operation Guide

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## Preface

This manual outlines the functions and operation of the Web-Based Admin View. Web-Based Admin View is a common base to utilize GUI (operation management view) with PRIMECLUSTER, and is provided along with each operation management product.

#### **Target Readers**

This manual is intended for all the users operating the products with Web-Based Admin View (e.g. PRIMECLUSTER.)

#### Organization

This manual consists of five parts, Appendices, and glossary. The content of each category is described below. When you use this product for the first time, be sure to read Part 1 first, and then work on the necessary operations.

#### Part 1 Introduction

Describes the functions and topology of the Web-Based Admin View.

#### Part 2 Web-Based Admin View GUI screen

Describes how to operate the GUI screen.

Part 3 Web-Based Admin View tools menu

Details the functions provided as the Web-Based Admin View tools menu.

#### Part 4 Web-Based Admin View operating setup

Details the operation method (e.g. shut-down, restart) and modifies the original settings.

#### Part 5 Notes on Web-Based Admin View

Describes the notes on Web-Based Admin View.

#### Appendix A Message

Explains the message texts and corrective actions.

#### Appendix B Troubleshooting

Explains how to take corrective actions in the event of a failure and collect required data for the request of troubleshooting.

#### Glossary

This part defines the terms and expounds the meaning of each technical term. Refer to this part if necessary.

#### **Related documentation**

The documents listed in this section contain information relevant to Web-Based Admin View and may be ordered through your sales representative. Before beginning to work with Web-based Admin View, read the following document:

- PRIMECLUSTER Concepts Guide
- PRIMECLUSTER Installation Guide
- PRIMECLUSTER Software Release Guide
- PRIMECLUSTER Cluster Foundation (CF) Configuration and Administration Guide
- PRIMECLUSTER Reliant Monitor Services (RMS) with Wizard Tools Configuration and Administration Guide
- PRIMECLUSTER Scalable Internet Service (SIS) Configuration and Administration Guide
- PRIMECLUSTER Installation and Administration Guide
- PRIMECLUSTER Messages
- PRIMECLUSTER Global Disk Services Configuration and Administration Guide
- PRIMECLUSTER Global File Services Configuration and Administration Guide

- PRIMECLUSTER Global Link Services Configuration and Administration Guide: Redundant Line Control Function

## 🛐 Information

Your sales representative will need your operating system release and product version to place your order.

#### **Manual Printing**

Use the PDF file supplied in a DVD for each product to print this manual.

Adobe Reader is required to read and print this PDF file. To get Adobe Reader, see Adobe Systems Incorporated's website.

#### **Notational Conventions**

#### Notation

This document adopts the following notational conventions.

#### Prompts

Command line examples that require system administrator (or root) rights to execute are preceded by the system administrator prompt, the hash sign (#). Entries that do not require system administrator rights are preceded by a dollar sign (\$).

#### Manual page section numbers

References to the UNIX operating system commands are followed by their manual page section numbers in parentheses \_\_\_\_\_ for example, cp(1).

#### The keyboard

Keystrokes that represent nonprintable characters are displayed as key icons such as [Enter] or [F1]. For example, [Enter] means press the key labeled *Enter*; [Cntl]+[B] means hold down the key labeled *Cntl* or *Control* and then press the [B] key.

#### Typefaces / Symbol

The following typefaces highlight specific elements in this manual.

Typeface / Symbol	Usage
Constant Width	Computer output and program listings; commands, file names, manual page names and other literal programming elements in the main body of text.
Italic, <italic></italic>	Variables that you must replace with an actual entered value.
<constant width=""></constant>	Variables that you must replace with an actual displayed value.
Bold	Items in a command line that you must type exactly as shown.
"Constant Width"	The title, documentation, screen, and etc of lookup destination.
[Constant Width]	Tool bar name, menu name, command name, button name, and icon names

#### Example 1.

Several entries from an /etc/passwd file are shown below: root:x:0:1:0000-Admin(0000):/: sysadm:x:0:0:System Admin:/usr/admin:/usr/sbin/sysadm setup:x:0:0:System Setup:/usr/admin:/usr/sbin/setup daemon:x:1:1:0000-Admin(0000):/:

#### Example 2.

To use the cat(1) command to display the contents of a file, enter the following command line: \$ cat <*file name*>

#### Symbol

Material of particular interest is preceded by the following symbols in this manual:



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Describ	es the con	tents of	an imp	oortant p	point.											

## G Note

Describes the points the users should pay close attention to.

## 💕 Example

Gives some examples for users' clear understanding.

## Information

Provides useful information related to the topic.



Provides manuals for users' reference.

#### Abbreviations

- Windows(R) Vista(R) Business operating system is abbreviated as Windows(R) Vista.
- Windows(R) 7 Professional operating system is abbreviated as Windows(R) 7.
- Windows(R) 8.1 Pro and Windows(R) 8.1 Enterprise are abbreviated as Windows(R) 8.1.
- Windows(R) 10 Pro and Windows(R) 10 Enterprise are abbreviated as Windows(R) 10.
- Windows Vista(R), Windows(R) 7, Windows(R) 8.1, and Windows(R) 10 are abbreviated as Windows.

- Oracle Solaris might be described as Solaris, Solaris Operating System, or Solaris OS.
- Red Hat Enterprise Linux is abbreviated as RHEL.
- RHEL is abbreviated as Linux(R).

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## **Revision History**

Revision	Location	Edition
Changed the description of corrective action when an unstarted process exists.	Symptom 1, Symptom 4, Symptom 8, and Symptom 16 of B.1 Corrective action	1.1
Deleted Corrective action No 2.	Symptom 10 of B.1 Corrective action	1
Deleted the description of single architecture model.	1.2.2 System topology	1.2
Changed the note.	3.1.2 Prerequisite client environment	1
Added the note.	3.2 Screen startup	1
Changed the procedure to change the language settings.	3.5.1 Tentative modification of screen display settings (Language, Look &Feel)	
Changed the setting value of out-time and added the contents of the note.	4.5.1 Environment variable	
Changed the description of how to change the IP address.	7.1 Network address	1
Changed the description of "Setup by command."	7.3 Management server	1
Changed the description of corrective action.	Symptom 1, Symptom 4, Symptom 8, and Symptom 16 of B.1 Corrective action	
Changed the descriptions of Java console display.	B.2.2 Java console	1
Added the note when setting IPv6 addresses.	<ul> <li>2.3.1 NIC switching mode</li> <li>2.3.2 Virtual NIC mode</li> <li>4.3.3 Primary management server</li> <li>4.3.4 Secondary management server</li> <li>4.4.1 IP address/Host name</li> <li>4.5.1 Environment variable</li> <li>4.5.3 Environment variable modification</li> <li>7.1 Network address</li> <li>7.3 Management server</li> <li>7.5 Multi-network between server and client by classified use</li> </ul>	1.3

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## Part 1 Introduction

Part 1 outlines Web-Based Admin View.

Chapter 1 Web-Based Admin View overview
Chapter 2 Web-Based Admin View installation

## Chapter 1 Web-Based Admin View overview

This chapter outlines Web-Based Admin View.

## **1.1 Function overview**

Web-Based Admin View is a common base to utilize GUI (operation management view) with PRIMECLUSTER, and is provided along with each operation management product. It serves the following functions:

1. Authentication function

The operation administrator is able to use the operation management view only if he signs on to Web-Based Admin View. Basically, the authentication process for each operation management product and node is eliminated.

2. GUI view function

A GUI view on the client is provided for each operation management product.

Since PRIMECLUSTER operation management view displays a management / monitoring screen on the client for Web-Based Admin View, an administrator using multiple operation management views can always perform a desired operation from the Web-Based Admin View screen.

3. Multiple-node monitoring function

Even when there are two or more nodes (e.g. PRIMECLUSTER), all the nodes are monitored by the management server for Web-Based Admin View. This enables the administrator to operate all monitored nodes only by accessing the management server.

4. Online manual display function

The operation management products offer document information services to administrators by providing online manuals on Web-Based Admin View in concurrence with the operation management view.

## **1.2 Web-Based Admin View topology**

## 1.2.1 Logical three-tier architecture

Web-Based Admin View adopts a logical three-tier architecture. It focuses on enabling every kind of operation management products running on Web-Based Admin View to configure its topology with complete control.

Each role is described below.

1. Client

The client describes the personal computers or UNIX workstations on which the operation management views of each operation management product are displayed. This operation management view is operated from a client.

2. Management server

The management server receives operation and displaying requests from the operation management view screen and forwards to the monitored nodes. When there are two or more nodes, the management server administers them overall, allowing all those monitoring nodes to be operated on a single screen for the clients. In addition, it is possible to duplicate the management server; primary management server and secondary management server.

In particular, whenever the GUI (operation management view) provided by PRIMECLUSTER is used, the management server is definitely made duplicate.

Also, the node that takes over operations is designed to be turned to the secondary management server when the node acting as the primary management server fails. Accordingly, the entire cluster system continues to be administered without down time.

3. Monitoring node

The monitoring node monitors and performs settings for a management server request. Also, it monitors diverse events that occur in the nodes after system startup, and notifies the management server of failure.

## 1.2.2 System topology

The system is designed to enable clients, management servers, and monitoring nodes to configure with complete control.

Each topology is described below.

Note that the topology to be supported varies depending on the operation management product. For details, refer to the document for each operation management product.

## 🚰 Note

- For details about setting the management server, refer to "7.3 Management server".
- For details about setting network environment of management server, refer to "7.5 Multi-network between server and client by classified use".

- For configuration of 3-tier model, refer to "2.4.1 Management server configuration".

1. 2-tier architecture model

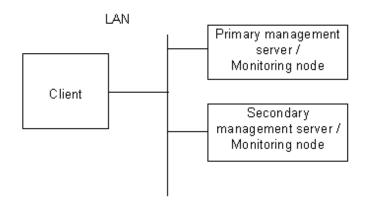
In this configuration, monitoring nodes and management servers share one tier, and a client is independent.

This model is relatively small-scale and is used when a management server is not set for specific purposes. It is a typical model primarily used for the cluster topology such as 1:1 standby and mutual standby in a two-node configuration.

It supports the following two types of topology:

- Generic topology

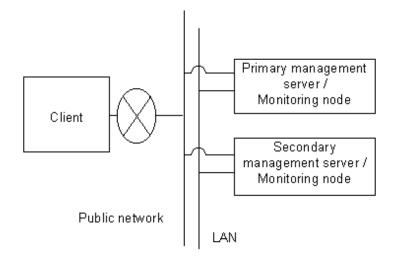
In this topology, only one LAN is used for the Web-Based Admin View operation. This topology should be adopted only if the range of network and users can be limited and defined.



- Topology where multi-network is used by classified use

In this topology, two LANs are used for Web-Based Admin View operation. The LAN used for communication among management servers and monitoring nodes and that used for the Web browser of a client are separate. When using a client from a public network, this topology is recommended for security.

For the setup, designate the IP addresses for a client and a monitoring node respectively on the administration server.



#### 2. 3-tier architecture model

In this configuration, monitoring nodes, management servers, and a client are allocated separately.

This model should be used especially when a large-scale PRIMECLUSTER system is managed centrally, or when a monitoring node should not be overloaded as a management server.

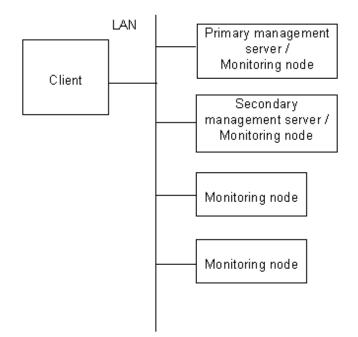
In case of the cluster system with three or more nodes, this model is used for N: 1 standby, mutual standby, or scalable operations.

For the configuration with three or more nodes, Fujitsu recommends this 3-tier architecture model in which the management server is installed separately to assure job continuity and availability.

This model supports the following two types of topology:

- Generic topology

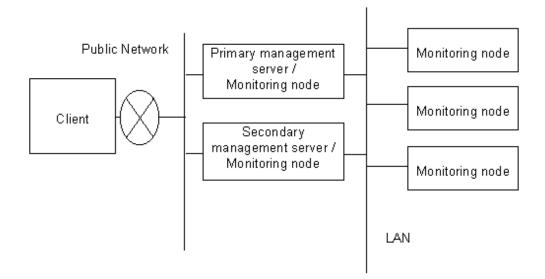
In this topology, only one LAN is used for the Web-Based Admin View operation. This topology should be adopted only if the range of network and users can be limited and defined.



- Topology where multi-network is used by classified use

In this topology, two LANs are used for Web-Based Admin View operation. The LAN used for communication among management servers and monitoring nodes and that used for the Web browser of a client are separate. When using a client from a public network, this topology is recommended for security.

For the setup, designate the IP addresses for a client and a monitoring node respectively on the management server.



## 🔓 Note

In three-tier configuration of Web-Based Admin View, server model and OS version of the cluster management server must be the same as those of cluster nodes.

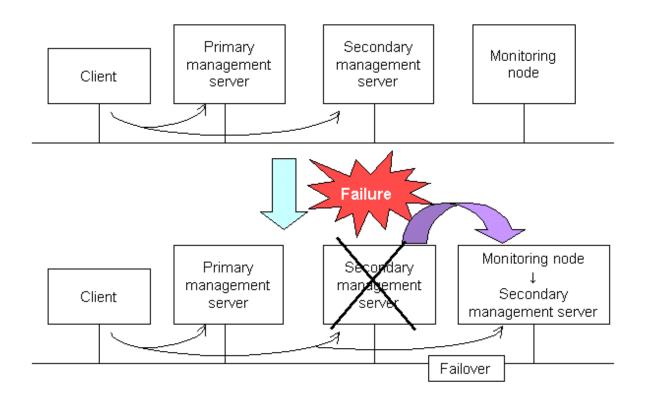
## 関 Point

In the normal operation, the client, the management server, and the monitoring node of Web-based Admin View communicate one another by using the IP address of LAN, which is assigned to the displayed node name as a result of executing "uname -n." Note that the node name is referred to the name with which the communication network recognizes the system. The IP address is automatically set up when Web-Based Admin View is installed. When the LAN IP address of each host (node) is modified along with the system migration, the IP address should also be changed. For the modification method, refer to "7.1 Network address".

## 1.2.3 Dynamic operation of secondary management server

Web-Based Admin view enables to automatically change a secondary management server during operation according to the operating status of the entire cluster system.

If the secondary management server fails, or both the primary and secondary management servers fail, one unit is selected from the other running monitoring nodes. This single selected monitoring node provides high reliability by taking over the function of the secondary management server.



It is possible to locate two or more candidate monitoring nodes as they can serve as a secondary management server. Each node should be predetermined whether or not it be a candidate for a secondary management server. Normally, the secondary management server is determined from active monitoring nodes in descending order of **mip** (IP addresses for identifying the Web-Based admin View's own host). For this IP address, refer to "4.4.1 IP address/Host name". For details of dynamic operation of the secondary management server, refer to "7.4 Secondary management server automatic migration".

## 1.3 Version / Level reference

The version of Web-Based Admin View is automatically updated when each product is installed.

In order to display the version currently installed, take the following steps:

- Confirm with the Web-Based Admin View screen

Access the management server from a client, and then select [Version] on the following Web-Based Admin View screen.

FUĴÎTSU

Version

ased Admin View

gure 1.1 Web-Based Admin View screen PRIMECLUSTER	
Server : Primary 192.168.10.1	Secondary 192.168.10.2
Cluster Services	Logout NodeList
💐 Global Disk Services	Web-Based
🗮 Global File Services	Tuncial
역 Web-Based Admin View tools	
🗮 Manual	
Common	

When selecting "Version," the following screen appears.

#### Version display example

- For Solaris OS

🛃 Version Info	_ <b>_</b> X
	FUĴĨTSU
FJSVwvcnf WWW Server for Admin View	
(sparc) 4.3.2,REV=2012.11.3001	
FJSVwvbs Web-Based Admin View	
(sparc) 4.3.4,REV=2014.09.1700	
[OK]	

In case of the above figure, the package of the FJSVwvcnf version is 4.3.2, and that of the FJSVwvbs version is 4.3.4.

#### - For Linux(R)



In case of the above figure, the package of the FJSVwvbs version is 4.3.3-01.

## G Note

The version is indicated next to the parenthesis.

- Confirm by command

Execute the following command, and confirm the version in the node.

. . . . . . . . .

# /etc/opt/FJSVwvbs/etc/bin/wvversion

## Chapter 2 Web-Based Admin View installation

This chapter outlines the operating environment and subsequent upgrading of Web-Based Admin View.

The initial installation of Web-Based Admin View is performed at the same time as the installation of each operation management product.

For details, refer to the documentation related to the installation of each operation management product.

## 2.1 Operation Environment

The management server and the monitoring node of Web-Based Admin View support the following operation environment:

- For Solaris OS
  - Memory

More than 512 MB of memory is required.



	••••
For supported OS, see the manual of each management product.	

- For Linux(R)
  - Memory

More than 1024 MB of memory is required.

- OS
- RHEL6
- RHEL7



••••	••	•••	•••	••	•••	•••	•	••	••	•••	•••	• •	•	•••	• •	•	••	•••	•	••	•	••	• •	••	•	•••	•	••	•	•••	•••	•	•••	•	•••	• •	••	•••	•	•	••	••	• •	•	•••	•	•••	•	•••	•••	• •	•	••	•••
Refer	to "	3.1	.2 I	Prei	eq	uis	ite	cl	ier	nt e	env	viro	onr	ne	nt	" f	or	de	tai	ils	o	f p	re	re	qu	isi	ite	ee	nv	irc	oni	me	ent	t fo	or	the	e c	lie	nt	of	W	eb	-B	as	ed	I A	dı	mi	n '	Vi	ew	•		



- To make Web-Based Admin View work on Linux, it is necessary to register the name and IP address of own host to the "/etc/hosts" file before installing Web-Based Admin View.

Just after Linux is installed, the "/etc/hosts" file is as the following "Before change". Correct it according to the following "After change".

- Before change
  - # Do not remove the following line, or various programs
  - # that require network functionality will fail.
  - 127.0.0.1 node\_name localhost.localdomain localhost
- After change
  - # Do not remove the following line, or various programs
  - # that require network functionality will fail.
  - #127.0.0.1 node\_name localhost.localdomain localhost
  - 127.0.0.1 localhost.localdomain localhost
  - 10.20.30.40 node\_name

Set node\_name for the host, and 10.20.30.40 for the IP address in the "/etc/hosts" file. Then, change the network address and management server IP address referring to "Chapter 7 Web-Based Admin View setup modification".

## 2.2 Upgrading

Web-Based Admin View is upgraded for the management server and the monitoring node at the same time as the operation management products.

For details, refer to the documentation for each operation management product listed up as **Operation management product name** of "3.3.1 Menu functions".

## 2.3 Setup with GLS

The Redundant Control Function of Global Link Services (hereinafter GLS) allows the network interface used by Web-Based Admin View to be duplex. This will ensure the consistency of GUI monitoring operations.

This section describes a setup method of how to make the network interface to be duplex by using GLS.

The setting procedure is explained for each mode as follows:

- NIC (Network Interface Card) switching mode
- Virtual NIC mode

The following IP addresses used for Web-Based Admin View can be duplex.

- IP address for identifying own host (Hereafter referred to as mip)
- IP address used for connecting to the management server from the client (Hereafter referred to as httpip)

For the method done by GLS, refer to "PRIMECLUSTER Global Link Services Configuration and Administration Guide: Redundant Line Control Function."

#### 2.3.1 NIC switching mode

#### Note when setting the operating environment for Web-Based Admin View

The setup to automatically make any monitoring node act as a management server (operating modification of the secondary management server) is not validated when making **mip** used duplex by the NIC switching mode of GLS (Redundant Line Control Function).

While Web-Based Admin View adopts the multi-cast IP address for selecting the secondary management server, the NIC switching mode of GLS does not support this multi-cast IP address. Therefore, when the NIC switching is done by GLS, the primary management server is not switched over to the secondary server.

#### Note when setting IP address

There are two types of IP addresses that can be set to take over for the NIC switching method by GLS.

- In case of logical IP address takeover

Make both the logical and physical IP addresses duplex.

- In case of physical IP address takeover

Make only the physical IP address duplex.

When the IP address, which is made duplex by GLS, is used as a takeover IP address for the cluster system operation (userApplication), the monitoring and the business operation from Web-Based Admin View might be stopped because of the state transition. Accordingly, it is necessary to set up the IP address, which is constantly available regardless of the state transition, to **mip** or **httpip**.

The IP address setup varies as described below depending on the fact if the management server (the node operated by Web-Based Admin View) is used as a cluster system node.

- a. When the management server is **used as** a cluster system node
  - In case of the logical IP address takeover
    - Only the physical IP address can be set.
  - In case of the physical IP address takeover
    - No IP address can be set.
- b. When the management server is **not used as** a cluster system node

Since the state transition of the cluster system does not affect on the Web-Based Admin View operation, either logical IP address or physical IP address can be set.

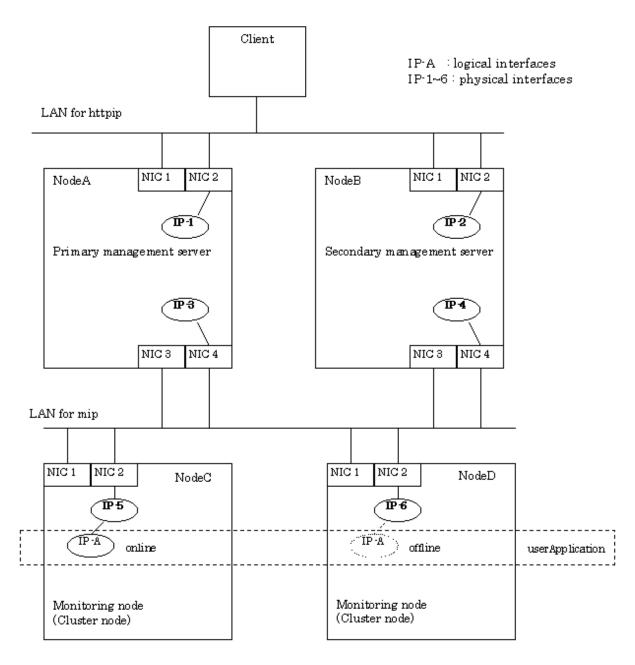
#### 3-tier architecture model

- In this model, the IP address setup varies depending on the node roles.
  - a. In case of management server

Either duplex logical IP address or physical IP address can be set up by either logical IP address takeover or physical IP address takeover.

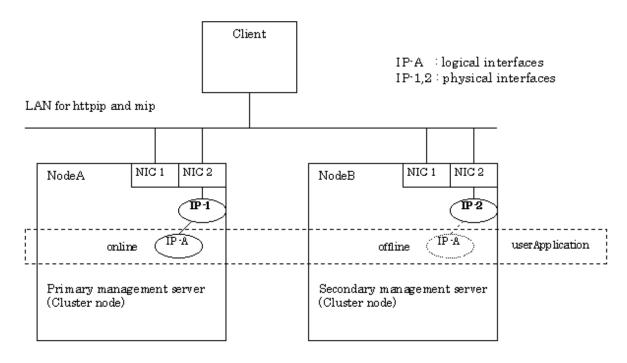
#### b. In case of monitoring node

The duplex physical IP address is set up by the logical IP address takeover.



#### 2-tire architecture model

In this model, the physical IP address is set up by the logical IP address takeover.



Each component and its definition are as follows:

```
- NIC
```

Abbreviation for Network Interface Card. It is inserted into a computer or workstation so that it can be connected to the LAN transmission media.

- Physical IP (address)

Stands for the IP address assigned to the physical interface.

Logical IP (address)Stands for the IP address assigned to the logical interface to communicate with other node.

#### Setup of IP address

Take the following steps to set up the duplex IP address.

1. Stop Web-Based Admin View on all the management servers and monitored nodes.

Refer to "6.1 Stop".

2. Set up the IP address.

Execute the following commands on the management server or the monitoring node where the IP address is changed.

- # /etc/opt/FJSVwvbs/etc/bin/wvSetparam mip <mip>
- # /etc/opt/FJSVwvbs/etc/bin/wvSetparam httpip < httpip>

*<mip>* indicates **mip**. Set up the logical IP address or the physical IP address.

*<httpip>* indicates **httpip**. Set up the logical IP address or the physical IP address.

3. Change the management server settings.

Change the management server settings on all the management servers and monitored nodes if the changed monitored node is the cluster management server.

# /etc/opt/FJSVwvbs/etc/bin/wvSetparam primary-server < primary management server IP address>

# /etc/opt/FJSVwvbs/etc/bin/wvSetparam secondary-server < secondary management server IP address>

For the IP address indicated as *<IP address of primary management server>* and *<IP address of secondary management server>* in the reference, set up **mip** for each management server.

4. Restart Web-Based Admin View on all the management servers and monitored nodes.

Refer to "6.2 Restart".



- Only IP (IPv4 or IPv6) addresses can be set to the primary management server, the secondary management server, and httpip. Note that IPv6 link local addresses cannot be set to these servers.

- The NIC switching takes 2 to 300 seconds, (default: 22-27 seconds) from the failure occurrence to switchover, and the connection between the client and the management server might be dropped during this time. In such a case, close the active browser, and reconnect to the management server after confirming switchover completion. Otherwise, the connection to the available management server can be established by clicking <Yes> to the 0007 message if it is displayed.

If the time of monitoring connection (default: 10 sec.) between the client and the management server is extended in the environment setup for Web-Based Admin View, the connection can be sustainable when the NIC switching is done. On the other hand, the failure detection of the session is delayed in the event of node stop or panic disorder. Based on this fact, change the time interval to monitor the connection between the client and the management server (Client - management server connection time).

For Client - management server connection time, be aware of setting the value (2-300 sec.) exceeding the time from occurrence of a NIC failure to completion of switchover.

For the setup of Client - management server connection time, refer to "Chapter 4 Environment settings". In the screen of the environment setup screen, up to 60 seconds can only be set at the maximum. Using a command allows a user to set 60 seconds or more.

#### Setup of Client - management server connection time

1. Stop Web-Based Admin View.

Stop Web-Based Admin View on all the management servers.

- # /etc/init.d/fjsvwvcnf stop
- # /etc/init.d/fjsvwvbs stop
- 2. Set up Client management server connection time.

Refer the example below to execute the following command on all the management servers.

Example: When changing Client - management server connection time to 100 seconds

- # /etc/opt/FJSVwvbs/etc/bin/wvSetparam keep-time 100
- 3. Start Web-Based Admin View.

Start Web-Based Admin View on all the management servers.

- RHEL6
  - # /etc/opt/FJSVwvbs/etc/bin/wvCntl start
  - # /etc/init.d/fjsvwvcnf start
- RHEL7
  - # /etc/init.d/fjsvwvbs start
  - # /etc/init.d/fjsvwvcnf start

#### 2.3.2 Virtual NIC mode

After setting Virtual NIC mode of GLS, take following steps to set Web-Based Admin View.

1. Stop Web-Based Admin View on all the management servers and monitored nodes.

Refer to "6.1 Stop".

#### 2. Set up the IP address.

Execute the following commands on the management servers and monitored nodes where GLS virtual IP address needs to be set.

#### # /etc/opt/FJSVwvbs/etc/bin/wvSetparam mip < mip>

#### # /etc/opt/FJSVwvbs/etc/bin/wvSetparam httpip < httpip>

*<mip>* indicates **mip**. Set up the virtual IP address.

<httpip> indicates httpip. Set up the virtual IP address.

3. Change the management server settings.

Change the management server settings on all the management servers and monitored nodes if the changed monitored node is the cluster management server.

# /etc/opt/FJSVwvbs/etc/bin/wvSetparam primary-server < primary management server IP address>

# /etc/opt/FJSVwvbs/etc/bin/wvSetparam secondary-server < secondary management server IP address>

For the IP address indicated as *<IP address of primary management server>* and *<IP address of secondary management server>* in the reference, set up **mip** for each management server.

4. Restart Web-Based Admin View on all the management servers and monitored nodes.

Refer to "6.2 Restart".

## G Note

- Only IP (IPv4 or IPv6) addresses can be set to the primary management server, the secondary management server, and httpip. Note that IPv6 link local addresses cannot be set to these servers.

- The virtual NIC mode takes 1 to 300 seconds, (default: 1-17 seconds) from the failure occurrence to switchover, and the connection between the client and the management server might be dropped during this time.

In such a case, close the active browser, and reconnect to the management server after confirming switchover completion.

Otherwise, the connection to the available management server can be established by clicking <Yes> to the 0007 message if it is displayed.

If the time of monitoring connection (default: 10 sec.) between the client and the management server is extended in the environment setup for Web-Based Admin View, the connection can be sustainable when the NIC switching is done. On the other hand, the failure detection of the session is delayed in the event of node stop or panic disorder. Based on this fact, change the time interval to monitor the connection between the client and the management server (Client - management server connection time).

For Client - management server connection time, be aware of setting the value (1-300 sec.) exceeding the time from occurrence of a NIC failure to completion of switchover.

For the setup of Client - management server connection time, refer to "Chapter 4 Environment settings". In the screen of the environment setup screen, up to 60 seconds can only be set at the maximum. Using a command allows a user to set 60 seconds or more.

#### Setup of Client - management server connection time

1. Stop Web-Based Admin View.

Stop Web-Based Admin View on all the management servers.

- # /etc/init.d/fjsvwvcnf stop
- # /etc/init.d/fjsvwvbs stop
- 2. Set up Client management server connection time.

Refer the example below to execute the following command on all the management servers.

Example: When changing Client - management server connection time to 100 seconds

# /etc/opt/FJSVwvbs/etc/bin/wvSetparam keep-time 100

#### 3. Start Web-Based Admin View.

Start Web-Based Admin View on all the management servers.

- RHEL6
  - # /etc/opt/FJSVwvbs/etc/bin/wvCntl start
  - # /etc/init.d/fjsvwvcnf start
- RHEL7
  - # /etc/init.d/fjsvwvbs start
  - # /etc/init.d/fjsvwvcnf start

#### Dynamic operation of secondary management server

The secondary management server can be dynamically operated in the environment where the network interface used with Web-Based Admin View is configured to be redundant by using Virtual NIC mode of GLS.

For the setting to operate the secondary management server dynamically, refer "7.4 Secondary management server automatic migration."

## 2.4 Initial Setup of Web-Based Admin View

### 2.4.1 Management server configuration

This section explains the configuration method of the 3-tier architecture where the management server is independent of monitoring nodes.

It is not necessary to follow this procedure if the management server is set up when installed. Take the following steps according to below "Verification " to check if the setup is correctly done.

#### Verification

Take the following procedure to check if the setup is correctly done.

Check if the management server is configured for the 3-tier model.

1. Check if the primary management server recognized by each node is identical with the active primary management server.

Execute the following command on the management server and all monitored nodes.

#### # /etc/opt/FJSVwvbs/etc/bin/wvGetparam primary-server

Confirm if the displayed IP address corresponds to **mip** (the IP address for identifying own host) of the active primary management server.

**If not**, the primary management server is not correctly configured. Set up the configuration according to "Configuration procedure of the management server" of "Configuration procedure".

2. Check if the secondary management server recognized by each node is identical with the active secondary management server.

Execute the following command on the management server and all monitored nodes.

#### # /etc/opt/FJSVwvbs/etc/bin/wvGetparam secondary-server

Confirm if the displayed IP address corresponds to mip of the active secondary management server.

If not, the secondary management server is not correctly configured. Set up the configuration according to "Configuration procedure of the management server" of "Configuration procedure".

#### Check if the topology is multi-network by classified use.

This case is applicable only to the multi-network by classified use.

Verification should be done on all primary and secondary management servers.

1. Check if the **mip** value is correctly set.

Execute the following command:

#### #/etc/opt/FJSVwvbs/etc/bin/wvGetparam mip

Confirm if the displayed IP address corresponds to mip (the IP address for identifying own host) on the active management server.

If not, the **mip** value of the active management server is not correctly set. Set up the **mip** value according to "Configuration procedure of multi-network by classified use" of "Configuration procedure".

2. Check if the **httpip** value is correctly set.

Execute the following command:

#### # /etc/opt/FJSVwvbs/etc/bin/wvGetparam httpip

Confirm if the displayed IP address corresponds to httpip (the IP address used for client) from the active management server.

**If not**, the **httpip** value of the active management server is not correctly set. Set up the **httpip** value according to "Configuration procedure of multi-network by classified use" of "Configuration procedure".

3. Check if the topology is multi-network by classified use.

Compare the output (mip) done by Step 1 with that (httpip) by Step 2.

If both values are the same, the topology of multi-network is not configured. Set up the configuration according to "Configuration procedure of multi-network by classified use" of "Configuration procedure".

#### **Configuration procedure**

Take the following steps to configure the management server.



Modifications should be done only to the values of the management server and the monitoring node where the setup was incorrect.

1. Configure the management server.

Set up the IP addresses of the primary and secondary management server.

This setup should be done only when creating multi-network between the management server and the client by classified use.

#### Configuration procedure of the management server:

Take the following steps to set up configuration according to "Setup by command" of "7.3 Management server". Regarding this setup, Step 1, and 2 should be done **on all management servers and monitoring nodes**.

- 1. Stop Web-Based Admin View according to Step 1.
- 2. Set up the IP address of the management server according to Step 2.

#### Configuration procedure of multi-network by classified use:

Take the following steps to set up configuration according to "Setup by command" of "7.5 Multi-network between server and client by classified use". Regarding this setup, only Step 1 should be done **on all management servers**.

- Set up httpip according to Step 1.

Modify httpip on the management servers.

2. To validate the setup, restart Web-Based Admin View on all management servers and monitoring nodes.

Refer to "6.2 Restart".



In the file (hosts) on all the nodes configuring the cluster system and the management server, define the host information (IP address, host name) on all these nodes by a tool (e.g. vi(1). The hosts file is "/etc/inet/hosts" on Solaris OS, but it is "/etc/hosts" on Linux(R).

## 2.4.2 Setting the Web-Based Admin View Language

The locale of Web-Based Admin View is set to English as default. On clients with a Japanese environment, messages from monitoring nodes are displayed in English.

If you want to display the messages in Japanese, take the following steps to set up environment variables of Web-Based Admin View. You need to set up the variables using a system administrator access privilege on all the nodes and the cluster management servers that construct a cluster system.

This operation must be executed with the system administrator authority for all the cluster nodes and the cluster management server that make up the cluster system.

Attribute	Variable	Possible values	Meaning
sys	Lang	C, ja	Language environment in which Web-Based Admin View operates.
			C: Operates in English. ja: Operates in Japanese.
			If this variable is not set, Web-Based Admin View operates in the English environment.

Operation Procedure:

1. Stop Web-Based Admin View on all the management servers and nodes.

```
# /etc/init.d/fjsvwvcnf stop
# /etc/init.d/fjsvwvbs stop
```

2. Add the environment variable to the definition file (/etc/opt/FJSVwvbs/etc/webview.cnf) of Web-Based Admin View, and set the language.

Execute the following command on all the management servers and nodes, referring to the example.

# /etc/opt/FJSVwvbs/etc/bin/wvSetparam -add <attribute> <environment-variable>
<setting\_value>

Example: Add the environment variable and set the operation language to Japanese.

# /etc/opt/FJSVwvbs/etc/bin/wvSetparam -add sys lang ja

3. Restart Web-Based Admin View on all the management servers and nodes.

- For RHEL6

# /etc/opt/FJSVwvbs/etc/bin/wvCntl restart
# /etc/init.d/fjsvwvcnf start

- For RHEL7

```
# /etc/init.d/fjsvwvbs restart
```

```
# /etc/init.d/fjsvwvcnf start
```



- It is necessary to set the locale to Japanese on personal computers that are used as clients. If the above setting is changed on the clients with an English environment, messages might be garbled.

. . . . . . . . . . . .

- To change the environment variable again after it is added by the above procedure, execute the following command:
  - # /etc/opt/FJSVwvbs/etc/bin/wvSetparam lang <setting\_value>

For details on the command, see "4.5.3 Environment variable modification".

## Part 2 Web-Based Admin View GUI screen

This part explains the operating method for all the Web-based Admin View users.

## Chapter 3 Web-Based Admin View screen startup

This chapter explains about the startup of Web-Based Admin View.

Check the Web-Based Admin View functions following the registration of user names.

Then, register those user names into appropriate user groups.

## 3.1 Prerequisite for screen startup

Take the following steps for preparations:

- Determine the user group
- Set up the prerequisite client environment
- Set up the Web environment

### 3.1.1 User group determination

To use Web-Based Admin View, you first need to create a user group administered by the operating system for all the nodes, and register a user name.

A specific user group name is defined for each operation management product. A user registers his user name into this assigned user group. This enables the user to limit his operating range.

### 3.1.1.1 User group type

For details on the user group to be created, refer to the manual of the operation management product.

This section explains about the user group enable to use functions provided as Web-Based Admin View.

- wvroot

"wvroot" is a Web-Based Admin View administrator group, and is created automatically when Web-Based Admin View is installed. This permits availability of all kinds of operation management products running on Web-Based Admin View, such as environment setup, logging view, and all. Also, the users belonging to the system administrator (root) can use those products.



As users who belong to wvroot have authority equivalent to those who belong to the system administrator group, you need to register a user group with sufficient care.

When creating the wvroot user group automatically at installation of PRIMECLUSTER, GID (ID number of the group) is not specified. Even if GID is not changed, it does not affect the behavior of the operation management products; however, if you want to specify the same GID between the primary management server and the secondary management server, execute the groupadd(8) command or the groupmod(8) command:

. . . . . . . . . . .

- When specifying GID before installing PRIMECLUSTER and then creating the wvroot user group

# groupadd -g <GID> wvroot

- When changing GID of the wvroot user group after installing PRIMECLUSTER

# groupmod -g <GID> wvroot

#### 3.1.1.2 Register to a user group

Use commands to register user names into the user groups.



Register the user name first, and then, follow up with registration into the user group. The system administrator should initially install by the user name "root."



It's recommended that the user be registered into the wvroot group as the Supplementary Group. In case of registration as a Primary Group, the registration needs to be redone when Web-Based Admin View is uninstalled and installed again.

As a example for inputting user name "wvroot" into the group name as Supplementary Group, the registration way is described ad fallows.

- Adding a user group for a registered user
  - # usermod -G wvroot <user name>
- Registering a new user

# useradd -G wvroot <user name>

## 3.1.2 Prerequisite client environment

The client PCs of Web-Based Admin View support the following type of hardware, OS, and Web browser:

- Windows(R)
  - CPU

800 MHz, 32-bit (x86) processor, or 800 MHz, 64-bit (x64) processor

- Memory
- 512 MB or more
- OS/Web browser

Windows Vista(R)/Internet Explorer 9 (Java Plug-in is required)

Windows Vista(R), Windows(R) 7, Windows(R) 8.1, and Windows(R) 10/Internet Explorer 11 (Java Plug-in is required)



- To display Japanese, the following requirements need to be satisfied.

- The Japanese version of Windows(R) is installed, and Japanese is selected for the language environment used in Windows(R).

- Do not uninstall (delete IPv4) IPv4 as stated below:

netsh interface ipv4 uninstall

If IPv4 was accidentally uninstalled, install it again.

netsh interface ipv4 install

- Web browser

Internet Explorer 7/8/9/10 or 11 (Java Plug-in is required)

- J2SE(TM) Runtime Environment (Java Plug-in software is attached)

Java 8 (Update 66 or later and the latest Update is recommended)

- Display unit

800 x 600 dots or higher, supports high color (16 bits, 65,536 colors) display



- The conditions of the Web browser (including Java Plug-in) and clients vary depending on each operation management product. For details, refer to the documentation of the management product.

- The Web browser might not work properly depending on its version. In such a case, use the latest version.
- If Windows(R) is used for a client that is supported with Web-Based Admin View, the following color pallet problem may occur:

When the GUI screen of Web-Based Admin View is displayed with Windows(R), the 16-bit or 32-bit color mode must be used. The 24-bit color mode does not properly support an alpha component (transparency) that is required for RMS graphs. If 24-bit color is used, RMS graphs may not be displayed properly.

Whether problems will occur in 24-bit color mode depends on the graphics card and video driver being used.

## 🐴 See

- For the operating environment of the management server or the monitoring node, refer to "2.1 Operation Environment".

- For details on the Java Plug-in settings, refer to "3.1.3.2 Required for the Web browser environment".

## 3.1.3 Web environment

This section explains how to set up and use the Web browser.

Take the following steps:

- Set up the Web browser.
- Set up the client in compliance with the Web browser environment.

#### 3.1.3.1 Preparing the Web browser

You need to set up the Web browser environment for the client.

As the supported OS and Web browser varies depending on each operation management product, be sure to check the documentation first.

For the basic browser supported for Web-Based Admin View, refer to "3.1.2 Prerequisite client environment".

For the installation method and environment configuration, follow the instructions for each browser.

Web-Based Admin View uses a Web browser cookie to identify the client.

For the method of setup to handle cookies, follow the instructions for each browser.

#### **Proxy setting**

#### Setup method on Internet Explorer

- 1. Select [Internet Options] from the [Tools] menu of the Web browser.
- 2. Select the [Connections] tab, on the [Internet Options] screen.
- 3. Click [LAN setting] in the LAN setting area.
- 4. De-select all the check boxes on the [Local Area Network (LAN) settings] screen.
- 5. Select [OK] on the [Local Area Network (LAN) settings] screen.
- 6. Select [OK] on the [Internet Options] screen.

#### 3.1.3.2 Required for the Web browser environment

The supported Java Plug-in versions are clarified in "3.1.2 Prerequisite client environment". Java Plug-in, which Oracle provides for free, may come with some operation management product packages.

Follow the setup method described in "Setting up Java Plug-in".

#### Setting up Java Plug-in

#### Windows(R)

- 1. Check if Java Plug-in is installed.
  - If Java 8 is displayed when clicking the following item of the control panel, it is not necessary to install Java Plug-in.
    - For Windows Vista(R), Windows(R) 7, Windows(R) 8.1, and Windows(R) 10
    - [Programs and Features]
- 2. Install Java Plug-in.

Download J2SE(TM) Runtime Environment from the Oracle download site, and start the installation.

Install following the procedure displayed on the screen.

- 3. Set Java Runtime Parameters. (only for displaying the GUI screen in English)
  - 1. Set the display format of the control panel.

Follow the setup method described in "Changing the Language".

- For Windows Vista(R)
  - Classic View
- For Windows(R) 7, Windows(R) 8.1, and Windows(R) 10

View by: Large icons or Small icons

2. Select [Start] - [Control Panel] - [Java] - [Java] tab - [View].

Java Runtime Environment Settings screen is displayed.

3. Select [User] tab of Java Runtime Environment Settings screen and add Runtime Parameters to the following.

.....

-Duser.language=en -Duser.country=us



If Java is running when setting Runtime Parameters, restart the program which uses Java after the setting.

If the program which uses Java is unknown, restart the Windows(R) operating system.

This completes the setup.

## G Note

- If the version of the installed Java Plug-in is older than that described above, install a recommended version.
- Java Plug-in should be installed after the Web browser. If you uninstall the Web browser after installing Java Plug-in, uninstall the Java Plug-in, and then reinstall it again.

- In some Java Plug-in versions on Windows(R), the cache files might remain in the client's system directory. In that case, delete these cache files by disk cleanup function on a regular basis.

3.2 Screen startup

When all preparations are completed, start the Web-Based Admin View screen.

#### **Procedures:**

1. Start the Web browser on a client.

2. Designate the following URL to access the management server:

http://<host name>:<port number>/Plugin.cgi

#### <host name>

httpip (host name or IP address used for the client) of the primary or secondary management server.

The default value of httpip is set to the IP address, which is assigned to the displayed node name as a result of executing "uname - n."

#### <port number>

Enter "8081." If the port number was changed according to "7.2.1 http port number", designate the number.



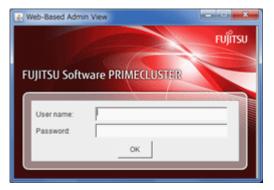
- If Web-Based Admin View is not activated despite specifying the host name in *<host name>*, designate the IP Address assigned to the host name directly.

- When specifying the IPv6 address for <host name>, enclose it in brackets "[]". (Example: http://[1080:2090:30a0:40b0:50c0:60d0:70e0:80f0]:8081/Plugin.cgi)
- The access method may vary depending on the operation management product. Pay close attention when interoperating with the operation management products that employ different access methods. Refer to "3.3.4 Concurrent use of operation management products with different access methods".
- When you input this to URL, it accesses the running management server. When the primary management server starts, it will connect to the primary management server even if you specify the host of the secondary management server. When the primary management server stops, it will connect to the secondary management server. If you want to connect the secondary management server when the primary management server started, specify the following URL to access it.

- http://<host name>:<port number>/Plugin.html

- 3. When the Web-Based Admin View is started, the following window is displayed.

Enter a user name and password registered in the management server and then click [OK].



## 🌀 Note

This screen cannot be closed by clicking the [X] button of upper-right corner in the screen.

4. When the authentication completes, the Web-Based Admin View screen is available.



- Do not start multiple Web-Based Admin Views on a single client.

- When you connect to Web-Based Admin View without installing JRE on the client, the message which instructs to install JRE1.2.1 is displayed. In this case, install Java Plug-in written in "3.1.2 Prerequisite client environmentt" and connect again.
- Do not click the [Forward], [Back] or [Reload]/[Update] button of the browser to change the pages after starting the Web-Based Admin View screen.
- Some browsers might be hung up during operation.
  - If the browser window disappears, restart the browser, and then reconnect to the URL.
  - If the browser does not work (not responsive), reload URL or restart the browser.
  - If the page looks hung-up right after starting the Web-Based Admin View, try to move a mouse on the browser. It might help to continue operation.
- If "Welcome to Web-Based Admin View" does not appear after a read of URL by Internet Explorer, an appropriate Java Plug-in may not be installed. Confirm that an appropriate Java Plug-in is installed by using "Add or delete application" in the control panel. If the Java Plug-in is not installed, or the unsupported old version Java Plug-in is installed, install the Java Plug-in as explained in "Setting up Java Plug-in." Also, if the "security warning" dialog box appears, and prompts you to decide whether "Java Plug-in" should be installed and executed, select [No].
- If dynamic operation of the secondary server is set in "7.4 Secondary management server automatic migration", the active primary management server or secondary management server may be automatically connected regardless of designating URL of the specific monitoring node. For details, refer to "7.4 Secondary management server automatic migration".
- If the authentication is failed for multiple times at Step 3, the message 0016 is displayed, and the login process is disabled. Refer to "Corrective action 3" of "Symptom 17" in "Appendix B Troubleshooting".
- When operating with Web-Based Admin View, a popped up screen might be displayed at the back side of other screens.

In this case, use a keyboard or a mouse to display the screen at the front.

## 3.3 Web-Based Admin View screen

When you start Web-Based Admin View, the Web-Based Admin View screen appears.

The supported functions of Web-Base Admin View are indicated as a menu in the left panel of the screen.

### 3.3.1 Menu functions

The Web-Based Admin View screen supports the following facilities.

Refer to "The menu outline."

#### Figure 3.1 Web-Based Admin View screen

PRIMECLUSTER	FUJរែទប
Server: Primary 192.168.10.1	Secondary 192.168.10.2
Cluster Services	Logout NodeList Version
💥 Global Disk Services	Web-Based Admin View
💥 Global File Services	and the
🔁 Web-Based Admin View tools	
💥 Manual	
Common	

#### The menu outline

The menu is categorized into the following two types:

- a. The operation management screen and some documentation of operation management products provided by PRIMECLUSTER.
- b. The operation management screen and some documentation of operation management products provided by Non-PRIMECLUSTER (such as Symfoware).

The following operations are possible for the menu of a:

#### - Operation management product name (PRIMECLUSTER)

Handles the management screen for the following PRIMECLUSTER products.

- Global Cluster Services (CF, CRM, RMS, SIS)
- Global Disk Services (hereinafter GDS)
- Global File Services (hereinafter GFS)
- Web-Based Admin View tools

Handles the logging view and environment setup. For details, refer to "3.3.2 Web-Based Admin View tools menu functions".

- Manual

Displays the documentation of PRIMECLUSTER as online manual.

The following operations are possible for the menu of b:

- Operation management product name (non-PRIMECLUSTER)

Handles the management screen of the following non-PRIMECLUSTER operation management product.

For example, the following menu category is displayed in the environment where Symfoware has been installed.

- Symfoware

For details, see the document for each operation management product.

#### - Common

Display the documentation of non-PRIMECLUSTER as online manual. For details, refer to "3.3.3 Common menu functions".



- The Web-Based Admin View menu varies depending on the products installed. You must be particularly careful when using products with different access methods because the startup menu of the products may not be displayed. For details, refer to "3.3.4 Concurrent use of operation management products with different access methods".

.....

- If a dialog is displayed because of a Web-Based Admin View error, the picture on the right area of the screen turns red. Click the red picture, and then a hidden dialog is brought to front. As any errors come into focus, be sure to make the picture viewable.
- Note that the online manual installed or uninstalled after the Web-Based Admin View startup is not displayed unless the Web-Based Admin View is restarted.

関 Point

- The following message may be output when a menu is selected:

💌 Web-Based Admin View			
٢	0022 Re-connect to following URL. http://10.20.30.40:8081/Plugin.cgi Do you want to connect?		
J,	Yes No		

In this case, follow the instructions below:

1. When other application is activated

Exit all active applications, and open URL specified by the message to re-access.

2. When no other application is activated

Start up the application in response to the message dialog.

Ensure that the displayed URL is automatically connected after the Web-Based Admin View screen is terminated. When you wish to redisplay the Web-Based Admin View screen that was displayed first, start up the new window of the Web browser or other new Web browser and access by the first method (http://host name or IP address: port number).

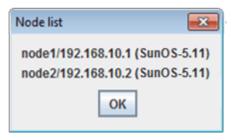
- The following window might be displayed when you try to start some application with other application active.



In such a case, start up the Web browser separately, and access the designated URL displayed in the "0021" message. Or, terminate all active applications, and then re-select the menu.

### - NodeList

A list of nodes connected to a management server is displayed in the following screen.



Format: Node name / IP address (classified by OS type)

```
In this case, it should be "Node name: node1, IP address: 192.168.10.1, OS type: Solaris 11 OS."
```

# 3.3.2 Web-Based Admin View tools menu functions

The Web-Based Admin View tools menu supports the following facilities.

[Web-Based Admin View tools menu outline] provides facilities overview locations. Click the arrow button on the left side of [Web-Based Admin View tools] to return to the Web-Based Admin View screen.

### Figure 3.2 Web-Based Admin View screen (Web-Based Admin View tools menu)



### Web-Based Admin View tools menu outline

### - Logging view

Displays the login log and operation log files. For reference, the retrieve facility can be used to fetch information. With the retrieval function, you can narrow down the information.

Reference location: "Chapter 5 Web-Based Admin View log reference"

### - Environment settings

You can set up the environment of Web-Based Admin View.

This operation environment falls into three types; user environment, system environment, and node environment.

Reference location: "Chapter 4 Environment settings"

# 3.3.3 Common menu functions

The Common menu supports the following facilities.

[Common menu outline] provides manual reference locations. Click the arrow button on the left side of [Common] to return to the Web-Based Admin View screen.

# Server: Primary 192.168.10.1 Secondary 192.168.10.2

### Figure 3.3 Web-Based Admin View screen (Common menu)

### Common menu outline

- Manual

Displays the documentation as online manual.

# 3.3.4 Concurrent use of operation management products with different access methods

Each operation management product provided on Web-Based Admin View may have a different method to access the management server as described in "Procedure" of "3.2 Screen startup".

In case of the concurrent use of operation management products with different access methods, start up two Web browsers or a new window from the Web browser. Then, designate URL according to the specified access method on each different browser screen and display the Web-Based Admin View screen.

# 3.4 Screen exiting

Exit from the Web-Based Admin View screen as described below:

### Logout from screen

Take the following steps to log off the Web-Based Admin View screen:

- 1. Close all screens if the management window of the operation management product is displayed.
- 2. Select [Logout] only when the Web-Based Admin View screen is displayed.

# Exit of screen

Take the following steps to exit the Web-Based Admin View screen:

1. Log off the Web-Based Admin View screen according to above "Logout from screen."

- 2. The login screen is displayed. To close the login screen and then exit the Web-Based Admin View screen.
  - Exit the web browser.
  - Switch the screen automatically by specifying a new URL or other bookmark.
  - Click [Back] of the web browser.



- When exiting the web browser, select the [File]-[Close] menu, or click the [X] button on upper-right corner of browser.
- The login screen cannot be closed by clicking the [X] button of upper-right corner in the screen.
- The login screen might remain in a while after exiting the web browser.

# 3.5 Screen operation instruction

This provides operating instructions.

# 3.5.1 Tentative modification of screen display settings (Language, Look & Feel)

If necessary, Look & Feel of the screen can be changed from Web-Based Admin View.

### Changing the Look & Feel

For Look&Feel modifications, select [Web-Based Admin View tool] - [Environment settings], and then change in the [Display setup] property of the [System environment] tab in the Environment setup page.

# See For details, refer to "Chapter 4 Environment settings".

# Changing the Language

If you use the Japanese version of the client operating system, you can set Web-Based Admin View to display in English.

Change the language before starting the Web browser.

Set Java Runtime Parameters.

### When changing language to English

1. Select [Control Panel] - [Java] and startup Java control panel.

Java Runtime Environment Settings screen is displayed.

- 2. Click on [View] on [Java] tab to view Java Runtime Environment Settings screen, and select [User] tab.
- Add the following setting on the column "Runtime Parameters" of the Java version that you are using.
   -Duser.language=en -Duser.country=us

### When changing language to Japanese

1. Select [Control Panel] - [Java] and startup Java control panel.

Java Runtime Environment Settings screen is displayed.

- 2. Click on [View] on [Java] tab to view Java Runtime Environment Settings screen, and select [User] tab.
- 3. If the following setting exists on the column "Runtime Parameters" of the Java version that you are using, delete it. -Duser.language=en -Duser.country=us



If Java is running when setting Runtime Parameters, restart the program which uses Java after the setting.

If the program which uses Java is unknown, restart the Windows(R) operating system.

# 3.5.2 Switchover of management server

The connected management server can be switched on Web-Based Admin View if necessary.

### Switching the management server

To switch the management server, click the button on the Web-Based Admin View screen. Each button displays the IP address of currently active primary or secondary management server. The button in green stands for the active management server connected to clients. To switch the management server, log off, and then select the non-green button.

Server: Primary	192.168.10.1	Secondary	192.168.10.2	
G Note				

The server switching button is available only when you are logged off.

# 3.5.3 Screen Size Modification

Note the following when changing the screen size:

# 🌀 Note

The modified screen size is tentative. It is not saved if the browser is terminated. When changing the screen size, the server might log off automatically depending on the browser.

# 3.5.4 Use Mouse

This shows how to use a mouse tailored to your needs.

Single selection

To select an item such as an icon, button, or menu, position the mouse on the desired item. Then, click left mouse button to select the target of operation. If single selections are repeated, the last selected will be effective.

### Multiple selection

Holding the <Shift> key down, position the mouse pointer on an item and click the mouse left button.

### **Canceling selection**

Holding the <Cntl> key down, position the mouse pointer on the item to be canceled and click the mouse left button.

### Deselecting text

Position the mouse pointer on an area other than icons or selection items and click the mouse left button to cancel all selections.

# Part 3 Web-Based Admin View tools menu

This part explains the functions provided by Web-Based Admin View tools menu.

Chapter 4 Environment settings	. 34
Chapter 5 Web-Based Admin View log reference	.57

# Chapter 4 Environment settings

### **Target users**

All users using the Web-Based Admin View

Set the operation environment for the Web-Based Admin View as described below.

# 関 Point

For reference or setup of operation environment, there are two methods; one is to execute a command directly on each management server and monitoring node, and the other is on an environment settings screen. The latter one is explained below.

Normally, when the setup is modified on the environment settings screen, all monitoring nodes should be activated, and are connected to the primary management server as well. If there's an inactive monitoring node or node which is not monitored by the primary management server, refer to "4.5 Reference and modification by command" and set up as required on each node.

There are the following three kinds of functions with the environment settings screen. Each screen is displayed by selecting a tab.

- User environment
- System environment
- Node environment

The following usage varies according to each function.

	User environment	System environment	Node environment	
Use	Set tentative operating conditions	Determine the operating conditions of the entire system	Specific setting for each monitoring node	
Target user	All users	The root user or the user that belongs to the Web-Based Admin View administrator group (wvroot) (*1)		
Setup timing	As long as the Web-Base	-Based Admin View is active.		
Setup validation timing (*2)	<ul> <li>[End]</li> <li>-&gt; 0052_message : select [Yes]</li> <li>-&gt; The value is validated right.</li> </ul>	<pre>[End] -&gt; 0051 message : select [Yes] -&gt; 0015 message : select [OK] -&gt; Log off (*3) -&gt; { Web-Based Admin View running on the management server restarts automatically } -&gt;_0003 message : the value is validated.</pre>	<pre>[End] -&gt; 0059 message : select [Yes] -&gt; 0015 message : select [OK] -&gt; Log off (*3) -&gt; { Web-Based Admin View running on the management server restarts automatically } -&gt; 0003 message : the value is validated.</pre>	

(\*1) The user who logs in by authority of other user group, except administrator group (wvroot), cannot set the system environment and the node environment because the tabs for those environments are not displayed.

(\*2) Below explains the operation procedure from selecting [End] in the environment settings screen to validating of setting value.

00xx : Indicates the number of a displayed message.

(\*3) Be sure to log off all clients connecting to the management server. Web-Based Admin View waits until all clients are logged off, and then restarts automatically. When selecting [Yes] to 0051 or 0059 message, 0015 message is displayed on all clients. Be sure to log off all clients.

When any client is logged in, Web-Based Admin View is started up again automatically if certain amount of time (10 minutes) passes. So the logged-in clients must be logged off, and then 0007 message is displayed.

G Note

Please select [Cancel] if the operating environment setting is ended without any changes for settings.

# 4.1 Environment settings start

Start the environment settings as described below.

# Target users

All users using the Web-Based Admin View

- Select the [Web-Based Admin View tools] button on the menu of Web-Based Admin View screen.

# Figure 4.1 Web-Based Admin View screen

- Select the [Environment settings] button in the [Web-Based Admin View tools] menu.

Figure 4.2 Web-Based Admin View screen (Web-Based Admin View tools menu)



The Environment settings screen is displayed.

# 4.2 User environment

# Target users

All users using the Web-Based Admin View

ltem	Usage	Default value
Client detailed trace log	Select this item when specific client information is necessary for maintenance or troubleshooting.	No
Inactivity timeout	The inactivity timeout is a security feature which locks Web-Based Admin View after a fixed period, so an unauthorized user cannot perform arbitrary operations when an authorized user is away from his seat.	No
Inactivity timeout interval	The inactivity timeout interval is standby time until Web-Based Admin View is locked.	10 minutes



Note that the user environment settings only remain valid until logged out. The value is default system setting at the next login.

# 4.2.1 Log & Inactivity timeout

Set the client detailed trace log, inactivity timeout, and the inactivity timeout interval as described below.

🖆 Environment settings		
User environment System enviro	nment Node environment	
Log & Inactivity timeout	Client detailed trace log	
	◯ Yes ◉ No	
	Inactivity timeout	
	○ Yes	
	No	
	OK Cancel Help	

# Figure 4.3 User environment (Log & Inactivity timeout) screen

### Client detailed trace log

Select [Yes] or [No] for collecting a detailed trace. When collecting the log, select [Yes]. When not collecting the log, select [No]. Inactivity timeout

Select [Yes] or [No] for the inactivity timeout. When enabling the timeout, select [Yes]. When disabling the timeout, select [No].

### Inactivity timeout interval

The inactivity timeout interval is displayed only if the inactivity timeout is enabled. The inactivity timeout interval may be set using the slider bar. You may also enter the time directly and press [Enter]. The timer units are in minutes, and any number from 10 to 60 may be entered.

# Information

### On the inactivity timeout

The inactivity timeout is a security feature. If the user does not interact with GUI at the specified interval, GUI will force the user to reenter his password before any further operations are allowed. After the password is successfully entered, the user can continue working.



The support status varies according to the operation management product. For details, refer to the documentation provided with each management product.

# 4.3 System environment

# Target users

Users who belong to the Web-Based Admin View administrator group



- After all of the operation management views are exited, use the environment settings menu.

- The system environment is available only when the environment settings are activated in the primary management server.

### Notices on system environment settings

The following explain setting items and conditions where they are required:

Item		Default value	Usage	
Display setting	Look & Feel	Metal	Use this item to change the Look & Feel displayed on the screen.	
Client detailed tr	Client detailed trace log		The trace log should be set up when the specific client information is required for maintenance an troubleshooting.	
Inactivity timeout	Inactivity timeout Inactivity timeout interval	No 10 minutes	This blocks improper operations by the unauthorized users by locking Web-Based Admin View. This function's validation varies depending on each operation management product.	
Primary manage	ment server	Default set at installation	To change the IP address of the primary management server.	
Secondary mana	gement server	Default set at installation	To change the IP address of the secondary management server	
Secondary management server automatic migration		No	Execute "7.4 Secondary management server automatic migration" setting.	
Client - management server connection time		10 seconds	Specify the time interval of the client to monitor the management server. The client checks the state of the management server periodically at the specified time interval. If it takes time to connect to the client because of a network failure, enter a larger value. Then the disconnection might be avoided.	
Automatic connection to management server		No	It indicates whether or not the client be connected automatically to an active management server. The displayed value cannot be modified on the GUI screen.	
		10	Note that this parameter is invalid in this version.	
Management server - monitoring node connection time		10 seconds	It specifies the time interval of the management server surveillance for the monitoring node. The management server monitors requests from a monitoring node at regular intervals.	
			If it takes time to connect to the client because of a network failure, enter a larger value. Then the disconnection might be avoided.	

# Table 4.2 System environment settings item list

Item	Default value	Usage
Reconnection interval	30 seconds	It determines the interval of connection requests issued from the monitoring node to the management server.

# Log files / Trace log files

To set up these items when specific information is required for maintenance and troubleshooting.

Normally, setup modification is not required.

Item		Default Value
Login log	File size	100KB
	Number of files	2
Operation log	File size	100KB
	Number of files	5
Event log	File size	100KB
	Number of files	2
Management server trace log	File size	200
	Number of files	5
	Detailed trace log	Yes
Monitoring node trace log	File size	200KB
	Number of files	5
	Detailed trace log	Yes



When the system environment settings are modified, the Web-Based Admin View is restarted to make it valid.

# 4.3.1 Display setup

Set the display language and Look & Feel.

🔬 Environment settings 📃 💼 🗮			
User environment System	m environment Node environment		
Display setting	Look & Feel		
Log & Inactivity timeout			
Primary server			
Secondary server	Look & Feel: Metal		
Client			
Monitoring node			
Login log			
Operation log			
Event log			
Server trace log			
Monitoring node trace log			
	OK Cancel Help		

# Figure 4.4 System environment (Display setting) screen

### Look & Feel

The default of Look & Feel is Metal. "Look & Feel" can select either the following according to the environment of client OS.

Look & Feel	Client OS	Java Plug-in
Metal	All	All
Nimbus	All	All
CDE/Motif	All	All
Windows	All	All
Windows Classic	All	All
Any	All	All

# 関 Point

Display language

- Client

The displayed language can be set or modified in the client locale.

Refer to "Changing the Language".

. . . . . . . . . . . . . . . . . .



The displayed language is supported depending on each management product. Refer to the manual of each operation management product.

.....

.....

.....

# 4.3.2 Log & Inactivity timeout

Set up the client detailed trace log, inactivity timeout, and the inactivity timeout interval as described below.

🖆 Environment settings					×
User environment System	m environment	Node environment			
Display setting Log & Inactivity timeout	Client detailed	trace log			
Primary server Secondary server Client Monitoring node	○ Yes ● No				
Login log Operation log Event log Server trace log Monitoring node trace log	Inactivity timeo O Yes No	put			
		OK Cancel	Help		

### Figure 4.5 System environment (Log & Inactivity timeout) screen

### Client detailed trace log

Select [Yes] or [No] for collecting a detailed trace. When collecting the log, select [Yes]. When not collecting the log, select [No].

Inactivity timeout

Select [Yes] or [No] for the inactivity timeout. When enabling the timeout, select [Yes]. When disabling the timeout, select [No].

### Inactivity timeout interval

The inactivity timeout interval can be set using the slider bar. You may also enter the time in the text field and press [Enter]. The timer units are indicated in minute. Enter any number from 10 to 60.

The inactivity timeout interval is displayed only if it is enabled.

# 🛐 Information

### On the inactivity timeout

The inactivity timeout is a security feature. If the user does not interact with GUI at the specified interval, GUI will force the user to reenter his password before any further operations are allowed. After the password is successfully entered, the user can continue working.



The support status varies according to the operation management product. For details, refer to the manual of each product.

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# 4.3.3 Primary management server

Set the IP address of the primary management server.

# Figure 4.6 System environment (Primary server) screen

Environment settings		
User environment System	m environment	Node environment
Display setting Log & Inactivity timeout	Primary server	ſ
Primary server	Name:	192.168.10.1
Secondary server Client Monitoring node	URL:	: http:// 192.168.10.1 : 8081
Login log		
Operation log		
Event log		
Server trace log		
Monitoring node trace log		
		OK Cancel Help

Primary server

Enter the IP address of the primary management server.

Enter the IP address which is to be designated to **mip** ("IP address/Host name for identifying own host ") of a node that will be the primary management server on the primary management server. For **mip**, refer to "4.4.1 IP address/Host name."

For the URL to access the primary management server, the URL of the primary management server that is currently set is displayed.



Only IP (IPv4 or IPv6) addresses can be set to the primary management server, the secondary management server, and httpip. Note that IPv6 link local addresses cannot be set to these servers.

# 4.3.4 Secondary management server

Set the IP address of the secondary management server.

Figure 4.7 System environment screen (when the secondary management server automatic migration is selected)

🛓 Environment settings	
User environment Syste	m environment Node environment
Display setting Log & Inactivity timeout	Secondary management server automatic migration
Primary server	Yes
Secondary server	○ No
Client	0
Monitoring node	
Login log	Management server group address
Operation log	manugement server group address
Event log	Address: ff02::1
Server trace log	
Monitoring node trace log	
	OK Cancel Help

Figure 4.8 System environment screen (when the secondary management server automatic migration is not selected)

🛃 Environment settings	
User environment Syste	m environment Node environment
Display setting Log & Inactivity timeout	Secondary management server automatic migration
Primary server	0.4
Secondary server	○ Yes
Client	No
Monitoring node	
Login log	Secondary server
Operation log	Secondary server
Event log	Name: 192.168.10.2
Server trace log	·
Monitoring node trace log	URL: http:// 192.168.10.2 : 8081
	OK Cancel Help

### Secondary management server automatic migration

Specify whether or not the secondary management server automatic migration is selected. When [Yes] is selected, the [Management server group address] setting is available. When [No] is selected, the [Secondary management server] setting is available.

The secondary management server automatic migration is only available when the management server IP address is IPv4 address.

When the management server IP address is IPv6 address, select [No].

### Management server group address

Set the **Multicast address** or broadcast address including the potential management server that is automatically selected from the secondary management server.

# G Note

Whenever possible, set the following multicast address for the management server group address.

Example : If the IP address of the primary management server is "10.20.30.40," change "10" to "231" to make the management server group address to "231.20.30.40."

.....

### Secondary server

Enter the IP address of the secondary management server.

Enter the IP address which is to be designated to **mip** ("IP address/Host name for identifying own host ") of a node that will be the secondary management server on the secondary management server. For **mip**, refer to "4.4.1 IP address/Host name."

For the URL to access the secondary management server, the URL of the secondary management server that is currently set is displayed.



Only IP (IPv4 or IPv6) addresses can be set to the primary management server, the secondary management server, and httpip. Note that IPv6 link local addresses cannot be set to these servers.

# 4.3.5 Client

Set the connection monitoring time between the client server and the management server, and display the automatic connection to the management server.

Figure 4.9 Scree	en environment	(Client	) screen

🖆 Environment settings	
User environment System	n environment Node environment
Display setting Log & Inactivity timeout Primary server Secondary server Client Monitoring node Login log Operation log Event log Server trace log Monitoring node trace log	Client - management server connection time Time (sec): 10 5 60 Automatic connection with management server Yes No
	OK Cancel Help

Client - management server connection time

Enter the interval (from 5 to 60 seconds) in the text field and press [Enter], or set the interval by moving the bar (slider) to the left or right.

Automatic connection with management server

This parameter is invalid in this version.

# 4.3.6 Monitoring node

Set the connection monitoring time between the monitoring node and the management server and the reconnection interval as described below.

📤 Environment settings	
User environment System	m environment Node environment
Display setting Log & Inactivity timeout Primary server Secondary server Client Monitoring node	Management server - monitoring node connection time Time (sec): 10 5 60
Login log Operation log Event log Server trace log Monitoring node trace log	Reconnection interval Time (sec): 30 5 5 300
	OK Cancel Help

# Figure 4.10 System environment (Monitoring node) screen

Management server - monitoring node connection time

Enter the interval (from 5 to 60 seconds) in the text field and press [Enter], or set the interval by moving the bar (slider) to the left or right.

# Reconnection interval

Enter the interval (from 5 to 300 seconds) in the text field and press [Enter], or set the interval by moving the bar (slider) to the left or right.

# 4.3.7 Login log

Set the size and number of login log files for the management server as described below.

Figure 4.1	1 System	environment	(Login	loa)	screen
Figule 4.1	i System	environment	(LUGIII	iug)	Scieen

📤 Environment settings	
User environment System	m environment Node environment
Display setting	Size of login log file
Log & Inactivity timeout Primary server	Size of file (KBytes): 100
Secondary server Client	50 500
Monitoring node	
Login log	Number of login log files
Operation log	
Event log	Number of files: 2
Server trace log	
Monitoring node trace log	2 10
	OK Cancel Help

Size of login log file

Enter the file size (from 50 to 500 KB) in the text field and press [Enter], or set the size by moving the bar (slider) to the left or right.

Number of login log files

Enter the number of files (from 2 to 10) in the text field and press [Enter], or set the number by moving the bar (slider) to the left or right.

# 4.3.8 Operation log

Set the size and number of operation log files for the management server as described below.

Eiguro 4	12 0	votom	onvironmon	+ 10	orotion		ooroon
Figure 4	. 12 3	ystem	environmen	ii (Oj	Jeralion	iug)	Screen

🙆 Environment settings		
User environment Syste	m environment Node environment	
Display setting	Size of operation log file	
Log & Inactivity timeout Primary server	Size of file (KBytes): 100	
Secondary server Client Monitoring node	50	
Login log Operation log	Number of operation log files	
Event log	Number of files: 5	
Server trace log		
Monitoring node trace log	2 10	
	OK Cancel Help	

Size of operation log file

Enter the file size (from 50 to 500 KB) in the text field and press [Enter], or set the size by moving the bar (slider) to the left or right.

# Number of operation log files

Enter the number of files (from 2 to 10) in the text field and press [Enter], or set the number by moving the bar (slider) to the left or right.

# 4.3.9 Event log

The following parameters are valid only if the operation management products like PRIMECLUSTER supporting event notification from a monitoring node are installed.

The size and number of event log files to be stacked in the management server are set up.

Figure	4 13	System	environment	(Event la	na) screen
Figure	4.13	System	environment		Jy) scieen

🛓 Environment settings	
User environment System	m environment Node environment
Display setting	Size of event log file
Log & Inactivity timeout Primary server	Size of file (KBytes): 100
Secondary server Client Monitoring node	50 500
Login log Operation log	Number of event log files
Event log	Number of files: 2
Server trace log Monitoring node trace log	2 10
	OK Cancel Help

Size of event log file

Enter the file size (from 50 to 500 KB) in the text field and press [Enter], or set the size by moving the bar (slider) to the left or right.

Number of event log files

Enter the number of files (from 2 to 10) in the text field and press [Enter], or set the number by moving the bar (slider) to the left or right.

# 4.3.10 Server trace log

Set the size and number of management server trace log files, and whether to collect a management server detailed trace log as described below.

🛓 Environment settings			
User environment System	m environment Node environment		
Display setting	Size of management server trace log file		
Log & Inactivity timeout Primary server	Size of file (KBytes): 200		
Secondary server Client Monitoring node	50 1000		
Login log Operation log	Number of management server trace log files		
Event log	Number of files: 5		
Server trace log Monitoring node trace log	2 10		
	Management server detailed trace log		
	● Yes ○ No		
OK Cancel Help			

Figure 4.14 System environment (Server trace log) screen

Size of management server trace log file

Enter the file size (from 50 to 1000 KB) in the text field and press [Enter], or set the size by moving the bar (slider) to the left or right.

Number of management server trace log files

Enter the number of files (from 2 to 10) in the text field and press [Enter], or set the number by moving the bar (slider) to the left or right.

Management server detailed trace log

Select whether to collect a management server detailed trace log.

# 4.3.11 Monitoring node trace log

Set the size and number of node trace log files, and whether to collect a node detailed trace log as described below.

🛓 Environment settings	
User environment System	m environment Node environment
Display setting	Size of monitoring node trace log file
Log & Inactivity timeout Primary server	Size of file (KBytes): 200
Secondary server Client Monitoring node	50 1000
Login log Operation log	Number of monitoring node trace log files
Event log Server trace log	Number of files: 5
Monitoring node trace log	2 10
	Monitoring node detailed trace log
	● Yes ○ No
	OK Cancel Help

Figure 4.15 System environment (Monitoring node trace log) screen

Size of monitoring node trace log file

Enter the file size (from 50 to 1000 KB) in the text field and press [Enter], or set the size by moving the bar (slider) to the left or right. Number of monitoring node trace log files

Enter the number of files (from 2 to 10) in the text field and press [Enter], or set the number by moving the bar (slider) to the left or right.

Monitoring node detailed trace log

Select whether to collect a monitoring node detailed trace log.

# 4.4 Node environment

Target users

Users who belong to the Web-Based Admin View administrator group

Table 4.3 List of node environment settings items			
Item	Usage	Default value	
IP address/Host name for identifying own host	Set up when modifying <b>mip</b> (the IP address or the host name for identifying own host) on the management server or the monitoring node for the environment settings. This IP address is used for communication among management servers and monitoring nodes.	The IP address, which is assigned to the displayed node name as a result of executing "uname -n"	
IP address/Host name of the WWW server	If the monitoring node for environment settings is a management server, <b>httpip</b> (the IP address or the host name that is set for the clients) is displayed.	The IP address, which is assigned to the displayed node name as a result of executing "uname -n"	

Item	Usage	Default value
	The displayed IP address/host name cannot be modified on the GUI screen. For modification, refer to "7.5 Multi-network between server and client by classified use".	
Object of secondary management server automatic migration	Specify whether the monitoring node is automatically selected as the secondary management server when "7.4 Secondary management server automatic migration" is set.	Yes

G Note

- From [Node], select a management server or node, and then set up respectively.
- When setting the operation environment, exit all other applications of Web-Based Admin View first.

- When the node environment settings items are modified, Web-Based Admin View of the monitoring node is restarted to enable the settings.

. . . . . . . . . . . . . . . . . .

- The node environment is available only when the environment settings is activated in the primary management server.

# 4.4.1 IP address/Host name

Set up and display the **mip** (IP address or host name for identifying own host) and the **httpip** (IP address or host name of WWW server).

Figure 4.16 Node environment (IP address/Host name) screen

🛓 Environment settings	
User environment Sys	tem environment Node environment
Node 192.168.10.1 IP address/Host name Server environment	IP address / Host name for identifying own host Name: 192.168.10.1
	IP address / Host name of WWW server Name: 192.168.10.1
	OK Cancel Help

IP address/Host name for identifying own host

Enter the **mip** (the IP address or the host name for identifying own host) value on the management server or monitoring node selected as [Node]. This IP address is used for communication between the management servers and the monitoring nodes.

The initial value is set to the IP address, which is assigned to the displayed node name as a result of executing "uname -n."

IP address/Host name of WWW server

If the monitoring node selected as [Node] is used as a management server, the system displays the **httpip** (the IP address or host name of the client) value.

The initial value is set to the IP address, which is assigned to the displayed node name as a result of executing "uname -n."



- If the IP address or host name for identifying own host is not set, the environment settings screen cannot be closed.
- Only IP (IPv4 or IPv6) addresses can be set to the primary management server, the secondary management server, and httpip. Note that IPv6 link local addresses cannot be set to these servers.

# 4.4.2 Server environment

Set whether the server should be a selection target for the secondary management server.

Figure 4.17 Node environment(Server environment) screen

lenvironment settings		- • ×
User environment System	m environment Node environment	
Node 192.168.10.1	Object of secondary management server automatic migration	
IP address/Host name	● Yes ○ No	
Server environment		
	OK Cancel Help	

Object of secondary management server automatic migration

Specify whether the monitoring node selected as [Node] is to be automatically singled out as the secondary management server. The initial value is "Yes."

# 4.5 Reference and modification by command

The Web-Based Admin View administers setting items as environment variables.

These environment variables can be referred or modified by executing a command on a management server and monitoring node as well as on the Environment setup screen.

# 4.5.1 Environment variable

Web-Based Admin View internally administers is corresponding to which parameter that can be referred and modified on the Environment settings screen.

Attribute	Environment variable	Setting value		Description
usr	look-and-feel	Metal,CDE/Motif,Windows,Any		Look & Feel
usr	locale	japanese, english		Language
usr	c-tlog-debug	on, off		Client detailed trace log
usr	out-time	When monitoring inactive timeout interval: <i>nnnn</i> (min: 10, max:60) When not monitoring inactive timeout interval: 0	minute	Inactivity timeout interval
sys	primary-server	IP address		IP address of Primary server
sys	secondary-server	IP address		IP address of Secondary server
sys	keep-time	<i>nnnn</i> (min: 5, max: 60)	second	Client - management server connection time
sys	health-time	<i>nnnn</i> (min: 5, max: 60)	second	Management server - monitoring node connection time
sys	retry-time	<i>nnnn</i> (min: 5, max: 300)	second	Reconnection interval
sys	s-llog-vol	nnnn (min: 50, max: 500)	Kbyte	Size of login log file
sys	s-llog-num	<i>nnnn</i> (min: 2, max: 10)		Number of login log files
sys	s-olog-vol	<i>nnnn</i> (min: 50, max: 500)	Kbyte	Size of operation log file
sys	s-olog-num	<i>nnnn</i> (min: 2, max: 10)		Number of operation log files
sys	s-elog-vol	<i>nnnn</i> (min: 50, max: 500)	Kbyte	Size of event log file
sys	s-elog-num	<i>nnnn</i> (min: 2, max: 10)		Number of event log files
sys	s-tlog-vol	<i>nnnn</i> (min: 50, max: 1000)	Kbyte	Size of management server trace log file
sys	s-tlog-num	<i>nnnn</i> (min: 2, max: 10)		Number of management server trace log files
sys	s-tlog-debug	on, off		Management server detailed trace log
sys	n-tlog-vol	<i>nnnn</i> (min: 50, max: 1000)	Kbyte	Size of monitoring node trace log file
sys	n-tlog-num	<i>nnnn</i> (min: 2, max: 10)		Number of monitoring node trace log files
sys	n-tlog-debug	on, off		Monitoring node detailed trace log
sys	group-addr	IP address		Management server group address

# Table 4.4 Operation environment variable list

Attribute	Environment variable	Setting value	Description
sys	server-ha	on, off	Secondary management server automatic migration
sys	lang	C.ja	Language environment in which Web-Based Admin View operates. C: Operates in English. ja: Operates in Japanese.
local	mip	IP address or Host name	IP address/Host name for identifying own host (Information to communicate between the management servers and the monitoring nodes)
local	httpip	IP address	IP address of WWW server
local	server-election	on, off	Object of secondary management server automatic migration

*nnnn*: positive number,

IP address: IPv4 address or IPv6 address

Host name: Host name



- The specified setting value is not checked by the wvSetparam. **Be aware** that the setting value is proper and correct (within a valid value) in case of setup or modification.

- Web-Based Admin View is not allowed to be started if "255.255.255" or any value outside the specified range is set for *nnn.nnn.nnn*
- When using the host name for mip, you need to create the environment where name resolution of the specified host name is available on the client and server.
- Only IP (IPv4 or IPv6) addresses can be set to the primary management server, the secondary management server, and httpip. Note that IPv6 link local addresses cannot be set to these servers.

# 4.5.2 Environment variable reference

To display environment variables, execute the following command from the management server or monitoring node:

/etc/opt/FJSVwvbs/etc/bin/wvGetparam <environment variables>

The environment variable corresponding to the specified variable is displayed in the following format:

### Display format :

<Attribute>:<Environment variable name> <Value>

When this variable <environment variables> is eliminated, the information related to all variables is displayed in the format above.

### EXAMPLES :

1. Accessing the primary management server

### # /etc/opt/FJSVwvbs/etc/bin/wvGetparam primary-server

sys:primary-server 10.20.30.40

- 2. Specifying an inappropriate variable
  - The following message appears.

"No such key < specified environment variable>"

# 4.5.3 Environment variable modification

To change an environment variable, execute the following command on the host:

wvSetparam <environment-variable> <setting-value>

The specified value is set to the variable "environment variable". When executed, the modified value is displayed in the following format:

### Display format:

<Attribute>:<Environment variable name> <Value>

# EXAMPLES:

When changing the IP address 10.20.30.41 of a primary management server

1. Stop Web-Based Admin View on all the management servers and monitored nodes.

Refer to "6.1 Stop".

2. Modify settings.

### # /etc/opt/FJSVwvbs/etc/bin/wvSetparam primary-server 10.20.30.41

sys:primary-server 10.20.30.41

3. Restart Web-Based Admin View.

Refer to "6.2 Restart".

If there's no operation environment variables identifying with the specified *<environment-variable>*, the following error message appears:

"No such key < specified environment variable>"



- The specified setting value is not checked by the wvSetparam. When setting or modifying, **be aware** that the setting value is proper and correct (within a valid value).

For the effective range of the setting value, refer to "4.5.1 Environment variable".

- To change the operating environment variables that include "sys" for attributes, set the same value on all the management servers and monitored nodes after stopping Web-Based Admin View on all the management servers and monitored nodes
- After modifications are made, restart Web-Based Admin View. Refer to "6.2 Restart".
- Only IP (IPv4 or IPv6) addresses can be set to the primary management server, the secondary management server, and httpip. Note that IPv6 link local addresses cannot be set to these servers.

# Chapter 5 Web-Based Admin View log reference

Target users

Users who belong to the Web-Based Admin View administrator group

# 5.1 Log type

The two types of log files are described below.

# Login log file

To save records of all logins and logouts session to the Web-Based Admin View.

Login: The beginning of each client session where the user authenticates themselves to the system.

Logout: The termination of a client session.

# **Operation log file**

To save records of operations in the Web-Based Admin View GUI screen.

# 5.2 Log file display

This chapter describes the method of displaying log files.

Login log and Operation log can be referred to on a logging view screen.

# 5.2.1 Logging view startup

Start the logging view as described below.

Target users: Users who belong to the Web-Based Admin View administrator group

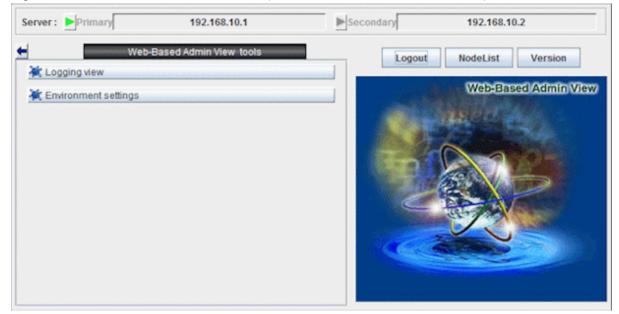
- Select [Web-Based Admin View tools] on the menu of the Web-Based Admin View screen.

# Figure 5.1 Web-Based Admin View screen

PRIMECLUSTER	FUJÎTSU
Server: Primary 192.168.10.1	Secondary 192.168.10.2
Cluster Services	Logout NodeList Version
🕷 Global Disk Services	Web-Based Admin View
🗮 Global File Services	ased.
🛱 Web-Based Admin View tools	
X Manual	
Common	

- Select < Logging view > on the [Web-Based Admin View tools] menu.

Figure 5.2 Web-Based Admin View screen (Web-Based Admin View tools menu)



The logging view screen is displayed.

# 5.2.2 Login log

Select [Login log] on the logging view screen. The <Login log> screen is displayed.

The usage of login log is described as following:

# Narrowing down the login log

🌺 Logging view	
View Help	
Login log Operation log	
	M 30 D 18 h 54 m M 30 D 18 h 54 m M 30 D 18 h 54 m
Search User name: Keyword:	Show
Time User name	Message
Status:	Next
Java Applet Window	

Figure 5.3 Logging view screen (Setup screen for login log display)

### Start time

Input time when the log was started (Specify with "yyyy Y mm M dd D hh H mm M" format).

# End time

Input time when the log was completed (Specify with "yyyy Y mm M dd D hh H mm M" format).

### User name

Input one user name. If not specified, all users are the object.

# Keyword

Input details to further narrow down. The keyword is valid in the message contents.

Select < Show > after specifying the conditions to display the login log.

When there are more than 200 lines to be shown at one time, select <Next> to see the further logs.

# **Referring to login log**

Figure 5.4 Logging view screen (Login log display screen)

🌺 Logging view			×
View Help			
Login log Operation	n log		
View range			
_			
Start time: 2	2002 🗘 Y 🕴	$7 \rightarrow M 30 \rightarrow D 18 \rightarrow h 54 \rightarrow m$	
End dimen	2002 <b>Y</b>	▲ M 30 ▲ D 18 ▲ h 54 ▲ m	
End time:	2002 <b>Y</b>	7 ↓ M 30 ↓ D 18 ↓ h 54 ↓ m	
Search			
		_	
User name:			
Keyword:		Show	
Time	User name	Message	
2002.07.18 17:51:45	root	login :Success :Sid = 1 From 192.168.246.62	
2002.07.18 18:25:54	root	login :Success :Sid = 2 From 192.168.246.62	
2002.07.18 18:41:28	root	login :Success :Sid = 1 From 192.168.246.62	
2002.07.18 19:52:03	root	login :Success :Sid = 1 From 192.168.246.62	
2002.07.18 20:10:34	root	login :Success :Sid = 1 From 192.168.246.62	
2002.07.18 20:26:26	root	login :Success :Sid = 1 From 192.168.246.62	
2002.07.18 22:52:00	root	logout:Aborted :Sid = 1, link down while 104 sec.	
2002.07.19 10:51:12	root	login :Success :Sid = 1 From 192.168.246.62	
2002.07.19 11:09:17	root	login :Success :Sid = 1 From 192.168.246.62	
2002.07.19 13:49:10	root	logout:Aborted :Sid = 1, link down while 108 sec.	
2002.07.19 13:49:59	root	login :Success :Sid = 2 From 192.168.246.90	
2002.07.19 13:56:32	root	logout:Aborted :Sid = 2, link down while 105 sec.	
2002 07 19 14 19 02	root	login :Success :Sid = 1 From 192 168 246 62	•
Status:Done.		Next	t
Java Applet Window			
ouva rippiet window			

The system shows the following items:

Time

Shows the times and dates of login and logout in the [YYYY.MM.DD.hh.mm.ss] format.

User name

Shows the name of login/logout user.

### Message

Shows if you are logged in or logged out.



Since the log display cannot be returned to a previous screen, narrow down the search conditions, or reselect the <Show> button.

When there are more than 200 lines to be shown at one time, select <Next> to see the further logs.

# 5.2.3 Operation log

Select the [Operation log] tab on the logging view screen. The <Operation log> screen is displayed.

The usage of operation log is described as following:

# Narrowing down the operation log

Figure 5.5 Logging view screen (Setup screen of operation log)

🌺 Logging view		_ 🗆 🗵
View Help		
Login log Operation log		
View range Start time: 2002	Y 7 M 30 D 18 h 54 m     Y 7 M 30 D 18 h 54 m     Y 7 M 30 D 18 h 54 m	
Search User name: Keyword:		how
Time Us	lser name Message	
Status:		Next
Java Applet Window		

Specify which operation log should be displayed.

Start time

Input time when the log was started (Specify with "yyyy Y mm M dd D hh H mm M" format).

End time

Input time when the log was completed (Specify with "yyyy Y mm M dd D hh H mm M" format).

### User name

Input one user name. If not specified, all users are the object.

# Keyword

Input details to further narrow down. The keyword is valid in the message contents.

Select the < Show > button after specifying the conditions to display the operation log.

When there are more than 200 lines to be shown at one time, select <Next> to see the further logs.

# **Referring to operation log**

# Figure 5.6 Logging view screen (Operation log display screen)

🌺 Logging view		
View Help		
Login log Operation lo	α	
	3   	
View range		
Start time: 2003	2 🗘 Y	7 <b>M</b> 30 <b>D</b> 18 <b>h</b> 54 <b>m</b>
End time: 200	2 • Y	7 • M 30 • D 18 • h 54 • m
Search		
User name:		
Keyword:		Show
		3104
Time	User name	Message
2002.07.18 17:51:54	root	I11ConfigServerImpl.startConfig
2002.07.18 17:51:54	root	[2]ConfigServerImpl.checkMutex
2002.07.18 17:51:54	root	[2]OK
2002.07.18 17:51:54	root	[1]NG : CRM
2002.07.18 17:51:57	root	[3]ConfigServerImpI.apDestroy
2002.07.18 17:51:57	root	[3]OK
2002.07.18 17:52:16	root	[4]CADM SIS: Set clustername: siscommand /opt/SMAW/SMAW/cf/bin/cft
2002.07.18 17:52:16	root	[4]CAdm, SIS: Command completed successfully.
2002.07.18 17:52:16	root	[5]CADM SIS: Retrieving service list: siscommand sysService
2002.07.18 17:52:18	root	[5]CAdm, SIS: Command completed successfully.
2002.07.18 17:52:24	root	[6]ClusterResourceManagerServerImpI.CtIMvSMinit
2002.07.18 17:52:24	root	[6]NG
2002 07 18 17:52:55	root	IZICADM CE: Loading driver: cfconfig -L
Status: Press 'Next' button, show more records.		
Java Applet Window		

### Time

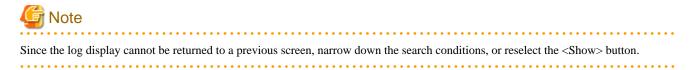
Shows the times and dates of user operations in [YYYY.MM.DD.hh.mm.ss] format.

### User name

Shows the user name.

### Message

Shows user operation contents and results.



# Part 4 Web-Based Admin View operating setup

This part provides operating instructions (e.g. stop, restart) and setup modification procedures for Web-Based Admin View.

Chapter 6 Web-Based Admin View operating instruction	
Chapter 7 Web-Based Admin View setup modification	

# Chapter 6 Web-Based Admin View operating instruction

In order to display the GUI screen on the client, Web-Based Admin View needs to be active. However, it requires no extra handling for startup since it is automatically started on the management server or monitoring node during system reboot.

This part gives a description of the following operating instructions:

- Stop or restart of Web-Based Admin View
  - When modifying the settings for the management server and the monitoring node, it might be necessary to stop and restart Web-Based Admin View.
- Setup conditions of installing scripts for Web-Based Admin View

This is used to set whether or not Web-Based Admin View should be automatically activated during system startup.

# 6.1 Stop

The Web-Based Admin View is automatically started on the management server or monitoring node during system startup. No special operation is required to start or stop it.

If the Web-Based Admin View has to be stopped for some reason such as setup modification of management server or monitoring node, take the following steps with system administrator authority.

- 1. #/etc/init.d/fjsvwvcnf stop
- 2. #/etc/init.d/fjsvwvbs stop



Be aware the Web-Based Admin View screen on the client is closed when stopping the operation. If the service stops while the Web-Based Admin View screen is active, the following message might be displayed: "0007 Management server session disconnected. Do you want to try to re-connect working Management Server?"

- With the 2-tier architecture model in which the monitoring node acts as a management server, Web-Based Admin View on the monitoring node is automatically shut down.
- If Web-Based Admin View is not shut down for some reasons, use the command in "6.2 Restart" to restart it. Then, terminate the operation again.

# 6.2 Restart

In order to display the GUI screen on the client, Web-Based Admin View needs to be active. However, it requires no extra handling for startup since it is automatically started on the management server or monitoring node during system startup.

If Web-Based Admin View has to be stopped for some reason such as setup modification of management server or monitoring node, execute two commands with system administrator authority as shown in the procedure below.

### Procedure

- For RHEL6

- 1. #/etc/opt/FJSVwvbs/etc/bin/wvCntl restart
- 2. #/etc/init.d/fjsvwvcnf restart

### - For RHEL7

- 1. # /etc/init.d/fjsvwvbs restart
- 2. #/etc/init.d/fjsvwvcnf restart



- Be aware that the Web-Based Admin View screen is closed on all clients when restarting. If you change the settings while the Web-Based Admin View screen is active, the following message might be displayed: "0007 Management server session disconnected. Do you want to try to re-connect working Management Server?"
- With the 2-tier architecture model in which the monitoring node acts as a management server, Web-Based Admin View on the monitoring node is restarted.
- Be sure to restart Web-Admin View after the following operations.
  - Modification of the http port number or RMI port number
  - Modification of the management server
  - Modification of the Java environment
  - Modification of the network address used by a Web-Based Admin View
  - Modification of the environment variable by executing a command
  - Modification of the secondary management server automatic migration
  - Modification of the connections to an active management server

## 6.3 Setup operating conditions

Execute the following command on the node to set up whether or not Web-Based Admin View should be automatically activated during system startup. This setting is unavailable in the RHEL7 environment.

Be sure to apply this setup as long as any operation management view (GUI) is not used.

[Setting to disable WWW server for Admin View and Web-Based Admin View]

#/etc/opt/FJSVwvbs/etc/bin/wvrcscript uninstall

[Settings to automatically activate WWW Server for Admin View and Web-Based Admin View during system startup]

# /etc/opt/FJSVwvbs/etc/bin/wvrcscript install

The following separate setup for WWW Server for Admin View or Web-Based Admin View is also available:

- To automatically start Web-Based Admin View during system startup
  - #/etc/opt/FJSVwvbs/etc/bin/wvrcscript install FJSVwvbs
- To not start Web-Based Admin View during system startup
   #/etc/opt/FJSVwvbs/etc/bin/wvrcscript uninstall FJSVwvbs
- To automatically start WWW Server for Admin View
  - #/etc/opt/FJSVwvbs/etc/bin/wvrcscript install FJSVwvcnf
- To prevent the use of the WWW server for Admin function during system startup
  - #/etc/opt/FJSVwvbs/etc/bin/wvrcscript uninstall FJSVwvcnf

Note that if this setup is applied, neither machine management nor the operation management view provided by PRIMECLUSTER will be available.

## Chapter 7 Web-Based Admin View setup modification

This chapter explains the following procedures to modify the initial setup and configuration.

- Modifying the network address used by a Web-Based Admin View
- Modifying the port number of the network service
- Changing the management server
- Modifying the operation of the secondary management server
- Modifying the network environment in the management server

## 7.1 Network address

The IP address used for Web-Based Admin View is set. It corresponds to the displayed node name after of executing "uname -n". There are following two purposes:

- The IP address or host name for identifying own host (mip)

This is used for communication among management servers and monitoring nodes.

- The IP address used for a client (httpip)

WWW server's IP addresses or host name.

Normally, these IP addresses are identical. If you need to modify the network environment to multi-network between server and client by classified use, set up the IP address respectively. For the detail, refer to "7.5 Multi-network between server and client by classified use".

Take the following steps to modify these IP addresses:

1. Stop Web-Based Admin View running on the management server or monitoring node.

Refer to "6.1 Stop".

2. Set up IP address.

Execute the following command:

# /etc/opt/FJSVwvbs/etc/bin/wvSetparam mip < IP address or Host name for identifying own host>

# /etc/opt/FJSVwvbs/etc/bin/wvSetparam httpip <IP address used for client>

For example, if you need to change the *<IP* address or Host name for identifying own host> to "100.100.100.100", execute the following:

#### #/etc/opt/FJSVwvbs/etc/bin/wvSetparam mip 100.100.100.100

Similarly, if you need to change the *IP address used for client>* to "100.100.100", execute the following:

#### # /etc/opt/FJSVwvbs/etc/bin/wvSetparam httpip 100.100.100.100

3. Change a management server.

If the modified monitoring node acts as a management server, modify the management server settings. Refer to "7.3 Management server". Skip this step for the single node cluster operation.

4. Restart Web-Based Admin View on the management server or monitoring node on which the IP address is changed.

Refer to "6.2 Restart".



- <IP address used for client> might not be required to modify when <IP address for identifying own host> and <IP address used for client> is different. httpip is described<IP address used for client>, mip is described <IP address for identifying own host>.

- When the value specified for the environment variable mip of Web-Based Admin View is a host name, specify name resolution.

- Only IP (IPv4 or IPv6) addresses can be set to the primary management server, the secondary management server, and httpip. Note that IPv6 link local addresses cannot be set to these servers.

## 7.2 Network service port number

Web-Based Admin View uses the following system resources:

- Port number for the http protocol
- Port number for Java RMI

If Web-Based Admin View does not operate normally, or when such system resources are competing with other products, change port numbers.

### 7.2.1 http port number

The default port number to access a management server from the client Web browser is "8081."

To modify the setup, execute the following command for all management servers and monitoring nodes:

# /etc/opt/FJSVwvbs/etc/bin/wvSetport fjwv-h=<port number>

To confirm the current port number, execute the following command for all management servers and monitoring nodes.

# /etc/opt/FJSVwvbs/etc/bin/wvSetport fjwv-h



- Modifications should be made in a single user mode.
- For Solaris OS, port numbers are controlled by the service name "fjwv-h" in the "/etc/inet/services" file on all management servers and monitoring nodes.
- For Linux(R), port numbers are controlled by the service name "fjwv-h" in the "/etc/services" file.
- When using the products such as InfoProxy, InfoSearcher, InfoDispatcher, and Safeauthor, be sure to change the port numbers.
- If a URL is registered as a bookmark, change the URL port number.

### 7.2.2 RMI port number

As Web-Based Admin View uses four service port numbers, 9396, 9397, 9398, and 9399 are used in Solaris in order to use the RMI programming model of the Java platform.

In Linux, four service port numbers of 9796, 9797, 9798, and 9799.

If the port numbers are the same as the numbers used for another product, change the numbers.

Be aware that there's no client running Web-Based admin View first, and then execute the following command on all management servers and monitoring nodes.

# /etc/opt/FJSVwvbs/etc/bin/wvSetport { fjwv\_c=<port number> | fjwv\_n=<port number> | fjwv\_s=<port number> | fjwv\_g=<port number> }

To check the current port number, execute the following command:

# /etc/opt/FJSVwvbs/etc/bin/wvSetport fjwv\_c fjwv\_n fjwv\_s fjwv\_g



- Modifications should be made in a single user mode.
- For Solaris OS, port numbers are controlled by the service name "fjwv\_c", "fjwv\_n", "fjwv\_s" and "fjwv\_s" in the "/etc/inet/services" file on all the nodes.

. . . . . . . . . . . . . . . .

- For Linux(R), port numbers are controlled by the service name "fjwv\_c", "fjwv\_n", "fjwv\_s" and "fjwv\_s" in the "/etc/services" file on all the nodes.
- Modification should be done for all management servers and monitoring nodes. The port number corresponding to each service name needs to be set to the same value among those nodes.

## Information

For details on Remote Method Invocation (RMI), see the Oracle Documents.

## 7.3 Management server

When the management server and the network address used on this management server have to be changed, be sure to set up the following:

There are two types of method: to set up by executing a command on each management server or monitoring node, or to set up from the environment setup screen.

## 🔟 Information

These settings are made in a static operation mode where primary and secondary management servers are fixed. For the setup of dynamic operation of the secondary management server, refer to "7.4 Secondary management server automatic migration".

#### Setup by command

#### **Procedure:**

- 1. Stop Web-Based Admin View on all the management servers and monitored nodes.
  - Refer to "6.1 Stop".
- 2. Set up the IP address of the management server.

Refer to "Example" below and execute the following commands for all the management servers and monitoring nodes:

# /etc/opt/FJSVwvbs/etc/bin/wvSetparam primary-server <IP address of primary management server>

# /etc/opt/FJSVwvbs/etc/bin/wvSetparam secondary-server <IP address of secondary management server>

Example:

When the IP addresses of primary management server and secondary server are set to "10.20.30.40" and "10.20.30.41":

#### # /etc/opt/FJSVwvbs/etc/bin/wvSetparam primary-server 10.20.30.40

# /etc/opt/FJSVwvbs/etc/bin/wvSetparam secondary-server 10.20.30.41

If the primary management server is only used for a management server, set the IP address of the secondary management server for that of the primary one.

3. Change mip (IP address for identifying own host) on the management servers.

To change the network address for the management server, change **mip** to the IP address set up in procedure 2 on the primary and secondary management servers.

Refer to "7.1 Network address".

4. Change httpip (IP address used for a client) on the management servers.

To change the network address for the management server, change **httpip** to **mip** or the IP address that is connected from the client on the primary and secondary management servers.

Refer to "7.5 Multi-network between server and client by classified use".

 Restart Web-Based Admin View on all the management servers and monitored nodes. Refer to "6.2 Restart".

#### Setting from the environment setup screen

#### **Procedure:**

1. Start up the Web-Based Admin View screen.

Access the primary management server from the Web browser.

2. Set up the IP address of the management server.

Select the [Web-Based Admin View tools]-[System environment] tab on [Environment settings] to set up for [Name] of the [Primary server] property and [Secondary server] property.

If the primary management server is only used for a management server, set the IP address of the secondary management server for that of the primary one.

Note that [Name] of the [Secondary server] property is not available if [Secondary management server automatic migration] is set to [Yes.]

3. On the management servers, change **mip** ("IP address for identifying own host").

Change mip on the primary and secondary management servers. Refer to "7.1 Network address".

4. On the management servers, set up httpip ("IP address used for a client").

Change httpip to mip or to IP address at user's discretion. Refer to "7.5 Multi-network between server and client by classified use".



The **httpip** value cannot be set up from the environment setup screen. Use a wvSetparam command. Refer to "7.5 Multi-network between server and client by classified use".

5. Login to the Web-Based Admin View screen, again.

When the environment setup is completed, the message "0051 In order to make the settings valid, restart Web-Based Admin View and reconnect it. Are you sure?" appears. If you need to validate the currently chosen value, select [Yes]. Log off, and then login the management server again. If [No] is selected, the setup remains invalid.

Refer to the message "0051" of "A.4.1 Information message".



- The modifications may not get valid on the environment setup screen if the monitoring node is inactive. In such a case, refer to "Setup by command" above.
- Only IP (IPv4 or IPv6) addresses can be set to the primary management server, the secondary management server, and httpip. Note that IPv6 link local addresses cannot be set to these servers.

## 7.4 Secondary management server automatic migration

The following shows the setup method how a monitoring node can be automatically operated when the secondary management server is down.

This setup is only available when the management server IP address is IPv4 address.

1. Prepare the address used on the network

To make this setup valid, a multicast address used on the network or a broadcast address is required. It must be pre-assigned from the network administrator.

2. Setup the secondary management server automatic migration

Two types of settings are available:

- executing a command

Refer to "7.4.1 Setup by command".

- setting from the environment setup screen

Refer to "7.4.2 Setting from environment settings screen".

3. Access method from a client to the management server

When this setup is valid, it might not be identifiable which monitoring node is used for the secondary management server when the client accesses the management server. In such a case, access from a client to the management server following the instructions described in "7.4.3 Access method".

## G Note

The monitoring node where this setup was done might be running as a secondary management server. In order to differentiate **httpip** ("IP address used for a client") from **mip** ("IP address for identifying own host"), set up **httpip**. Refer to "7.5 Multi-network between server and client by classified use".

## 7.4.1 Setup by command

Procedure:

- Stop Web-Based Admin View on all the monitored nodes that might become the secondary management server. Refer to "6.1 Stop".
- 2. Determine a potential monitoring node of the secondary management server.

Execute the following command on all the monitored nodes that might become the secondary management server:

#### # /etc/opt/FJSVwvbs/etc/bin/wvSetparam server-election on

- Restart Web-Based Admin View on all the monitored nodes that might become the secondary management server. Refer to "6.2 Restart"
- 4. Set up a group address.

Execute the following command on the primary management server to set up a group address:

# /etc/opt/FJSVwvbs/etc/bin/wvSetparam group-addr <group address>

5. Set the secondary management server to the mode in which a dynamic decision is available.

Execute the following command on the primary management server:

#### # /etc/opt/FJSVwvbs/etc/bin/wvSetparam server-ha on

 To validate the setup, restart Web-Based Admin View on all the management servers and monitored nodes. Refer to "6.2 Restart".

## 🚮 Information

When a multicast address for IPv4 is set to a group address, for example, the IP address of the primary management server is 10.20.30.40, override 231.20.30.40 by changing "10" to "231."

For details of the group address information, refer to "RFC1700".

## 7.4.2 Setting from environment settings screen

There are methods of "Doing setup" and "Undoing setup" to set from environment settings screen.

#### **Doing setup**

Take the following steps to access the primary management server via the Web browser.

#### Procedure:

- 1. Determine a potential monitoring node of the secondary management server.
  - a. Select the [Node environment] tab on the environment setup screen, and select a potential monitoring node of the secondary management server from [Node].
  - b. Select [Server environment].
  - c. Set [Object of secondary management server automatic migration] to [Yes.]

This setting must be selected from [Node] for all potential monitoring nodes of the secondary management server.

- 2. Set the secondary management server to the mode in which a dynamic decision is available.
  - a. Select the [System environment] tab.
  - b. Select [Yes] from [Secondary management server automatic migration] of the [Secondary server] property.
- 3. Set up a group address.
  - a. Select the [System environment] tab.
  - b. Set "Multicast address" or "Broadcast address" to [Management server group address] of the [Secondary server] property.
- 4. Validate settings.

When settings are completed, terminate the environment setup.

The message, "0051 In order to make the settings valid, restart Web-Based Admin View and reconnect it. Are you sure?" appears. If you need to validate the currently chosen value, select [Yes]. Log off, and then login the management server again. If [No] is selected, the setup remains invalid.

#### **Undoing setup**

To undo settings, access the primary management server from the Web browser as follows:

#### Procedure:

- 1. Set the secondary management server to the mode in which a dynamic decision is not available.
  - a. Select the [System environment] tab from the environment setup screen.
  - b. Select [No] from [Secondary management server automatic migration] of the [Secondary server] property.
- 2. Validate settings.

When settings are completed, terminate the environment setup.

Then, the message, "0051 Do you wish to restart Web-based Admin View and login again to validate the value?" appears. If you need to validate the value, select [Yes]. If [No] is selected, the setup remains invalid.



The modifications done on the environment setup screen might not be effective if the monitoring node was inactive. In such a case, refer to "7.4.1 Setup by command".

## 7.4.3 Access method

If you setup the secondary management server automatic migration, it might not be identifiable which monitoring node is used for the secondary management server when the client accesses the management server.

In such a case, describe URL to access from the client as shown below. Then, the running primary or secondary management server is automatically connected:

http://<host name>:<port number>/Plugin.cgi

<host name>

httpip (host name or IP address used for the client) of the primary or secondary management server.

<port number>

Enter "8081." If the port number was changed according to "7.2.1 http port number", designate the number.



When getting access from a client by using this function, the actually connected management server is not always a monitoring node or management server designated in URL. In order to connect by designating the primary or secondary management server, click the [Management server switching] button in the upper right of the Web-Based Admin View screen while the login screen is displayed after accessing an optional management server or monitoring node. For details of Management server switching button, refer to "3.5.2 Switchover of management server".

.....

## 7.5 Multi-network between server and client by classified use

Web-Based Admin View enables to set up a different httpip ("IP address used for a client") than mip ("IP address for identifying own host").

Normally, these IP addresses are identical. If you need to modify the network environment, take following steps to set up a separate IP address.



These values (**mip** and **httpip**) are not omissible. Even in the case of not setting a different IP address that the management server opens to clients, be sure to set up the same IP address as **mip** according to each setup method.

#### Setup by command

Take the following steps on the primary and secondary management server.

Procedure:

1. Set up the network address

Login to the primary or secondary management server to execute the following commands:

The *<IP address or Host name for identifying own host>* value designates the network address (IP address or Host name) used for Web-Based Admin View on the primary or secondary management server.

Generation Mote

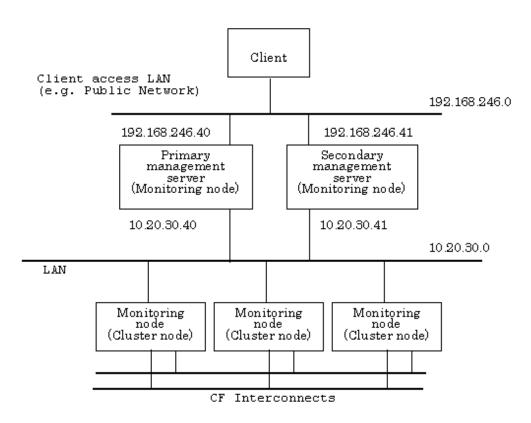
When modifying the **mip** value, it's necessary to set the primary and secondary management servers again on all monitoring nodes and all management servers. For the setup each of management server, refer to "7.3 Management server".

# /etc/opt/ FJSVwvbs/etc/bin/wvSetparam mip <IP address or Host name for identifying own host>
# /etc/opt/FJSVwvbs/etc/bin/wvSetparam httpip <IP address used for client>

#### Examples:

Set up the "mip" and "httpip" on the primary management server as follows in the configuration below:

# /etc/opt/FJSVwvbs/etc/bin/wvSetparam mip 10.20.30.40
# /etc/opt/FJSVwvbs/etc/bin/wvSetparam httpip 192.168.246.40



2. After modifications, restart Web-Based Admin View. Refer to "6.2 Restart".

## G Note

- If the clients are deployed on the LAN (10.20.30.0 in above fig.) used for **mip** of the management server in this topology, the management server needs to have routing information to transfer the communication requests for **httpip** to **mip**.

- If you need to set again the operation not to separate network on the management server by classified use, Web-Based Admin View must be restarted after executing the following command on all management servers. Refer to "6.2 Restart".

# /etc/opt/FJSVwvbs/etc/bin/wvSetparam httpip <IP address same as mip>

#### Setup from environment setup screen

Access the primary management server via the Web browser to set up the following. Note that only **mip** can be set up on the environment setup screen. When changing the IP address for the clients, refer to "Setup by command" as described above.

Procedure:

1. Designate a management server.

Select [Node environment], and then select a management server from [Node] to separate network.

2. Set the IP address or the host name.

Select [IP address/Host name] and set the network address used for Web-Based Admin View (IP address or host name) in [IP address/Host name for identifying own host].

The setup value is **mip**.

3. Validate settings.

After settings are completed, exit the environment setup.

When the environment setup is terminated after modifications, the message, "0051 In order to make the settings valid, restart Web-Based Admin View and reconnect it. Are you sure?" appears. If you need to validate the currently chosen value, select [Yes]. Log off, and then login the management server.

.....

Note that selecting No does not enable the management server until it is rebooted.



- This method might not be validated if the monitoring node was not active when the setup was done. In such a case, use a command referring to "Setup by command".
- Only IP (IPv4 or IPv6) addresses can be set to the primary management server, the secondary management server, and httpip. Note that IPv6 link local addresses cannot be set to these servers.

.....

# Part 5 Notes on Web-Based Admin View

This part describes the notes when using Web-Based Admin View.

## Chapter 8 Notes on Web-Based Admin View

The host name cannot be specified as setting values of the primary management server, secondary management server, and httpip for Web-Based Admin View.

The setting value of the primary management server or secondary management server is as follows:

- The value of "primary-server" or "secondary-server" for environment variables of Web-Based Admin View set with the wvSetparam command.
- The value of "IP/host name" of the primary management server or secondary management server of the [System environment] tab in the Environment setup page.

The setting value of httpip is as follows:

- IP address used for connecting to the management server from the client

## Appendix A Message

This appendix provides information on messages associated with Web-Based Admin View, and wherever possible, a recovery procedure is provided to locate and correct the problem.

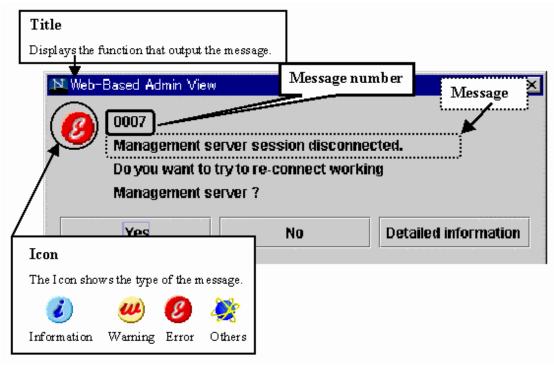
## A.1 Message reference

This section explains how to refer to a message.

#### Message display style

Web-Based Admin View displays a following message dialog:

#### Figure A.1 Message dialog



## Information

For details on the function (title) displayed by Web-Based Admin View, see "Table A.1 Message dialog messages".

#### Refer to message

Message dialog contains the description of function(title), type(icon), and the message number.

If you do not quite understand the meaning of a message or action, take a note of the message text or the message number, and look up the message in the following table:

Function (title)	Message number	Type (Icon)
A.2 Web-Based Admin View message	0001-0044	3
	0001-0044	8

#### Table A.1 Message dialog messages

Function (title)	Message number	Type (Icon)
	0045-0049	
A.3 Log reference message	0045-0049	8
	0051-0059	
A.4 Environment setup message	message 0051-0059 000	<b>@</b>
	0051-0059	8
A.5 Security message	0061-0069	8



If the title of the message is other than those above, the manual for each product described in the title, and then take appropriate actions.

## A.2 Web-Based Admin View message

## A.2.1 Information message

0020 This application cannot launch with a secondary Management Server specified. Please specify a primary Management Server.

#### Corrective action

Connect to the primary management server and start this application.

0021 This application must be started up with following URL on another browser window.

#### Corrective action

Select [OK] to exit all running applications, and then re-access the recommended URL.

#### 0022 Re-connect to following URL. Do you want to connect?"

#### Corrective action

Select Yes or No.

- Click [Yes] to retrieve active the management server and attempt the connection.
- Click [No] to end the connection.

0023 This application must be started up with following URL on another browser window.

#### Corrective action

Click [Yes] to access by the specified URL.

#### Reference problem

"Symptom 13" in "Troubleshooting"

## A.2.2 Error message

#### 0001 Cannot call Management server.

#### Corrective action 1

In most cases, the management server might not be able to respond to the request from the client, or the response from the server might be extremely slow. Click <OK> and call a management server again.

#### Corrective action 2

If the corrective action 1 does not work, the Web browser might not be operating normally. Exit the Web browser, and then, restart the Web-Based Admin View screen, or reboot the client first.

#### Reference problem

"Symptom 1", "Symptom 8" in "Troubleshooting"

#### 0003 Management server session disconnected. Do you want to re-connect?

#### Corrective action

When the system environment was modified in the environment setup, it is displayed in the client in which the setup was done. Take a proper action in the following:

- Click [Yes] to reconnect.
- Click [No] to end the connection.
- Click [Detailed information] to display error detailed information.

#### 0004 Connection refused from Management Server. Do you want to re-connect?

#### Corrective action

The network failure might have occurred, the client terminal's CPU might have been overloaded, or the system time setting of the management server might have been changed. Take a proper action in the following:

- Click [Yes] to reconnect to another management server.
- Click [No] to end the current connection.

#### Reference problem

"Symptom 1" in "Troubleshooting"

#### 0005 Cannot connect to Management. Server. Do you want to re-connect?

#### Corrective action

The management server may not have been started. Take a proper action in the following:

- Click [Yes] to reconnect.
- Click [No] to end the connection.
- Click [Detailed information] to display error detailed information.

#### Reference problem

"Symptom 1", "Symptom 4" in "Troubleshooting"

#### 0006 An error was detected in the Management Server environment setting.

#### Corrective action 1

The Web browser might not be operating properly. Exit the Web browser, and then, restart the Web-Based Admin View screen, or reboot the client first.

#### Corrective action 2

Refer to take appropriate action while referring to the explanation of "Symptom 16" in troubleshooting to take a **Corrective action**. Still, the problem is not improved, report the contents of the Java console to local Customer Support.

#### Reference problem

"Symptom 16" in "Troubleshooting"

**0007** Management server session disconnected. Do you want to try to re-connect working Management Server?

#### Corrective action

Select one of [Yes], [No], or [Detailed information]:

- Click [Yes] to retrieve an active management server for connection.
- Click [No] to end the connection.
- Click [Detailed information] to display error detailed information.



This message appears if no response is received from the management server. Confirm the state of the management server or the network.

If connection is available by selecting [Yes], a temporary network load is assumed to be the cause of the disconnection.

In this case, raise the "Connection monitoring time between Client and Server" of the system environment.

#### Reference problem

"Symptom 2", "Symptom 15" in "Troubleshooting"

#### 0015 Management Server will terminate. Please logout immediately.

#### Corrective action

The management server is terminated. Sign off Web-Based Admin View.

#### 0016 login incorrect.

#### Corrective action

Enter a correct user name and password.

#### Reference problem

"Symptom 17" in "Troubleshooting"

#### 0017 password incorrect.

#### Corrective action

Enter a correct password.

#### **0030 Internal Error**

#### Corrective action

An error was detected in the management server environment setting. Contact local Customer Supports



This error message appears on the page within the Web browser.

#### 0031 Network Error

Note

#### Corrective action

A network error has occurred. Restart the cluster management server and the monitored node, and then reconnect the network following the procedures described in "6.2 Restart". Still, the problem is not improved, contact local Customer Supports.

. . . . . . . . . . . . . .

## This error message appears on the page within the Web browser.

#### 0032 Login Error

#### Corrective action

Login was failed. Sign on by a correct user ID and password.

It may occur by setting the Web browser.

Change the settings of the Web browser according to "3.1.3.1 Preparing the Web browser".

#### Reference problem

"Symptom 15" in "Troubleshooting"



This error message appears on the page within the Web browser.

#### 0033 Management server is not running.

#### Corrective action

Select [Reload] of the browser.



This error message appears on the page within the Web browser.

#### 0040 Invalid browser

#### Corrective action

Web-Based Admin View cannot be started by accessing the specified URL with this Web browser. Use the Web browser which is supported for the operation environment of Web-Based Admin View.



```
This error message appears on the page within the Web browser.
```

#### 0041 Old Swing is installed

#### Corrective action

The version of the Swing class file set in the Web browser is not correct. Set a Swing class file in the correct version.



This error message appears on the page within the Web browser.

#### 0042 Swing is not installed

#### Corrective action

No Swing class file is set up on the Web browser, or the version is incorrect. Set up the Swing class file again as described in "3.1.3.2 Required for the Web browser environment".



This error message appears on the page within the Web browser.

## A.3 Log reference message

## A.3.1 Information message

#### 0045 Invalid value found at 'Start(End)' field.

#### Corrective action

Set the correct start and finish time.

#### 0046 Please put the start time earlier than the end time.

#### Corrective action

Set the correct start and finish time.

#### 0047 There are no records. There are no appropriate logs.

#### Corrective action

Reset the conditions and display information

## A.3.2 Error message

#### 0048 Read error occurred. Log information couldn't be gotten.

#### Corrective action

Re-select <Show> and display information.

#### 0049 Initialize error.

#### Corrective action

Contact local Customer Support.

## A.4 Environment setup message

### A.4.1 Information message

0051 In order to make the settings valid, restart Web-Based Admin View and reconnect it. Are you sure?

#### Corrective action

Select [Yes] to login again. Then, Web-Based Admin View starts automatically and outputs the message if you wish to login again after restarting. Select [Yes].

Otherwise, select [No]. The value is not enabled.

#### 0052 Do you want to terminate Environment setup to make the settings valid?

#### Corrective action

Select [Yes] to quit environment setup and enable the setup.

Otherwise, select [No].

#### 0053 Do you want to cancel processing?

#### Corrective action

Click [Yes] to cancel processing. Click [No] to stop cancellation.

#### 0054 Do you want to terminate Environment setup?

#### Corrective action

Click [Yes] to exit. Otherwise, click [No].

0059 In order to make the settings valid, restart Web-Based Admin View on the changed monitoring node and reconnect it. Are you sure?

#### Corrective action

Select [Yes] to login again. Then, Web-Based Admin View starts automatically and outputs the message if you wish to login again after restarting. Select [Yes].

Otherwise, select [No]. The value is not enabled

#### A.4.2 Warning message

#### 0055 There is an error in the designation of item.

#### Corrective action

Enter the correct value.

0058 The Web-Based Admin View may not work correctly because of the designation of *item*. Do you want to continue?

#### Corrective action

Click [Yes] to continue. If you do not wish to continue, click [No].

### A.4.3 Error message

#### 0056 There is a connection error. Environment setup is canceled.

#### Corrective action

A communication error occurred.

Check if the management server and monitoring node are working properly. If not, restart Web-Based Admin View as explained in "6.2 Restart".

#### 0057 There is an internal error. Environment setup is canceled.

#### Corrective action

Report the contents of the Java Console to local Customer Support.

## A.5 Security message

### A.5.1 Error message

0061 Access to illegal class was requested. (class name: *classname*) The application will terminate. Check whether the illegal access is done on client, server or network. Re-connect to Web-Based Admin View after removing the threat.

#### Corrective action

Access to the illegal class was detected. Terminate the application to avoid the risk of loading the illegal class, also the risk of continuing the process in the attacked environment.

*classname* shows the name of the access requested illegal class. Check whether the illegal access is done on client, server or network. Re-connect to Web-Based Admin View after removing the threat.

## Appendix B Troubleshooting

The Appendix B is directed to all kinds of users, and explains what actions to be taken in the event of Web-Based Admin View failure for them.

## **B.1** Corrective action

This section explains the actions to be taken in the event of a Web-Based Admin View failure.

Be sure to check "Symptom 1" before working on each problem.

Symptom No	Content of Symptom
Symptom 1	The Web-Based Admin View screen cannot be started. Even though it was started, the screen is not displayed properly, or a dialog message from 0001-0005 appears.
Symptom 2	The screen is not switched when clicking the confirmation button for 0003 or 0007 dialog message. The browser is hung up when attempting to reconnect to the management server that was previously connected.
Symptom 3	The message "FJSVwvbs: OutOfMemoryError" may be output to the Java console screen of the management server or monitoring node.
Symptom 4	When the browser accesses the management server, dialog message 0005 is displayed, and the Web-Based Admin View screen and dialog message are not displayed.
Symptom 5	When the IP address of the LAN was changed, the operation of Web-Based Admin View was disabled.
Symptom 6	With the operation management view, the monitoring node cannot be displayed in the node list for each product.
Symptom 7	The screen is not switched when clicking the confirmation button of dialog message.
Symptom 8	It takes a few minutes to show the Web-Based Admin View screen. Even the menu is displayed, the client gets hung up, or the dialog message 0001 appears.
Symptom 9	When a Java Plug-in is used for the client browser, garbage data are jumbled up or the screen display is distorted after accessing the Web-Based Admin View screen or operation management view of each product.
Symptom 10	The message "FJSVwvbs: webview.cnf abnormal" or "Node process abnormal end" is output when starting up or restarting Web-Based Admin view, or starting up a node.
Symptom 11	The message "WARNING: unrelated 'httpip' property." is output when the Web-Based Admin View is started or restarted.
Symptom 12	The manual title is not displayed by manual reference operation after the manual package is installed, or the manual title remains after the package is deleted.
Symptom 13	The dialog message 0023 is displayed when starting the operation management product from the Web-Based Admin View screen.
Symptom 14	The start button of the operation management product gets out of the Web-Based Admin View screen.
Symptom 15	The 0003 or 0007 dialog message may not appear when the management server is disconnected.
Symptom 16	The 0006 dialog message is displayed, and the Web-Based Admin View screen is not displayed when accessing the management server from the browser.
Symptom 17	The server is unable to login with the user ID and password, and the 0016 dialog message is output.
Symptom 18	"PRIMECLUSTER Global File Services Configuration and Administration Guide" is not displayed in the manual menu.

Symptom No	Content of Symptom
Symptom 19	The cluster node is not displayed, or an access error occurs when the operation management screen is activated for the first time after Web-Based Admin View installation.
Symptom 20	When reading the URL of Java Plug-in by using Internet Explorer, the message "Welcome to Web-Based Admin View" is not displayed or the dialog of "Security Warning" (If the Java Plug-in should be installed and executed) is displayed in the Web browser.
Symptom 21	The japanese character turns into garbage or is not displayed on a screen.
Symptom 22	The message of 0032 dialog message is displayed in the Web browser when you refer the manual or help.
Symptom 23	Web-Based Admin View or each operation management view (such as GDS operation management view and GFS operation management view) on Web-Based Admin View becomes unusable in process of the operation, or the connection to the management server is cut in process of the operation.
Symptom 24	During the displaying of each operation management view (such as GDS operation management view and GFS operation management view), if the hardware of the client machine is reset or the network of the client machine is cut, you will become to not able to login Web-Based Admin View after it is recovered.
Symptom 25	Monitored nodes might not be displayed on a list of nodes for each product after the network disconnection between the management servers and monitored nodes is recovered.

GFS: Global File Services GDS: Global Disk Services

# Symptom 1: The Web-Based Admin View screen cannot be started. Even though it was started, the screen is not displayed properly, or a dialog message from 0001-0005 appears.

No	Corrective action
1	Check the following:
	- If the designated URL is correct.
	- If the host name is correctly specified.
	- If the environment supports Java Plug-in. (Refer to "3.1.3 Web environment")
	- If the browser type and version are the recommended ones.
	- If the slew mode is selected for NTP settings.
2	Refer to "7.2.1 http port number" and confirm the http port number that is currently set up.
3	Check whether Web-Based Admin View is started on the management server.
	Execute the ps(1) command to check whether the following process is started correctly.
	[When the monitoring node acts as the management server]
	wvAgent /opt/FJSVwvbs
	wvAgent /opt/FJSVwvbs /opt/FJSVwvcnf/bin/wvcnfd -b < <i>IP address or Host name&gt;</i> -p < <i>Port number&gt;</i>
	<java_home>/bin/java -Dwebview.htdocs=/etc/opt/FJSVwvcnf/htdocs/FJSVwvbs</java_home>
	-mx128m -Djava.security.policy=/opt/FJSVwvbs/etc/.policyAp
	com.fujitsu.webview.base.server.ServerMain/opt/FJSVwvbs
	<java_home>:Environment variable of Web-based Admin View.</java_home>
	[When the monitoring node does not act as the management server]
	wvAgent /opt/FJSVwvbs
	wvAgent /opt/FJSVwvbs
	/opt/FJSVwvcnf/bin/wvcnfd -b < <i>IP address or Host name</i> > -p < <i>Port number</i> >

No	Corrective action
	If even one process is not running, take actions as described in the following action 9 to 11.
4	The browser might be hung up depending on the client OS or the browser version.
	In such a case, restart the browser and retry accessing the management server.
5	Refer to the installation guide for the product and make sure all the required packages are correctly installed.
6	Change NTP settings so that time will be synchronized slowly by the slew mode.
7	Check the proxy setting of the browser not using a proxy server. For the proxy setting, refer to "Proxy setting" in "3.1.3.1 Preparing the Web browser".
	Both the host name and corresponding IP address must be set not using a proxy server.
8	Check mip, httpip, and the IP address or the host name for the management server in all the nodes.
	- IP address or host name for identifying own host
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam mip local:mip < <i>IP address or Host name</i> >
	- IP address used for the client
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam httpip local:httpip < <i>IP address</i> >
	- IP address of the primary management server
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam primary-server sys:primary-server < <i>IP address</i> >
	- IP address of the secondary management server
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam secondary-server sys:secondary-server < <i>IP address</i> >
	If these parameters are not set up correctly, set correct addresses. Refer to "7.1 Network address", or "7.3 Management server", and "7.5 Multi-network between server and client by classified use".
9	Check if the Java environment is specified by Web-Based Admin.
	[How to check the defined Java environment]
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam java_home
	local:java_home /opt/SMAW/SMAWcj2re/jre
	If the Java environment is different from the one Web-Based Admin specified, perform the following setting:
	<ol> <li>Stop Web-Based Admin View Refer to "6.1 Stop" to stop Web-Based Admin View.</li> </ol>
	<ol> <li>Modify the Java environment # /etc/opt/FJSVwvbs/etc/bin/wvSetparam java_home /opt/SMAW/SMAWcj2re/jre</li> </ol>
	<ol> <li>Restart Web-Based Admin View Refer to "6.2 Restart" to restart Web-Based Admin View.</li> </ol>
10	Check if the specified port number has not already been used. Refer to "7.2 Network service port number".
11	Check whether the definition file (/etc/opt/FJSVwvbs/etc/webview.cnf or /etc/opt/FJSVwvbs/etc/ wvlocal.cnf) of Web-Based Admin View is set up correctly on all the management servers or monitoring nodes.
	The following is an example of the webview.cnf file:

No	Corrective action
	[Example of /etc/opt/FJSVwvbs/etc/webview.cnf]
	usr:out-time:0
	usr:c-tlog-debug:off
	usr:look-and-feel:Metal
	sys:_serialID:< <i>IP address or Host name</i> >@XXXX.XX.XX XX:XX.XXX
	sys:http-home:
	sys:s-tlog-debug:on
	sys:classpath:/opt/FJSVwvbs/etc/jars/swingall.jar sys:health-time:10
	sys:keep-time:10
	sys:tophtml-suffix:html
	sys:httpdif:hme0
	sys:n-tlog-debug:on
	sys:s-llog-vol:100
	sys:n-tlog-vol:200
	sys:s-tlog-vol:200
	sys:acsif:hme0
	sys:s-olog-vol:100
	sys:s-elog-vol:100
	sys:rmi-cmdread-timer:900
	sys:n-pending-events:100
	sys:retry-time:30
	sys:cluster-lib-path:
	sys:cluster-path:
	sys:s-llog-num:2
	sys:n-tlog-num:5
	sys:s-tlog-num:5
	sys:group-addr:
	sys:s-olog-num:5 sys:s-elog-num:2
	sys:s-clog-hulli.2 sys:rmi-cmdwait-timer:900
	sys:server-ha:off
	sys:secondary-server:< <i>IP address</i> >
	sys:primary-server:< <i>IP address</i> >
	sys:s-java-option:-Xmx128m
	The following is an example of the wvlocal.cnf file:
	[Example of /etc/opt/FJSVwvbs/etc/wvlocal.cnf]
	local:classpath: local:cluster-path:
	local:cluster-lib-path:
	local:mip:< <i>IP address or Host name</i> >
	local:httpip:
	local:server-election:on
	local:java_home:/opt/SMAW/SMAWcj2re/jre
	local:s-log-path:/var/opt/FJSVwvbs/logs/server
	local:n-log-path:/var/opt/FJSVwvbs/logs/node
	If the webview.cnf or wvlocal.cnf file is not in this format, recreate the above file by using an editor (eg. vi).
	If the "webview.cnf or wvlocal.cnf" file is created as shown above, take the following steps to reset
	the node specific parameter on all the management servers and monitoring nodes.
	Set up the Network address that is used for Web-Based Admin View on the node. Refer to "7.1 Network address".

No	Corrective action
	<ol> <li>Set up the IP addresses of the primary management server and the secondary server. Refer to "7.3 Management server".</li> </ol>
	<ol> <li>Set up the IP address of the open network for clients when the node acts as a management server. Refer to "7.5 Multi-network between server and client by classified use".</li> </ol>
	3. Set up the group address. Refer to the method used for command-based setup in "7.4 Secondary management server automatic migration".
	4. Restart Web-Based Admin View. Refer to "6.2 Restart".
12	The communication between the client and the management server may be blocked by firewall.
	When using firewalld, iptables, or ip6tables as firewall on the management server, allow the communication on port numbers used by Web-Based Admin View.
	For details on the port numbers used by Web-Based Admin View, see "7.2 Network service port number."

# Symptom 2: The screen is not switched when clicking the confirmation button for 0003 or 0007 dialog message. The browser is hung up when attempting to reconnect to the management server that was previously connected.

No	Corrective action
1	Enter the URL of the connected management server in the URL field of the browser and switch the
	screen manually, or restart the browser, and then retry accessing the server.

# Symptom 3: The message "FJSVwvbs: OutOfMemoryError" may be output to the Java console screen of the management server or monitoring node.

No	Corrective action
1	Restart Web-Based Admin View on the management server or monitoring node on which the message appeared. Shut down/restart the client Web browser and then reaccess.
	📸 See
	For restarting Web-Based Admin View, refer to "6.2 Restart".
2	1. Stop Web-Based Admin View.
	See
	Refer to "6.1 Stop".
	2. Change a heap size.
	<pre># /etc/opt/FJSVwvbs/etc/bin/wvSetparam s-java-option -Xmx<heap-size>m <heap-size>: Heap size. The initial value is 128Mbyte. For example,When changing a heap size to 256Mbyte. # /etc/opt/FJSVwvbs/etc/bin/wvSetparam s-java-option -Xmx256m</heap-size></heap-size></pre>
	<ol> <li>Restart Web-Based Admin View.</li> </ol>
	🐴 See
	Refer to "6.2 Restart".
	•••••••••••••••••••••••••••••••••••••••

Symptom 4: When the browser accesses the management server, dialog message 0005 is displayed, and the Web-Based Admin View screen and dialog message are not displayed.

No	Corrective action
1	If a name is specified as the host name of the management server in the URL field of the browser, designate the IP address used for the client of the management server. If the authentication dialog box is displayed then, the client DNS settings may be incorrect. In that case, follow the procedure shown below:
	The default value of <b>httpip</b> set to the IP address, which is assigned to the displayed node name as a result of executing "uname -n."
	If it does not appear, go to Corrective Action 3.
	- If Windows Vista(R) is installed in the client
	Select [View status] of Local area connection from [Control Panel]-[View network status and tasks]. Then, [Properties] is displayed.
	If [User Account Control] dialog box is displayed, click [Continue].
	From the list on the [Networking] tab, select [Internet protocol Version 4 (TCP/IPv4)] and then display [Properties]. If either [Obtain DNS server address automatically] or [Use the following DNS server addresses:] is selected, check if the name is configured in the DNS and mapped to an IP address by the designated DNS server. If neither is selected, <b>go to Corrective Action 3</b> .
	- If Windows(R) 7 is installed in the client
	View by: Category Select [Local Area Connection] from [Control Panel]-[View network status and tasks]. Then, [Properties] is displayed.
	From the list on the [Networking] tab, select [Internet protocol Version 4 (TCP/IPv4)] and then display [Properties]. If either [Obtain DNS server address automatically] or [Use the following DNS server addresses:] is selected, check if the name is configured in the DNS and mapped to an IP address by the designated DNS server. If neither is selected, <b>go to Corrective Action 3</b> . View by: Large icons or Small icons Select [Local Area Connection] from [Control Panel]-[Network and Sharing Center]. Then, [Properties] is displayed.
	From the list on the [Networking] tab, select [Internet protocol Version 4 (TCP/IPv4)] and then display [Properties]. If either [Obtain DNS server address automatically] or [Use the following DNS server addresses:] is selected, check if the name is configured in the DNS and mapped to an IP address by the designated DNS server. If neither is selected, <b>go to Corrective Action 3</b> .
	- If Windows(R) other than 7 is installed in the client
	View by: Category Select [Control Panel]-[View network status and tasks], click the <network name=""> displayed in "Connections" from "View your active networks". Then, click [Properties] from the "General" tab. Select [Internet Protocol Version 4 (TCP/IPv4)] from the list on the "Networking" tab and then click [Properties]. If either [Obtain DNS server address automatically] or [Use the following DNS server addresses:] is selected, check if the name is configured in the DNS and mapped to an IP address by the designated DNS server. If neither is selected, <b>go to Corrective Action 3</b>. View by: Large icons or Small icons Select [Control Panel]-[Network and Sharing Center], click the <network name=""> displayed in "Connections" from "View your active networks". Then, click [Properties] from the "General" tab. Select [Internet Protocol Version 4 (TCP/IPv4)] from the list on the "Networking" tab and then click [Properties]. If either [Obtain DNS server address automatically] or [Use the following DNS server addresses:] is selected, check if the name is configured in the DNS and mapped to an IP</network></network>
	address by the designated DNS server. If neither is selected, go to Corrective Action 3.

No	Corrective action
2	Confirm whether a combination of the host name (local host name) displayed as a result of executing "uname -n" and the IP address is registered either in the "/etc/inet/hosts" file or DNS. If not, you need to register either in the /etc/inet/hosts file or in DNS for host name to be mapped to the IP address.
3	Check whether Web-Based Admin View is started on the management server.
	Execute the ps(1) command to check whether the following process is started correctly.
	[When the monitoring node acts as the management server]
	wvAgent /opt/FJSVwvbs wvAgent /opt/FJSVwvbs /opt/FJSVwvcnf/bin/wvcnfd -b < <i>IP address or Host name</i> > -p < <i>Port number&gt;</i> <java_home>/bin/java -Dwebview.htdocs=/etc/opt/FJSVwvcnf/htdocs/FJSVwvbs -mx128m -Djava.security.policy=/opt/FJSVwvbs/etc/.policyAp com.fujitsu.webview.base.server.ServerMain /opt/FJSVwvbs <java_home>:Environment variable of Web-based Admin View.</java_home></java_home>
	[When the monitoring node does not act as the management server]
	wvAgent /opt/FJSVwvbs wvAgent /opt/FJSVwvbs /opt/FJSVwvcnf/bin/wvcnfd -b < <i>IP address or Host name</i> > -p < <i>Port number</i> >
	If even one process is not running, take actions as described in the following action 7 to 9.
4	Check <b>mip</b> , <b>httpip</b> , and the IP address or the host name for the management server in all the nodes.
	- IP address or host name for identifying own host
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam mip local:mip < <i>IP address or Host name</i> >
	- IP address used for the client
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam httpip local:httpip < <i>IP address</i> >
	- IP address of the primary management server
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam primary-server sys:primary-server <i><ip address=""></ip></i>
	- IP address of the secondary management server
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam secondary-server sys:secondary-server < <i>IP address</i> >
	If these parameters are not set up correctly, set correct addresses. Refer to "7.1 Network address", or "7.3 Management server", and "7.5 Multi-network between server and client by classified use".
5	1. Edit and access the following file on the management server:
	File: /etc/opt/FJSVwvbs/etc/WebView.html Record: < PARAM NAME=Port VALUE="????" >
	2. Execute the following command:
	# /etc/opt/FJSVwvbs/etc/bin/wvSetport fjwv_c
	If the VALUE in 2 is ????, the same as that in 1, go to <b>Corrective action 6</b> . If the VALUE in 2 is nor the same as that in 1, change the RMI port number of fjwv_c, according to "7.2.2 RMI port number". #/etc/opt/FJSVwvbs/etc/bin/wvSetport fjwv_c=< <i>RMI port number</i> > The initial value is 9399 in Solaris and 9799 in Linux.
	After changing the port number, be sure to restart Web-Based Admin View. Refer to "6.2 Restart".
6	Edit the following file in the management server and retry accessing the management server:

No	Corrective action
	File: /etc/opt/FJSVwvbs/etc/WebView.html
	File: /etc/opt/FJSVwvbs/etc/Plugin.html
	Record: < PARAM NAME=Initial_wait VALUE="??"> Specify 60 or more in "??".
	After editing a file, be sure to restart Web-Based Admin View. Refer to "6.2 Restart".
7	Check if the Java environment is specified by Web-Based Admin.
	[How to check the defined Java environment]
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam java_home
	local:java_home /opt/SMAW/SMAWcj2re/jre
	If the Java environment is different from the one Web-Based Admin specified, perform the following setting:
	<ol> <li>Stop Web-Based Admin View Refer to "6.1 Stop" to stop Web-Based Admin View.</li> </ol>
	<ol> <li>Modify the Java environment # /etc/opt/FJSVwvbs/etc/bin/wvSetparam java_home /opt/SMAW/SMAWcj2re/jre</li> </ol>
	3. Restart Web-Based Admin View
	Refer to "6.2 Restart" to restart Web-Based Admin View.
8	Check if the specified port number has not already been used. Refer to "7.2 Network service port number".
9	Check whether the definition file (/etc/opt/FJSVwvbs/etc/webview.cnf or /etc/opt/FJSVwvbs/etc/ wvlocal.cnf) of Web-Based Admin View is set up correctly on all the management servers or monitoring nodes.
	The following is an example of the webview.cnf file:
	[Example of /etc/opt/FJSVwvbs/etc/webview.cnf]
	usr:out-time:0
	usr:c-tlog-debug:off
	usr:look-and-feel:Metal
	sys:_serialID:< <i>IP address or Host name</i> >@XXXX.XX.XX XX:XX:XX.XXX
	sys:http-home: sys:s-tlog-debug:on
	sys:s-nog-dcoug.on sys:classpath:/opt/FJSVwvbs/etc/jars/swingall.jar
	sys:health-time:10
	sys:keep-time:10
	sys:tophtml-suffix:html
	sys:httpdif:hme0
	sys:n-tlog-debug:on sys:s-llog-vol:100
	sys:n-tlog-vol:100
	sys:s-tlog-vol:200
	sys:acsif:hme0
	sys:s-olog-vol:100
	sys:s-elog-vol:100
	sys:rmi-cmdread-timer:900 sys:n-pending-events:100
	sys:n-pending-events:100 sys:retry-time:30
	sys:cluster-lib-path:
	sys:cluster-path:
	sys:s-llog-num:2
	sys:n-tlog-num:5

No	Corrective action
	sys:s-tlog-num:5
	sys:group-addr:< <i>IP address</i> >
	sys:s-olog-num:5
	sys:s-elog-num:2
	sys:rmi-cmdwait-timer:900
	sys:server-ha:off
	sys:secondary-server:< <i>IP address&gt;</i> sys:primary-server:< <i>IP address&gt;</i>
	sys:s-java-option:-Xmx128m
	The following is an example of the wvlocal.cnf file:
	[Example of /etc/opt/FJSVwvbs/etc/wvlocal.cnf]
	local:classpath:
	local:cluster-path:
	local:cluster-lib-path:
	local:mip:< <i>IP address or Host name&gt;</i>
	local:httpip: <ip address=""></ip>
	local:server-election:on
	local:java_home:/opt/SMAW/SMAWcj2re/jre
	local:s-log-path:/var/opt/FJSVwvbs/logs/server
	local:n-log-path:/var/opt/FJSVwvbs/logs/node
	If the webview.cnf or wvlocal.cnf file is not in this format, recreate the above file by using an editor (eg. vi).
	If the "webview.cnf or wvlocal.cnf" file is created as shown above, take the following steps to reset
	the node specific parameter on all the management servers and monitoring nodes.
	<ol> <li>Set up the Network address that is used for Web-Based Admin View on the node. Refer to "7.1 Network address ".</li> </ol>
	<ol> <li>Set up the IP addresses of the primary management server and the secondary server. Refer to "7.3 Management server".</li> </ol>
	<ol> <li>Set up the IP address of the open network for clients when the node acts as a management server. Refer to "7.5 Multi-network between server and client by classified use".</li> </ol>
	4. Set up the group address. Refer to the method used for command-based setup in "7.4 Secondary management server automatic migration".
	5. Restart Web-Based Admin View. Refer to "6.2 Restart".

# Symptom 5: When the IP address of the LAN was changed, the operation of Web-Based Admin View was disabled.

No	Corrective action
1	Change the network address used for Web-Based Admin View in accordance with "7.1 Network address". Then, reset the IP address available to management server setup and the clients, Refer to "7.3 Management server" and "7.5 Multi-network between server and client by classified use".

# Symptom 6: With the operation management view, the monitoring node cannot be displayed in the node list for each product.

No	Corrective action
1	Follow the Corrective Action of Symptom 5, and then, restart Web-Based View in accordance with "6.2 Restart".

### Symptom 7: The screen is not switched when clicking the confirmation button of dialog message.

No	Corrective action
1	When the picture on the right of the Web-Based Admin View screen is red, the hidden message dialog behind other windows might appear by clicking it. In order to recognize such a hidden dialog, show the picture on the display at all time.

# Symptom 8: It takes a few minutes to show the Web-Based Admin View screen. Even the menu is displayed, the client gets hung up, or the dialog message 0001 appears.

No	Corrective action
1	Set up longer time than the existing [Connection monitoring time between client and server] in the system environment.
2	If a name is specified as the host name of the management server in the URL field of the browser, designate the IP address used for the client of the management server. If the authentication dialog box is displayed then, the client DNS settings may be incorrect. In that case, follow the procedure shown below:
	The default value of <b>httpip</b> set to the IP address, which is assigned to the displayed node name as a result of executing "uname -n."
	If it does not appear, go to Corrective Action 4.
	- If Windows Vista(R) is installed in the client
	Select [View status] of Local area connection from [Control Panel]-[View network status and tasks]. Then, [Properties] is displayed.
	If [User Account Control] dialog box is displayed, click [Continue].
	From the list on the [Networking] tab, select [Internet protocol Version 4 (TCP/IPv4)] and then display [Properties]. If either [Obtain DNS server address automatically] or [Use the following DNS server addresses:] is selected, check if the name is configured in the DNS and mapped to an IP address by the designated DNS server. If neither is selected, <b>go to Corrective Action 3</b> .
	- If Windows(R) 7 is installed in the client
	View by: Category Select [Local Area Connection] from [Control Panel]-[View network status and tasks]. Then, [Properties] is displayed.
	From the list on the [Networking] tab, select [Internet protocol Version 4 (TCP/IPv4)] and then display [Properties]. If either [Obtain DNS server address automatically] or [Use the following DNS server addresses:] is selected, check if the name is configured in the DNS and mapped to an IP address by the designated DNS server. If neither is selected, <b>go to Corrective Action 3</b> . View by: Large icons or Small icons Select [Local Area Connection] from [Control Panel]-[Network and Sharing Center]. Then, [Properties] is displayed.
	From the list on the [Networking] tab, select [Internet protocol Version 4 (TCP/IPv4)] and then display [Properties]. If either [Obtain DNS server address automatically] or [Use the following DNS server addresses:] is selected, check if the name is configured in the DNS and mapped to an IP address by the designated DNS server. If neither is selected, <b>go to Corrective Action 3</b> .
	- If Windows(R) other than 7 is installed in the client
	View by: Category Select [Control Panel]-[View network status and tasks], click the <network name=""> displayed in "Connections" from "View your active networks". Then, click [Properties] from the "General" tab. Select [Internet Protocol Version 4 (TCP/IPv4)] from the list on the "Networking" tab and then click [Properties]. If either [Obtain DNS server address automatically] or [Use the following DNS server addresses:] is selected, check if the name is configured in the DNS and mapped to an IP address by the designated DNS server. If neither is selected, <b>go to Corrective Action 3</b>.</network>

No	Corrective action
	View by: Large icons or Small icons Select [Control Panel]-[Network and Sharing Center], click the <network name=""> displayed in "Connections" from "View your active networks". Then, click [Properties] from the "General" tab. Select [Internet Protocol Version 4 (TCP/IPv4)] from the list on the "Networking" tab and then click [Properties]. If either [Obtain DNS server address automatically] or [Use the following DNS</network>
	server addresses:] is selected, check if the name is configured in the DNS and mapped to an IP address by the designated DNS server. If neither is selected, <b>go to Corrective Action 3</b> .
3	Confirm whether a combination of the host name (local host name) displayed as a result of executing "uname -n" and the IP address is registered either in the "/etc/inet/hosts" file or DNS. If not, you need to register either in the /etc/inet/hosts file or in DNS for host name to be mapped to the IP address.
4	Check whether Web-Based Admin View is started on the management server.
	Execute the ps(1) command to check whether the following process is started correctly.
	[When the monitoring node acts as the management server]
	wvAgent /opt/FJSVwvbs wvAgent /opt/FJSVwvbs /opt/FJSVwvcnf/bin/wvcnfd -b < <i>IP address or Host name&gt;</i> -p < <i>Port number&gt;</i> <java_home>/bin/java -Dwebview.htdocs=/etc/opt/FJSVwvcnf/htdocs/FJSVwvbs -mx128m -Djava.security.policy=/opt/FJSVwvbs/etc/.policyAp com.fujitsu.webview.base.server.ServerMain /opt/FJSVwvbs <java_home>:Environment variable of Web-based Admin View.</java_home></java_home>
	[When the monitoring node does not act as the management server]
	wvAgent /opt/FJSVwvbs wvAgent /opt/FJSVwvbs /opt/FJSVwvcnf/bin/wvcnfd -b < <i>IP address or Host name</i> > -p < <i>Port number</i> >
	If even one process is not running, take actions as described in the following action 8 to 10.
5	Check <b>mip</b> , <b>httpip</b> , and the IP address or the host name for the management server in all the nodes.
	- IP address or host name for identifying own host
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam mip local:mip < <i>IP address or Host name</i> >
	- IP address used for the client
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam httpip local:httpip < <i>IP address</i> >
	- IP address of the primary management server
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam primary-server sys:primary-server < <i>IP address</i> >
	- IP address of the secondary management server
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam secondary-server sys:secondary-server < <i>IP address</i> >
	If these parameters are not set up correctly, set correct addresses. Refer to "7.1 Network address", or "7.3 Management server", and "7.5 Multi-network between server and client by classified use".
6	1. Edit and access the following file on the management server:
	File: /etc/opt/FJSVwvbs/etc/WebView.html
	Record: < PARAM NAME=Port VALUE="????" >
	2. Execute the following command:
	#/etc/opt/FJSVwvbs/etc/bin/wvSetport fjwv_c

No	Corrective action
	If the VALUE in 2 is ????, the same as that in 1, go to Corrective action 7. If the VALUE in 2 is nor the same as that in 1, change the RMI port number of fjwv_c, according to "7.2.2 RMI port number". # /etc/opt/FJSVwvbs/etc/bin/wvSetport fjwv_c=< <i>RMI port number&gt;</i> The initial value is 9399 in Solaris and 9799 in Linux.
	After changing the port number, be sure to restart Web-Based Admin View. Refer to "6.2 Restart".
7	Edit the following file in the management server and retry accessing the management server: File: /etc/opt/FJSVwvbs/etc/WebView.html File: /etc/opt/FJSVwvbs/etc/Plugin.html Record: < PARAM NAME=Initial_wait VALUE="??"> Specify 60 or more in "??". After editing a file, be sure to restart Web-Based Admin View. Refer to "6.2 Restart".
8	Check if the Java environment is specified by Web-Based Admin.
	[How to check the defined Java environment] # /etc/opt/FJSVwvbs/etc/bin/wvGetparam java_home local:java_home /opt/SMAW/SMAWcj2re/jre
	If the Java environment is different from the one Web-Based Admin specified, perform the following setting: 1. Stop Web-Based Admin View Refer to "6.1 Stop" to stop Web-Based Admin View.
	<ol> <li>Modify the Java environment # /etc/opt/FJSVwvbs/etc/bin/wvSetparam java_home /opt/SMAW/SMAWcj2re/jre</li> <li>Restart Web-Based Admin View Refer to "6.2 Restart" to restart Web-Based Admin View.</li> </ol>
9	Check if the specified port number has not already been used. Refer to "7.2 Network service port number".
10	Check whether the definition file (/etc/opt/FJSVwvbs/etc/webview.cnf or /etc/opt/FJSVwvbs/etc/ wvlocal.cnf) of Web-Based Admin View is set up correctly on all the management servers or monitoring nodes.
	The following is an example of the webview.cnf file:
	[Example of /etc/opt/FJSVwvbs/etc/webview.cnf] usr:out-time:0 usr:c-tlog-debug:off usr:look-and-feel:Metal sys:_serialID:< <i>IP address or Host name</i> >@XXXX.XXXXXXXXXXXXXXXXX sys:http-home: sys:s-tlog-debug:on sys:classpath:/opt/FJSVwvbs/etc/jars/swingall.jar sys:health-time:10 sys:keep-time:10 sys:keep-time:10 sys:tophtml-suffix:html sys:httpdif:hme0 sys:n-tlog-debug:on sys:s-llog-vol:100 sys:n-tlog-vol:200 sys:s-tlog-vol:200 sys:acsif:hme0

>	Corrective action
	sys:s-olog-vol:100
	sys:s-elog-vol:100
	sys:rmi-cmdread-timer:900
	sys:n-pending-events:100
	sys:retry-time:30
	sys:cluster-lib-path:
	sys:cluster-path:
	sys:s-llog-num:2
	sys:n-tlog-num:5 sys:s-tlog-num:5
	sys:s-uog-num:5 sys:group-addr:< <i>IP address</i> >
	sys:s-olog-num:5
	sys:s-olog-num:2
	sys:rmi-cmdwait-timer:900
	sys:server-ha:off
	sys:secondary-server:< <i>IP address</i> >
	sys:primary-server:< <i>IP address</i> >
	sys:s-java-option:-Xmx128m
	The following is an example of the wvlocal.cnf file:
	[Example of /etc/opt/FJSVwvbs/etc/wvlocal.cnf]
	local:classpath:
	local:cluster-path:
	local:cluster-lib-path:
	local:mip:
	local:httpip:
	local:server-election:on
	local:java_home:/opt/SMAW/SMAWcj2re/jre
	local:s-log-path:/var/opt/FJSVwvbs/logs/server
	local:n-log-path:/var/opt/FJSVwvbs/logs/node
	If the webview.cnf or wvlocal.cnf file is not in this format, recreate the above file by using an editor (eg. vi).
	If the "webview.cnf or wvlocal.cnf" file is created as shown above, take the following steps to reset
	the node specific parameter on all the management servers and monitoring nodes.
	<ol> <li>Set up the Network address that is used for Web-Based Admin View on the node. Refer to "7.1 Network address".</li> </ol>
	<ol> <li>Set up the IP addresses of the primary management server and the secondary server. Refer to "7.3 Management server".</li> </ol>
	3. Set up the IP address of the open network for clients when the node acts as a management server. Refer to "7.5 Multi-network between server and client by classified use".
	4. Set up the group address. Refer to the method used for command-based setup in "7.4 Secondary management server automatic migration".
	5. Restart Web-Based Admin View. Refer to "6.2 Restart".
	J. RESTAIL WED-DASED AUTIIII VIEW. RETET TO 0.2 RESTART.

Symptom 9: When a Java Plug-in is used for the client browser, garbage data are jumbled up or the screen display is distorted after accessing the Web-Based Admin View screen or operation management view of each product.

No	Corrective action
1	The graphics hardware of the client might be failed. Modify the operation method (see below) or update
	the graphics driver. If the problem is not solved, contact your local Customer Support.

No	Corrective action
	[For Windows Vista(R)]
	<ol> <li>Select [Start]-[Control Panel]-[Adjust screen resolution]-[Advanced Setting]- [Troubleshoot] - [Change setting].</li> </ol>
	2. If [User Account Control] dialog box is displayed, click [Continue].
	3. Change the settings of the hardware accelerator.
	[For Windows(R) 7]
	View by: Category
	<ol> <li>Select [Start]-[Control Panel]-[Adjust screen resolution]-[Advanced Setting]-[Troubleshoot]- [Change setting].</li> </ol>
	2. If you are prompted for an administrator password or confirmation, type the password or provide confirmation.
	3. Change the settings of the hardware accelerator.
	View by: Large icons or Small icons
	<ol> <li>Select [Start]-[Control Panel]-[Display]-[Adjust screen resolution]-[Advanced Setting]- [Troubleshoot]-[Change setting].</li> </ol>
	2. If you are prompted for an administrator password or confirmation, type the password or provide confirmation.
	3. Change the settings of the hardware accelerator.
	G Note
	- If the problem is not solved even after the performance is lowered to a next level, check the display as turning down the level one by one.
	- The modification of operation method might affect the overall client's graphic displays. When Web-Based Admin View is not used, undo any setup modifications.

# Symptom 10: The message "FJSVwvbs: webview.cnf abnormal" or "Node process abnormal end" is output when starting up or restarting Web-Based Admin view, or starting up a node.

No	Corrective action
1	Check if the Java environment is specified by Web-Based Admin.
	[How to check the defined Java environment]
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam java_home
	local:java_home /opt/SMAW/SMAWcj2re/jre
	If the Java environment is different from the one Web-Based Admin specified, perform the following setting:
	1. Stop Web-Based Admin View
	Refer to "6.1 Stop" to stop Web-Based Admin View.
	2. Modify the Java environment
	# /etc/opt/FJSVwvbs/etc/bin/wvSetparam java_home /opt/SMAW/SMAWcj2re/jre
	3. Restart Web-Based Admin View
	Refer to "6.2 Restart" to restart Web-Based Admin View.
2	Check <b>mip</b> , <b>httpip</b> , and the IP address or the host name for the management server in all the nodes.

No	Corrective action
	- IP address or host name for identifying own host
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam mip local:mip < <i>IP address or Host name</i> >
	- IP address used for the client
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam httpip local:httpip < <i>IP address</i> >
	- IP address of the primary management server
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam primary-server sys:primary-server < <i>IP address</i> >
	- IP address of the secondary management server
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam secondary-serve sys:secondary-server < <i>IP address</i> >
	If these parameters are not set up correctly, set correct addresses. Refer to "7.1 Network address", or "7.3 Management server", and "7.5 Multi-network between server and client by classified use".
3	Check if the specified port number has not already been used. Refer to "7.2 Network service port number".
4	Check whether the definition file (/etc/opt/FJSVwvbs/etc/webview.cnf or /etc/opt/FJSVwvbs/etc/ wvlocal.cnf) of Web-Based Admin View is set up correctly on all the management servers or monitoring nodes.
	The following is an example of the webview.cnf file:
	[Example of /etc/opt/FJSVwvbs/etc/webview.cnf]
	usr:out-time:0
	usr:c-tlog-debug:off
	usr:look-and-feel:Metal sys:_serialID:< <i>IP address or Host name</i> >@XXXX.XX.XX XX:XX:XX.XXX
	sys:http-home:
	sys:s-tlog-debug:on
	sys:classpath:/opt/FJSVwvbs/etc/jars/swingall.jar
	sys:health-time:10 sys:keep-time:10
	sys:keep-tille:10
	sys:httpdif:hme0
	sys:n-tlog-debug:on
	sys:s-llog-vol:100
	sys:n-tlog-vol:200
	sys:s-tlog-vol:200 sys:acsif:hme0
	sys:s-olog-vol:100
	sys:s-elog-vol:100
	sys:rmi-cmdread-timer:900
	sys:n-pending-events:100
	sys:retry-time:30
	sys:cluster-lib-path:
	sys:cluster-path: sys:s-llog-num:2
	sys:n-tlog-num:5
	sys:s-tlog-num:5
	sys:group-addr:< <i>IP address</i> >
	sys:s-olog-num:5
	sys:s-elog-num:2

No	Corrective action
	sys:rmi-cmdwait-timer:900 sys:server-ha:off sys:secondary-server:< <i>IP address&gt;</i> sys:primary-server:< <i>IP address&gt;</i> sys:s-java-option:-Xmx128m
	The following is an example of the wvlocal.cnf file:
	[Example of /etc/opt/FJSVwvbs/etc/wvlocal.cnf]
	local:classpath: local:cluster-path: local:cluster-lib-path: local:mip:< <i>IP address or Host name&gt;</i> local:httpip:< <i>IP address&gt;</i> local:server-election:on local:java_home:/opt/SMAW/SMAWcj2re/jre local:s-log-path:/var/opt/FJSVwvbs/logs/server local:n-log-path:/var/opt/FJSVwvbs/logs/node
	If the webview.cnf or wvlocal.cnf file is not in this format, recreate the above file by using an editor (eg. vi).
	If the "webview.cnf or wvlocal.cnf" file is created as shown above, take the following steps to reset
	the node specific parameter on all the management servers and monitoring nodes.
	<ol> <li>Set up the Network address that is used for Web-Based Admin View on the node. Refer to "7.1 Network address".</li> </ol>
	<ol> <li>Set up the IP addresses of the primary management server and the secondary server. Refer to "7.3 Management server".</li> </ol>
	<ol> <li>Set up the IP address of the open network for clients when the node acts as a management server. Refer to "7.5 Multi-network between server and client by classified use".</li> </ol>
	<ol> <li>Set up the group address. Refer to the method used for command-based setup in "7.4 Secondary management server automatic migration".</li> </ol>
	5. Restart Web-Based Admin View. Refer to "6.2 Restart".

Symptom 11: The message "WARNING: unrelated 'httpip' property." is output when the Web-Based Admin View is started or restarted.

No	Corrective action
1	Confirm if the IP address of the open network is correctly set up in the management server. Refer to "7.5 Multi-network between server and client by classified use".

Symptom 12: The manual title is not displayed by manual reference operation after the manual package is installed, or the manual title remains after the package is deleted.

No	Corrective action
1	The installation or deletion of the manual contents while Web-Based Admin View is active will not take effect. You need to restart to make it valid. Refer to "6.2 Restart". Restart the Web-Based Admin View, and then retry accessing from the client.

Symptom 13: The dialog message 0023 is displayed when starting the operation management product from the Web-Based Admin View screen.

No	Corrective action
1	Since the access method may vary depending on the operation management product, recheck by referring to the manual of operation management products.
	In case of the concurrent use of operation management products with different access methods, refer to "3.3.4 Concurrent use of operation management products with different access methods".

# Symptom 14: The start button of the operation management product gets out of the Web-Based Admin View screen.

No	Corrective action
1	If the incorrect access method is applied to start an optional operation management product, the system might show the 0022 dialog message, and then automatically re-access by a correct access method. In such a case, the Web-Based Admin View screen that was displayed by the first incorrect method is exited.
	If you need to display this first Web-Based Admin View screen again, start the Web browser and access on the screen.
	For details refer to "Concurrent use of operation management products with different access methods".

# Symptom 15: The 0003 or 0007 dialog message may not appear when the management server is disconnected.

No	Corrective action
1	Restart the browser and retry accessing the management server.

# Symptom 16: The 0006 dialog message is displayed, and the Web-Based Admin View screen is not displayed when accessing the management server from the browser.

No	Corrective action
1	Check whether Web-Based Admin View is started on the management server.
	Execute the ps(1) command to check whether the following process is started correctly.
	[When the monitoring node acts as the management server]
	wvAgent /opt/FJSVwvbs wvAgent /opt/FJSVwvbs /opt/FJSVwvcnf/bin/wvcnfd -b < <i>IP address or Host name&gt;</i> -p < <i>Port number&gt;</i> <java_home>/bin/java -Dwebview.htdocs=/etc/opt/FJSVwvcnf/htdocs/FJSVwvbs -mx128m -Djava.security.policy=/opt/FJSVwvbs/etc/.policyAp com.fujitsu.webview.base.server.ServerMain /opt/FJSVwvbs <java_home>:Environment variable of Web-based Admin View.</java_home></java_home>
	[When the monitoring node does not act as the management server]
	wvAgent /opt/FJSVwvbs wvAgent /opt/FJSVwvbs /opt/FJSVwvcnf/bin/wvcnfd -b < <i>IP address or Host name</i> > -p < <i>Port number</i> >
	If even one process is not running, take actions as described in the following action 3 to 5.
2	<ul> <li>Check mip, httpip, and the IP address or the host name for the management server in all the nodes.</li> <li>IP address or host name for identifying own host <ul> <li># /etc/opt/FJSVwvbs/etc/bin/wvGetparam mip</li> <li>local:mip <ip address="" host="" name="" or=""></ip></li> <li>IP address used for the client</li> </ul> </li> </ul>

No	Corrective action
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam httpip
	local:httpip < <i>IP address</i> >
	- IP address of the primary management server
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam primary-server sys:primary-server < <i>IP address</i> >
	- IP address of the secondary management server
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam secondary-server sys:secondary-server < <i>IP address</i> >
	If these parameters are not set up correctly, set correct addresses. Refer to "7.1 Network address", or "7.3 Management server", and "7.5 Multi-network between server and client by classified use".
3	Check if the Java environment is specified by Web-Based Admin.
	[How to check the defined Java environment]
	# /etc/opt/FJSVwvbs/etc/bin/wvGetparam java_home
	local:java_home /opt/SMAW/SMAWcj2re/jre
	If the Java environment is different from the one Web-Based Admin specified, perform the following setting:
	<ol> <li>Stop Web-Based Admin View Refer to "6.1 Stop" to stop Web-Based Admin View.</li> </ol>
	<ol> <li>Modify the Java environment #/etc/opt/FJSVwvbs/etc/bin/wvSetparam java_home /opt/SMAW/SMAWcj2re/jre</li> </ol>
	<ol> <li>Restart Web-Based Admin View Refer to "6.2 Restart" to restart Web-Based Admin View.</li> </ol>
4	Check if the specified port number has not already been used. Refer to "7.2 Network service port number".
5	Check whether the definition file (/etc/opt/FJSVwvbs/etc/webview.cnf or /etc/opt/FJSVwvbs/etc/ wvlocal.cnf) of Web-Based Admin View is set up correctly on all the management servers or monitoring nodes.
	The following is an example of the webview.cnf file:
	[Example of /etc/opt/FJSVwvbs/etc/webview.cnf]
	usr:out-time:0
	usr:c-tlog-debug:off
	usr:look-and-feel:Metal sys:_serialID:< <i>IP address or Host name</i> >@XXXX.XX.XX XX:XX:XX.XXX
	sys:_senanD.
	sys:s-tlog-debug:on
	sys:classpath:/opt/FJSVwvbs/etc/jars/swingall.jar
	sys:health-time:10 sys:keep-time:10
	sys:tophtml-suffix:html
	sys:httpdif:hme0
	sys:n-tlog-debug:on sys:s-llog-vol:100
	sys:s-flog-vol:100 sys:n-tlog-vol:200
	sys:s-tlog-vol:200
	sys:acsif:hme0
	sys:s-olog-vol:100
I	sys:s-elog-vol:100

No	Corrective action
	sys:rmi-cmdread-timer:900
	sys:n-pending-events:100
	sys:retry-time:30
	sys:cluster-lib-path:
	sys:cluster-path:
	sys:s-llog-num:2
	sys:n-tlog-num:5
	sys:s-tlog-num:5
	sys:group-addr:< <i>IP address</i> >
	sys:s-olog-num:5
	sys:s-elog-num:2
	sys:rmi-cmdwait-timer:900
	sys:server-ha:off
	sys:secondary-server: <ip address=""></ip>
	sys:primary-server: <ip address=""></ip>
	sys:s-java-option:-Xmx128m
	The following is an example of the wvlocal.cnf file:
	[Example of /etc/opt/FJSVwvbs/etc/wvlocal.cnf]
	local:classpath:
	local:cluster-path:
	local:cluster-lib-path:
	local:mip: <ip address="" host="" name="" or=""></ip>
	local:httpip: <ip address=""></ip>
	local:server-election:on
	local:java_home:/opt/SMAW/SMAWcj2re/jre
	local:s-log-path:/var/opt/FJSVwvbs/logs/server
	local:n-log-path:/var/opt/FJSVwvbs/logs/node
	If the webview.cnf or wvlocal.cnf file is not in this format, recreate the above file by using an editor (eg. vi).
	If the "webview.cnf or wvlocal.cnf" file is created as shown above, take the following steps to reset the node specific parameter on all the management servers and monitoring nodes.
	<ol> <li>Set up the Network address that is used for Web-Based Admin View on the node. Refer to "7.1 Network address".</li> </ol>
	<ol> <li>Set up the IP addresses of the primary management server and the secondary server. Refer to "7.3 Management server".</li> </ol>
	<ol> <li>Set up the IP address of the open network for clients when the node acts as a management server. Refer to "7.5 Multi-network between server and client by classified use".</li> </ol>
	4. Set up the group address. Refer to the method used for command-based setup in "7.4 Secondary management server automatic migration".
	5. Restart Web-Based Admin View. Refer to "6.2 Restart".
6	Through Firewall and NAT, a client may accesses each node on which PRIMECLUSTER is installed.
	From a client, do not access each node on which PRIMECLUSTER is installed through Firewall and NAT.

# Symptom 17: The server is unable to login with the user ID and password, and the 0016 dialog message is output.

No	Corrective action
1	Check if the user ID and password provided are correctly registered.

No	Corrective action
2	If no password is assigned for the user ID, set the password.
3	If you continue to login, follow the corrective action 4 below.
4	If the problem is not improved, reconnect from a client after restarting the management server of Web-Based Admin View. Refer to "6.2 Restart".

# Symptom 18: "PRIMECLUSTER Global File Services Configuration and Administration Guide" is not displayed in the manual menu.

No	Corrective action
1	The English and Japanese versions of "PRIMECLUSTER Global File Services Configuration and Administration Guide" cannot be displayed at the same time.
	Reinstall the manual package of GFS. Refer to "3.3.3 Common menu functions".

GFS: Global File Services

# Symptom 19 : The cluster node is not displayed, or an access error occurs when the operation management screen is activated for the first time after Web-Based Admin View installation.

No	Corrective action
1	Take the following steps to check if the setup for primary and secondary management server is properly done. For your reference, you can see "4.3.3 Primary management server", "4.3.4 Secondary management server".
	1. Check the provided [Secondary] information in the upper right of the Web-Based Admin View screen.
	2. Take proper actions according to the information.
	- In case of non-display
	Check if there's any failure or damage in the secondary management server.
	- If any, locate the cause of the node failure and take corrective actions.
	<ul> <li>If not, set up the primary and secondary management server. Refer to "7.3 Management server".</li> </ul>
	- In case of displaying "Down"
	Check if there's any failure or damage in the nodes and if the package is correctly installed for each product. If any, take corrective actions.

# Symptom 20 : When reading the URL of Java Plug-in by using Internet Explorer, the message "Welcome to Web-Based Admin View" is not displayed or the dialog of "Security Warning" (If the Java Plug-in should be installed and executed) is displayed in the Web browser.

No	Corrective action
1	Verify the following:
	- If the Java Plug-in is installed.
	- If the supported version is updated.
	If there is any problem, install Java Plug-in according to "Setting up Java Plug-in" in "3.1.3.2 Required for the Web browser environment".
	Note that the dialogue box appears when clicking the icon on "Click here to get the plugin", so select [Cancel].

#### Symptom 21 : The japanese character turns into garbage or is not displayed on a screen.

No	Corrective action
1	The client might be used where Japanese environment is not set up. Check the environment, and then use the client with proper environment. For details about the recommended display language on your environment, refer to "4.3.1 Display setup".

Symptom 22 : The dialog message of 0032 is displayed in the Web browser when you refer the manual or help.

No	Corrective action	
1	Change the settings of the Web browser according to "3.1.3.1 Preparing the Web browser".	

Symptom 23 : Web-Based Admin View or each operation management view (such as GDS operation management view and GFS operation management view) on Web-Based Admin View becomes unusable in process of the operation, or the connection to the management server is cut in process of the operation.

No	Corrective action
1	Check whether the port number which uses in Web-Based Admin View overlaps with one in other products.
	Check the port numbers which use in Web-Based Admin View.
	[Example of checking the port number setting in Solaris]
	#/etc/opt/FJSVwvbs/etc/bin/wvSetport
	fjwv-h=8081 fjwv_s=9398 fjwv_n=9397 fjwv_c=9399 fjwv_g=9396 [Example of checking the port number setting in Linux]
	# /etc/opt/FJSVwvbs/etc/bin/wvSetport
	fjwv-h=8081 fjwv_s=9798 fjwv_n=9797 fjwv_c=9799 fjwv_g=9796
	If the above port numbers are repeatedly used by other products, refer to "7.2 Network service port number" to change them.

Symptom 24 : During the displaying of each operation management view (such as GDS operation management view or GFS operation management view), if the hardware of the client machine is reset or the network of the client machine is cut, you will become to not able to login Web-Based Admin View after it is recovered.

No	Corrective action
1	Restart Web-Based Admin View. Refer to "6.2 Restart".

Symptom 25 : Monitored nodes might not be displayed on a list of nodes for each product after the network disconnection between the management servers and monitored nodes is recovered.

No	Corrective action
1	Restart Web-Based Admin View. Refer to "6.2 Restart".

### **B.2** Troubleshooting information collection

In the event of a failure, collect the following material for investigation, and contact local Customer Support.

Investigation information for Web-Based Admin View

- 1. Execute wvCntl to collect investigation information on all management servers and monitoring nodes.
- 2. Collect the Java Console on the clients.
- 3. Collect screen hard copies on the clients.



If the PRIMECLUSTER is installed, collect the investigation information. Refer to "C.1 Collecting Troubleshooting Information" in "PRIMECLUSTER Installation and Administration Guide."

B.2.1 wvCntl

Execute these operations on all the management server and monitoring node. In the event of a failure, the investigation information can be collected by executing the wvCntl command. For details on the management server and monitoring node, refer to "1.2.2 System topology".

Execute the wvCntl command as follows:

Procedure:

- 1. Log-in with system administrator authority.
- 2. Execute the wvCntl command.

Then, the file "wvLogs.tar.Z" is generated on the node.

# /etc/opt/FJSVwvbs/etc/bin/wvCntl glogs -all < the material storage directory name> < the material storage directory name>:

Designate the material storage directory by full path name. Otherwise, information is automatically stored in the default directory /var/tmp.

### B.2.2 Java console

Take the following steps to collect the Java console on the client which displays Web-Based Admin View.

#### Java console display

Collect the Java console of Java Plug-in. Display it by taking the following steps.

- 1. Start up Java control panel.
- 2. Select [Details] tab on Java control panel.
- 3. Select "Show console "in "Java console" and click on <OK> button.

#### In case of non-displaying Java Console

After collecting this information, take the following steps to restore the setting as the Java console is not displayed:

- 1. Start up Java control panel.
- 2. Select [Details] tab on Java control panel.
- 3. Select "Hide console "in "Java console" and click on <OK> button.

### B.2.3 Screen hard copy

Collect screen hard copies on the client as following:

- 1. Click [Print Screen], and then paste the necessary data by an image-editing tool.
- 2. Store in a bit map file or other format.
- 3. If the [Detail] button is available on the error dialog, click.
- 4. Collect the error details as well

### Glossary

#### Cookie

A piece of information, sent by a Web server to a Web browser and saved on the client hard disk drive. When a server receives a request from a Browser that includes a Cookie, the server is able to use the information stored in the Cookie to identify each client.

#### DNS

Abbreviation for Domain Network Service. This system provides the naming policy and mechanisms for mapping domain and machine names to addresses on the Internet.

#### **Global Disk Services**

The volume management software designed to improve availability and manageability of the information stored on the disk unit of the Storage Area Network (SAN).

#### **Global File Services**

The software that provides direct and concurrent access to the file system on the shared storage unit from two or more nodes within a cluster.

#### **Global Link Services**

PRIMECLUSTER optional module that provides network high availability solutions by multiplying a network route.

#### Group address

The specialized address that is able to recognize multiple hosts and communicate to those destination addresses on the IP network.

#### GUI

See "Operation management view"

#### Host name

The name that stands for the network machine (all kinds of nodes with IP addresses) especially in the TCP/IP network.

#### httpip

The IP address and host name used for a client (WWW server's IP address and host name).

This is used for communication among monitoring clients and management servers.

#### Http port

Refers to the network port that the management Web server (Webcnf) uses to accept a connection from the client.

#### Internet Explorer

The name of Web browser developed and manufactured by Microsoft.

#### Java console

The console screen for the Java program provided by a Web browser or Java Plug-in. The behavior of the Java program within a client's Web browser is displayed.

#### Java Development Kit

Java basic development kit offered by Oracle. Java Plug-in software is attached.

#### Java Plug-in

JavaVM for the Web browser manufactured by Oracle.

#### Java Runtime Environment

Software set required in order to perform software developed in the Java offered by Oracle. Java Plug-in software is attached to Java Runtime Environment.

#### LAN

Abbreviation for Local Area Network.

In this manual, generic name of network (LAN) used by Web-Based Admin View. For example, public LAN, administrative LAN, private LAN, and so on.

#### mip

The IP address or the host name used for identifying the own host.

This is used for communication among management servers and monitoring nodes. The management server uses mip as the value to identify each monitoring node.

#### Network address used for Web-Based Admin View

The IP address of LAN used for communication among clients and management servers, and among management servers and monitoring nodes.

- The IP address, which is used for communication among client and management servers, is set up as httpip.
- The IP address, which is used for communication among management servers and monitoring nodes, is set up as mip.

The initial value of httpip and/or mip is assigned to the displayed node name as a result of executing "uname -n." The IP address is automatically set up when Web-Based Admin View is installed.

#### Operation management view

The software that enables to install and manage operations of the cluster system on the GUI screen.

### 💕 Example

Global Cluster Services screen Global Disk Services screen Global File Services screen

#### Management Web server

Product to provide the WWW server (http server) function for using the Web-Based Admin View.

#### **Multicast address**

IP address for implementing multicast.

#### Node

A single computer (on which a single operating system operates)

#### PRIMECLUSTER

Software provided by Fujitsu for cluster configuration.

#### **RMI** function

Abbreviation for Remote Method Invocation. Remote method invocation function.

#### **RMI** port

The network port that enables Web-Based Admin View to perform communications with clients and monitor target nodes.

#### RMS

Abbreviation for Reliant(R) Monitor Software. Software that maintains high availability of user-specified resources by providing monitoring and switchover capabilities.

#### Session ID

The ID is required to consider allowing a user to access the Web-Based Admin View. When the user signs on with a valid user ID and password, a unique session ID is created.

#### Swing Class File

A Java component provided by Oracle. Performs control related to graphics.

#### The IP address for identifying own host

See "mip."

#### The IP address used for a client

See "httpip."

#### User group

Used to limit the operation and monitoring of each operation management product provided by Web-Based Admin View. This user group (eg. wvroot) is registered as a group to be supported by the operating system. In order to use Web-Based Admin View, the registration of the user ID into this group is indispensable.

#### Web-Based Admin View

A common base to utilize GUI (operation management view) with PRIMECLUSTER

#### WWW Server for Admin View

WWW server for Web-Based Admin View (Web server).

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