FUJITSU

FUJITSU Software Systemwalker Software Configuration Manager

Operator's Guide

Windows/Linux

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Preface

Purpose of this Document

This document explains patch management procedures as well as how to manage configuration information and software parameters from the management console in Systemwalker Software Configuration Manager.

Intended Readers

This document is intended for those who want to understand how to operate the management console in Systemwalker Software Configuration Manager.

It is assumed that readers of this document already have the following knowledge:

- Basic knowledge of the operating system being used

Structure of this Document

The structure of this document is as follows:

Chapter 1 Management Console

This chapter provides an overview of functions of the management console in Systemwalker Software Configuration Manager.

Chapter 2 Resources

This chapter explains how to manage configuration information from the management console.

Chapter 3 Patches

This chapter explains how to manage patch files from the management console.

Chapter 4 Reports

This chapter explains how to check configuration information from the management console.

Chapter 5 Job Management

This chapter explains how to manage jobs from the management console.

Conventions Used in this Document

Refer to the *Documentation Road Map* for information on the names, abbreviations, and symbols used in this manual.

Abbreviations and Generic Terms Used for Operating Systems

This document uses the following abbreviations and generic terms to indicate operating systems.

Official name	Abbreviation	
Microsoft(R) Windows Server(R) 2012 Datacenter Microsoft(R) Windows Server(R) 2012 Standard	Windows Server 2012	Windows
Microsoft(R) Windows Server(R) 2012 R2 Datacenter Microsoft(R) Windows Server(R) 2012 R2 Standard	Windows Server 2012 R2	
Microsoft(R) Windows Server(R) 2008 Standard Microsoft(R) Windows Server(R) 2008 Standard without Hyper-V Microsoft(R) Windows Server(R) 2008 Enterprise Microsoft(R) Windows Server(R) 2008 Enterprise without Hyper-V	Windows Server 2008	
Microsoft(R) Windows Server(R) 2008 R2 Standard Microsoft(R) Windows Server(R) 2008 R2 Enterprise	Windows Server 2008 R2	

Official name	Abbreviation	
Red Hat(R) Enterprise Linux(R) (for x86)	RHEL (x86)	RHEL
Red Hat(R) Enterprise Linux(R) (for Intel 64)	RHEL (Intel 64)	
Oracle Solaris	Solaris Operating System	Oracle Solaris

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Chapter 1 Management Console

Systemwalker Software Configuration Manager provides a management console as a GUI for managing hardware (chassis and servers), virtual environments (VM hosts and VM guests), the software configuration information, patches and software parameters for managed servers.

1.1 Overview of the Management Console

The management console can be used to perform the following operations:

- Resource management

  Collect and manage hardware (chassis and servers), virtual environment (VM hosts and VM guests), and software configuration information (server names, tenants, host names, IP addresses, installation software, and software parameters) on the managed servers. Also, perform parameter settings, script execution, and configuration modification.

  If an error occurs on a server, compare its current configuration baseline with the configuration baseline when the server was last running correctly and check any patches that have been newly applied in the interim.

- Patch management

  Patch management involves managing the following patch information:

  - Windows patches
  - Linux patches
  - Solaris patches
  - Software patches

  The patch application status can also be collected from repository servers or managed servers and managed, and unapplied patches can be applied or distributed to managed servers.

- Software parameter management

  Parameters configured in the software listed can be collected and changed.

- Reports

  The desired configuration information stored in the CMDB can be checked.

- Job management

  Manage jobs such as distributing and applying patches, configuring parameters, running scripts, and configuration modification.

Setting up the web browser

Before using the management console, a web browser must be set up as follows:

- Configure settings to accept cookies.
- Enable JavaScript.
- Configure settings to use TLS 1.0.
- Configure settings to save the encrypted page to disk.
- Depending on the security level of the browser, the management console may not be displayed even after login. In this case, register the URL of the management console in **Trusted sites**.
- Use Internet Explorer in standard mode when logging in to the management console.

  The procedure for configuring standard mode is as follows:

  1. **Press the "Alt" key on the keyboard to display the menu bar.**
  2. **Click Tools > Compatibility View settings.**
  3. **Remove the check from Display intranet sites in Compatibility View.**

1.2 Flow of Operations

Systemwalker Software Configuration Manager uses the steps listed below to manage patches, parameters and configurations for servers.

1. Download patches

   This step involves downloading OS patches and software patches from the vendor websites and the UpdateSite respectively.

   Patches for Windows operating systems are downloaded using Microsoft Windows Server Update Services (WSUS).

   Patches for Linux operating systems are downloaded and registered with Yellowdog Updater Modified (yum) repository servers by the infrastructure administrator.

   Software patches are downloaded and registered with Systemwalker Software Configuration Manager by the infrastructure administrator.

2. Distribute and apply patches

   Distribute and apply patches to managed servers based on an instruction from the tenant user.

   Patches for Windows operating systems are distributed and applied by linking to Microsoft Windows Server Update Services (WSUS) based on a Systemwalker Software Configuration Manager operation.

   Patches for Linux operating systems are distributed and applied by linking to Yellowdog Updater Modified (yum) based on a Systemwalker Software Configuration Manager operation.

   Systemwalker Software Configuration Manager can also be used to distribute software patches and to apply these patches by registering scripts.

3. Install software

   Install the software on the managed servers based on instructions from the tenant user.

   The infrastructure administrator registers the files necessary for installation of the software in the media library beforehand.

4. Configure software parameters and run scripts

   Configure parameters for the software on the managed servers based on instructions from the tenant user. Scripts can also be run on managed servers.

   The infrastructure administrator defines, in advance, those parameters that can be configured in the software.

5. Perform discovery

   Periodically and automatically collect managed server patch application statuses, software parameter setting values, and configuration information of hardware and software from linkage servers and managed servers, and store this information in the Configuration Management Database (CMDB).

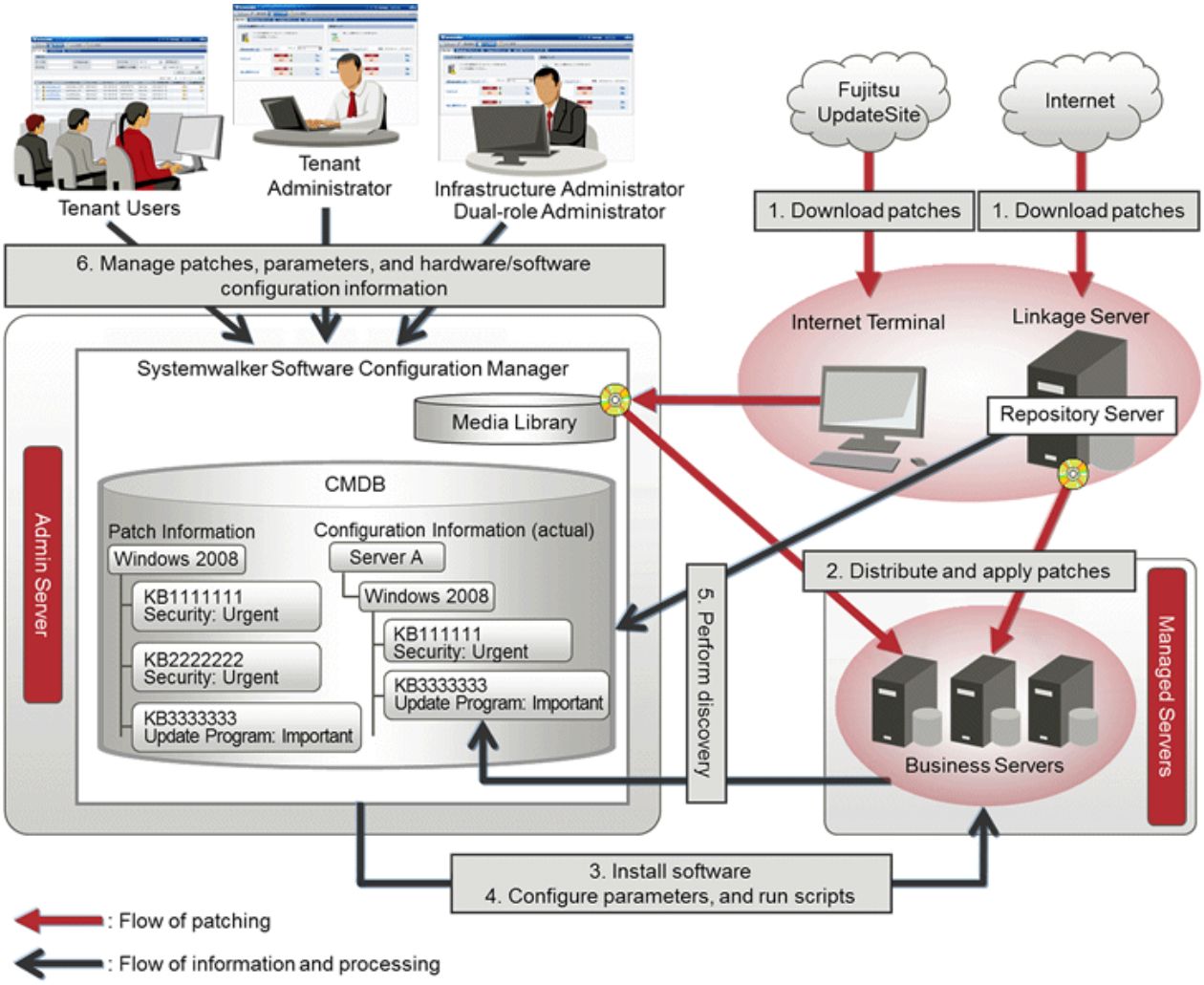
6. Manage patches, parameters, and configuration information

   The infrastructure administrator and dual-role administrator can check hardware and software configuration information for all servers in the data center by logging in to the management console for Systemwalker Software Configuration Manager. Also, checking of the application status of patches discovered on the linkage server and managed servers, as well as the software parameter setting values, is possible.

   Tenant administrators can check the software configuration information, patch application status, and software parameter settings for all servers in the tenant.

   Tenant users can check the software configuration information, patch application status, and software parameter settings of the servers that they manage themselves.

Figure 1.1 Overview of Systemwalker Software Configuration Manager



The user roles for this product

The explanations of this product assume that the roles of the people using this product can be classified as follows:

Infrastructure administrator

- Infrastructure administrators set up and maintain Systemwalker Software Configuration Manager.
- Infrastructure administrators define the managed servers for Systemwalker Software Configuration Manager.
- Infrastructure administrators define policies for managing Windows patches, release the patches obtained from Microsoft Windows Server Update Services (WSUS), and determine classification levels.
- Infrastructure administrators obtain Linux patches and register them with Yellowdog Updater Modified (yum) repository servers.
- Infrastructure administrators obtain software patches and register them with Systemwalker Software Configuration Manager.
- Infrastructure administrators define the parameters to be collected from the software, as well as the parameters to be configured in the software.
- Infrastructure administrators can use the management console to look up the patch application status, software parameter setting values, and hardware and software configuration information for all servers in the center.

Dual-role administrator

- Dual-role administrators act as both an infrastructure administrator and a tenant administrator.

Tenant administrator

- Tenant administrators can use the management console to look up patch application status and software configuration information for their tenant's servers.
- Tenant administrators use the management console to install the software on the servers belonging to their tenant.
- Tenant administrators use the management console to configure parameters in software on servers belonging to their tenancy.
- Tenant administrators can use the management console to look up the patch application status, software parameter setting values, and software configuration information on servers belonging to their tenancy.

Tenant user

- Tenant users use the management console to apply patches to the servers that they manage.
- Tenant users use the management console to install the software on the servers they manage themselves.
- Tenant users use the management console to configure parameters in software on servers they manage themselves.
- Tenant users can use the management console to look up the patch application status, software parameter setting values, and software configuration information on servers they manage themselves.

1.3 List of Functions Available from the Management Console

The following table shows the functions that can be used with the management console, as well as which roles can use each function:

Table 1.1 Functions available from the management console

Function	Window	Information displayed/ button	Infrastructure administrator	Dual-role administrator	Tenant administrator	Tenant user	Express (*1)	Remarks
Home	Home	Function list	Y	Y	Y	Y	Y	A list of functions is displayed.
		Notifications	Y	Y	Y	Y	Y	Notifications from the system are displayed.
Resources	Hardware	Chassis list	Y	Y	-	-	Y	Moves from the link to the chassis name to the chassis details.
		Chassis details	Y	Y	-	-	Y	Moves from the link to the server blade name to the physical server details.
		Physical server list	Y	Y	-	-	Y	Moves from the link to the physical server name and chassis name to the details.
		Physical server details	Y	Y	-	-	Y	Displays the details of the physical server and a list of related VM guests.
		OS list	Y	Y	-	-	Y	Displays the list of servers on which the OS is installed.
		Map view	Y	Y	-	-	Y	Displays relationships between chassis, physical servers, servers, server groups, and tenants.
	Servers	Servers	Y	Y	Y	Y	-	Clicking the links for server names displays the server details.
		Patch application button	-	Y (*2)	Y (*2)	Y	-	The **Patch Application** wizard is displayed.

Function	Window	Information displayed/ button	Infrastructure administrator	Dual-role administrator	Tenant administrator	Tenant user	Express (*1)	Remarks
		Parameter settings button	-	Y (*2)	Y (*2)	Y	-	The **Parameter Settings** wizard is displayed.
		Script execution button	-	Y (*2)	Y (*2)	Y	-	The **Script Execution** wizard is displayed.
		Configuration Modification button	-	Y (*2)	Y (*2)	Y	-	The Configuration Modification wizard is displayed.
	Server Details	Installed software	Y	Y	Y	Y	-	Clicking the links for product names displays the software details.
		Unapplied OS patches	Y	Y	Y	Y	-	A list of unapplied OS patches is displayed.
		Applied OS patches	Y	Y	Y	Y	-	A list of applied OS patches is displayed.
		Unapplied software patches	Y	Y	Y	Y	-	A list of unapplied software patches is displayed.
		Applied software patches	Y	Y	Y	Y	-	A list of applied software patches is displayed.
		Patch application button	-	Y (*2)	Y (*2)	Y	-	The **Patch Application** wizard is displayed.
		Compare configuration baselines button	Y	Y	Y	Y	-	The **Configuration Baseline List** window is displayed.
		Download parameters in CSV format button	Y	Y	Y	Y	-	Parameter information is output in CSV format.
		Parameter details button	Y	Y	Y	Y	-	The **Parameter Details** window is displayed for the software.
	Parameter Details	Detailed information about the parameters	Y	Y	Y	Y	-	Detailed information about the software parameters is displayed.
		Download CSV file button	Y	Y	Y	Y	-	Parameter information is output in CSV format.
		Download package button	Y	Y	Y	Y	-	The registered parameter package is downloaded.
		Parameter settings button	-	Y (*2)	Y (*2)	Y	-	The **Parameter Settings** wizard is displayed.

Function	Window	Information displayed/ button	Infrastructure administrator	Dual-role administrator	Tenant administrator	Tenant user	Express (*1)	Remarks
	Software		Y	Y	Y	Y	-	Clicking the links for product names displays the software details.
	Software Details	Detailed information about the software	Y	Y	Y	Y	-	Detailed information about the software is displayed.
	Configuration modification templates	The configuration modification templates	Y	Y	Y	Y	-	Details of the configuration modification template are displayed from the link of the template name.
		Create button	Y	Y	Y	Y	-	The **Configuration Modification Template** wizard is displayed.
	Configuration modification template Details	Detailed information about configuration modification templates	Y	Y	Y	Y	-	Displays details of the configuration modification template.
		Edit	Y	Y	Y	Y	-	The **Configuration Modification Template** wizard is displayed. Edits details of the configuration modification template.
		Copy and edit	Y	Y	Y	Y	-	The **Configuration Modification Template** wizard is displayed. Creates a new configuration modification template based on the already created configuration modification template.
		Delete	Y	Y	Y	Y	-	Deletes the configuration modification template.
	Configuration Baseline List	Configuration baseline list	Y	Y	Y	Y	-	The configuration baseline list is displayed.
		Compare button	Y	Y	Y	Y	-	The two selected configuration baselines are compared.
	Configuration Baseline Comparison Results		Y	Y	Y	Y	-	The configuration baseline comparison results are displayed.
	Patch Application wizard		-	Y (*2)	Y (*2)	Y	-	The **Patch Application** wizard for applying patches to specified servers is displayed.
	Parameter Settings wizard		-	Y (*2)	Y (*2)	Y	-	The **Parameter Settings** wizard is displayed.

Function	Window	Information displayed/ button	Infrastructure administrator	Dual-role administrator	Tenant administrator	Tenant user	Express (*1)	Remarks
	Script Execution wizard		-	Y (*2)	Y (*2)	Y	-	The **Script Execution** wizard is displayed.
Patches	Summary view	Number of servers with unapplied patches	Y	Y	Y	Y	-	The number of servers with unapplied patches is displayed for each operating system and patch type. The **List of Servers with Unapplied Patches** window is displayed from the links.
		Number of new patches	Y	Y	Y	Y	-	The number of new patches is displayed for each operating system and patch type. The window for a list of the latest patches is displayed from the links.
	List of Servers with Unapplied Patches	A list of servers with unapplied patches and a list of unapplied patches for the selected server	Y	Y	Y	Y	-	Patch details are displayed from the **Patch name** links, whereas server details are displayed from the **Server name** links.
		Patch application button	-	Y (*2)	Y (*2)	Y	-	The **Patch Application** wizard is displayed.
	List of New Patches	A list of new patches and a list of servers where the selected patch has not been applied	Y	Y	Y	Y	-	Patch details are displayed from the **Patch name** links, whereas server details are displayed from the **Server name** links.
		Patch application button	-	Y (*2)	Y (*2)	Y	-	The **Patch Application** wizard is displayed.
	Patches	Windows patches	Y	Y	Y	Y	-	Patch details are displayed from the **Patch name** links.
		Linux patches	Y	Y	Y	Y	-	Patch details are displayed from the **Patch name** links.
		Software patches	Y	Y	Y	Y	-	Patch details are displayed from the **Patch name** links.
		Download CSV file button	Y	Y	Y	Y	-	A list of patches is output in CSV format.

Function	Window	Information displayed/ button	Infrastructure administrator	Dual-role administrator	Tenant administrator	Tenant user	Express (*1)	Remarks
		Patch application button	-	Y (*2)	Y (*2)	Y	-	The **Patch Application** wizard is displayed.
	Patch Details	Detailed information about the selected patch	Y	Y	Y	Y	-	Detailed information about the patch is displayed.
		Unapplied servers	Y	Y	Y	Y	-	The servers where the selected patch has not been applied are displayed.
		Updated servers	Y	Y	Y	Y	-	The servers where the selected patch has been applied are displayed.
		Patch application button	-	Y (*2)	Y (*2)	Y	-	The **Patch Application** wizard is displayed.
	Patch Application wizard		-	Y (*2)	Y (*2)	Y	-	The **Patch Application** wizard for applying specified patches to servers is displayed.
Job management	Job list		Y	Y	Y	Y	-	Clicking the links for job names displays the job details.
	Job details	Detailed information about the job	Y	Y	Y	Y	-	Clicking the links for process names displays the process details.
		Action button	-	Y	Y	Y	-	Executes an action.
	Process details	Detailed information about the process	Y	Y	Y	Y	-	Detailed information about the process is displayed.
		Action button	-	Y	Y	Y	-	Executes an action.

Y: Can be used.

-: Cannot be used.

*1: Indicates the functions which can be used in Systemwalker Software Configuration Manager Express.

***2: These functions may not be available, depending on the ServerView Resource Orchestrator role that has been assigned to the login user. Refer to "1.4 Login Users" for information on roles.**

1.4 Login Users

The users who log in to this product must be registered with the directory service beforehand.

Before linking to ServerView Resource Orchestrator, users must be registered with ServerView Resource Orchestrator. The following table shows the correspondences between the roles for ServerView Resource Orchestrator and the roles for Systemwalker Software Configuration Manager.

If the roles have been customized on ServerView Resource Orchestrator, the basic roles of the copy source that correspond to the roles of this product are shown below. Refer to "Customizing Roles" in the *ServerView Resource Orchestrator Cloud Edition Design Guide* for information on customizing roles.

ServerView Resource Orchestrator		Systemwalker Software Configuration Manager		
Role category	Role or basic role	Role	Viewing of Hardware Configuration Information Viewing of Virtual Environment Configuration Information	Patch distribution and application operation Parameter configuration operation Script execution operation Configuration modification operation
Infrastructure Administrative Role	Infrastructure administrator	Infrastructure administrator	A	-
	Infrastructure operator		A	-
	Infrastructure monitor		A	-
Tenant Management Roles	Tenant administrator	Tenant administrator	-	A
	Tenant operator		-	-
	Tenant monitor		-	-
Tenant Use Roles	Tenant user	Tenant user	-	A
Multiple Roles	Administrator	Dual-role administrator	A	A
	Operator		A	-

A: All operations can be performed.

S: Some operations can be performed.

-: No operations can be performed.

Refer to "Restricting Access Using Roles" in the *ServerView Resource Orchestrator Cloud Edition Design Guide* for information on ServerView Resource Orchestrator roles.

Note

Users who have not been registered using the user information management commands, and users who do not satisfy the conditions for users of this product, cannot use the management console. After they log in to the management console, the error "HTTP Status 403" is displayed.

Refer to "Managing User Information" in the *Installation Guide* for information on requirements to use this product.

1.5 Login and Logout

This section explains how to log in and log out of the management console.

1.5.1 Login

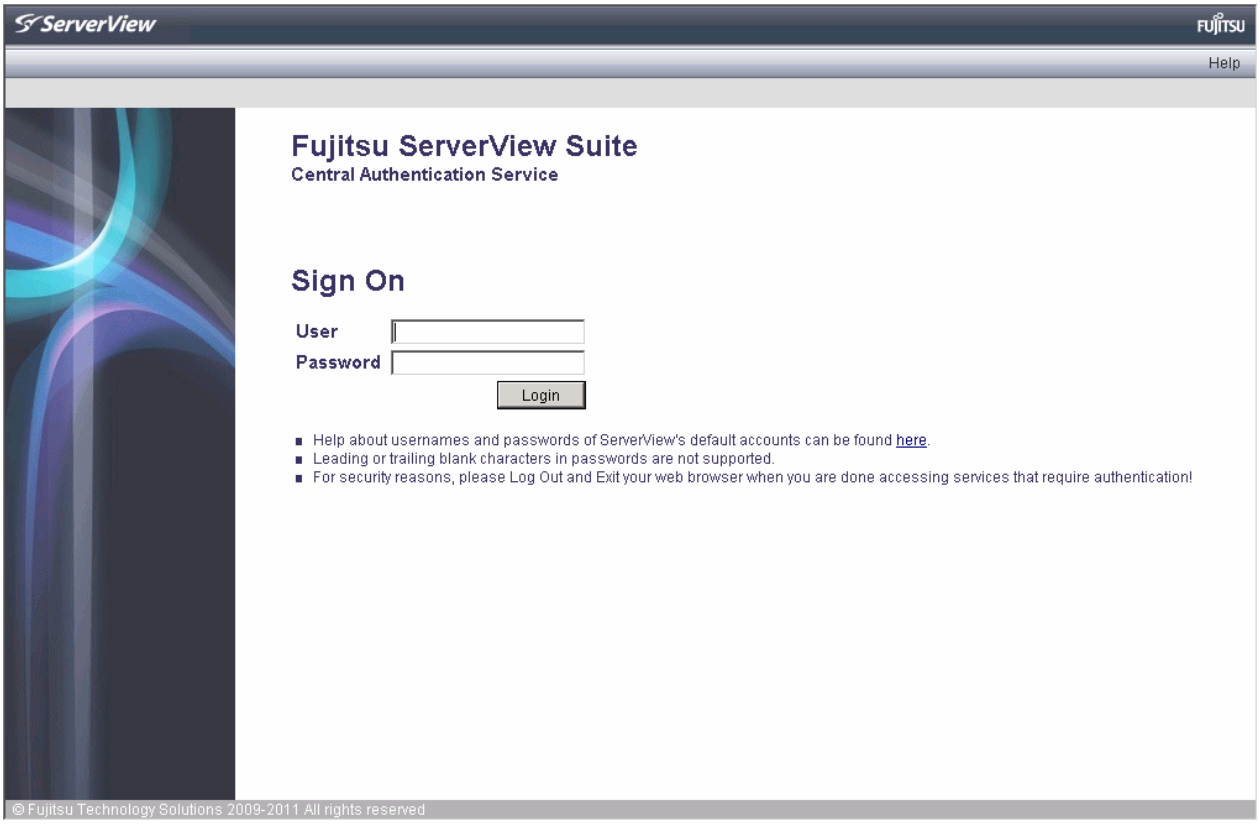
Use the following methods to open the management console:

```
https://<FQDN on the admin server>:31500/
```

If the port number for accessing the management console was changed when Systemwalker Software Configuration Manager was installed, specify the new port number.

When the management console is started, the following login window is displayed:

Figure 1.2 Login window



For the user name and password, log in using an account registered in the directory service.

To link to ServerView Resource Orchestrator, log in using a ServerView Resource Orchestrator account.

Note

Confirming Licenses

When you log in to the management console, check the license. If there is a problem with the license, the following message is displayed. To register the license key, refer to "Registering a License Key" in the "*Installation Guide*".

- No license key has been registered. Register a license key for this product.

  Register the license key provided with the licensed product.

- The edition of the license and the edition of the installed software do not match.

  The edition of the license does not match the edition of the installed product. Perform one of the following actions:

  - Register the license key for the edition you want to use.

  - There may have been mistakes in the installation or setup procedure that were performed. Check the installation and setup procedures. For Systemwalker Software Configuration Manager, refer to the "*Installation Guide*". For Systemwalker Software Configuration Manager Express, refer to the "*Express User's Guide*".

1.5.2 Logout

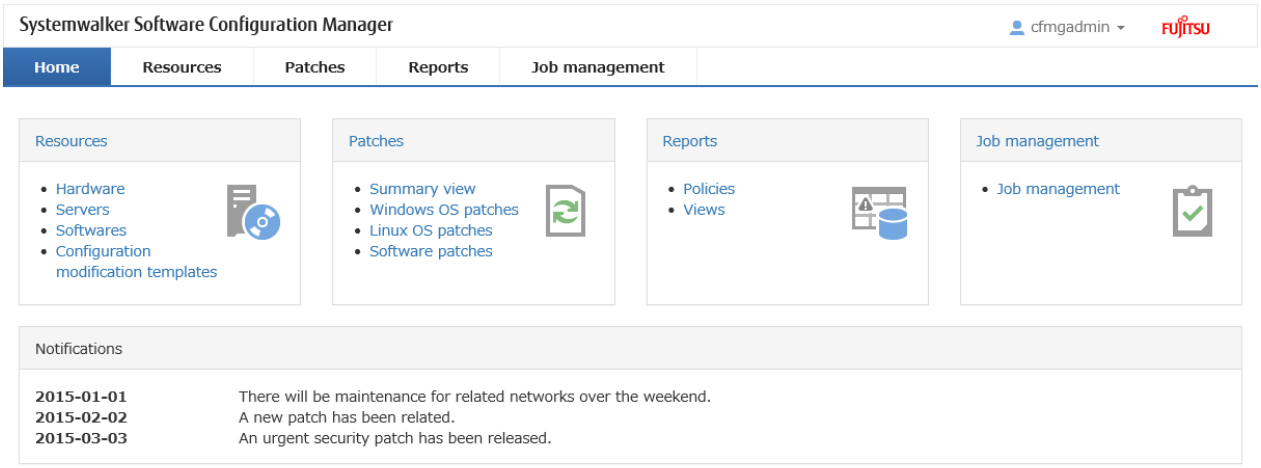
1. Click the user ID on the upper right of the window, and select Log out from the drop down list.

2. Close the browser after logging out.

1.6 Home

The **Home** window is displayed when the user logs in.

The **Home** window displays the **Function list** and **Notifications** for the management console.



Function list

The **Function list** displays a list of the functions for the management console. When each link is clicked, the corresponding window will be displayed as described below.

Resources

- **Hardware**

  The Hardware window is displayed.

- **Servers**

  The Servers window is displayed.

- **Software**

  The Software window is displayed.

- **Configuration Modification Templates**

  The Configuration modification templates window is displayed.

Patches

- **Summary view**

  Clicking this link displays a window showing the aggregate results for the number of servers with unapplied patches and the number of new patches for each operating system and patch type.

- **Windows patches**

  Clicking this link displays the Windows patches window.

- **Linux patches**

  Clicking this link displays the Linux patches window.

- **Software patches**

  Clicking this link displays the Software patches window.

Reports

- Policies

  The Policies window is displayed.

- Views

  The Views window is displayed.

Job management

- **Job management**

  The Job management window is displayed.

Notifications

The **Notifications** section shows notifications from the system, such as maintenance information.

Refer to the *Operation Guide* for information on how to edit notifications.

Chapter 2 Resources

The **Resources** window provides the following functions:

- Hardware

  Displays the list of chassis and physical server information collected by the discovery function, allowing you to view the detailed information of individual chassis and physical servers. If hypervisor is installed on the physical server, the list of guest OSs deployed on that hypervisor can be viewed as well.

  Map view allows you to confirm dependency relationships between chassis, physical servers, servers, server groups, and tenants as well as the information of the software installed on the server.

  Information

  Information of server groups and tenants is displayed when linking to ServerView Resource Orchestrator.

- **Servers**

  The servers for which information has been collected by the discovery function can be displayed as a list, detailed information about each individual server can be looked up, including the patch application status for each server, and patches can also be applied. It is also possible to display information that has been filtered by specifying particular conditions.

- **Software**

  The software installed on the servers for which information has been collected using the discovery function can be displayed as a list, and detailed information about each individual server can be looked up, including the patch application status for each server. It is also possible to display information that has been filtered by specifying particular conditions.

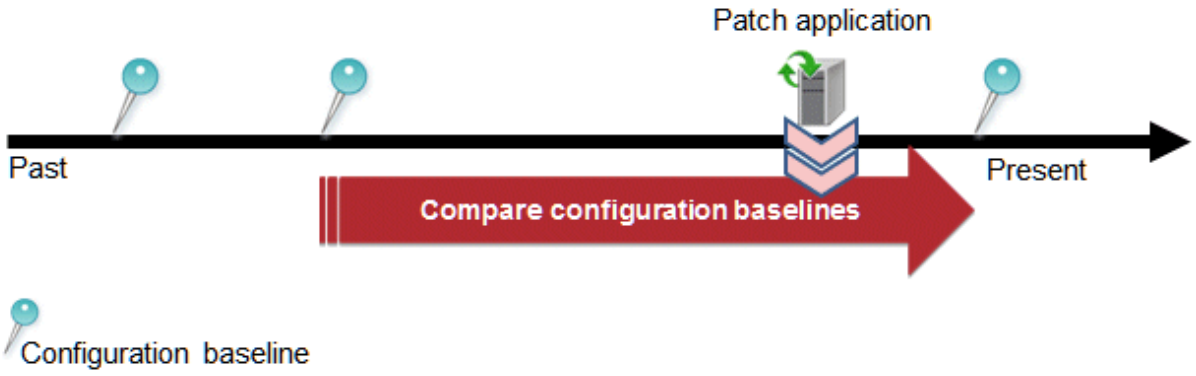
- **Configuration Modification Templates**

  The detailed information of individual configuration modification templates can be referenced by displaying the list of the configuration modification templates.

- **Compare configuration baselines**

  A configuration baseline is a snapshot of the information collected by the discovery function at a specific moment in time.

  The **Configuration Baseline Comparison Results** window shows a list of the changes that have been made since the configuration baseline snapshot was taken.



  If a problem occurs with a server, it is possible to check which patches have been applied since the server was last running correctly by comparing the current configuration baseline with the configuration baseline at the time when the server was running correctly.

  The **Configuration Baseline Comparison Results** window also shows changes when there are differences in the definitions for RPM packages subject to Linux patch management between the two baselines being compared.

  Configuration baselines are created by infrastructure administrators.

- **Patch Application wizard**

  This wizard allows the user to apply patches by first selecting the target servers. Users can then select the required patches, and specify the application method.

- **Parameter Settings wizard**

  This wizard allows the user to set parameters. The user selects the target server and software, and then the parameters to be set. The wizard also allows the user to edit the parameters to be set.

- **Script Execution wizard**

  This wizard allows the user to run any script on the target server.

- **Configuration Modification Template Wizard**

  Create and edit the configuration modification template using the wizard.

- **Configuration Modification Wizard**

  Execute configuration modification using the wizard. Select the configuration modification template to execute, and specify the parameters.

2.1 Hardware

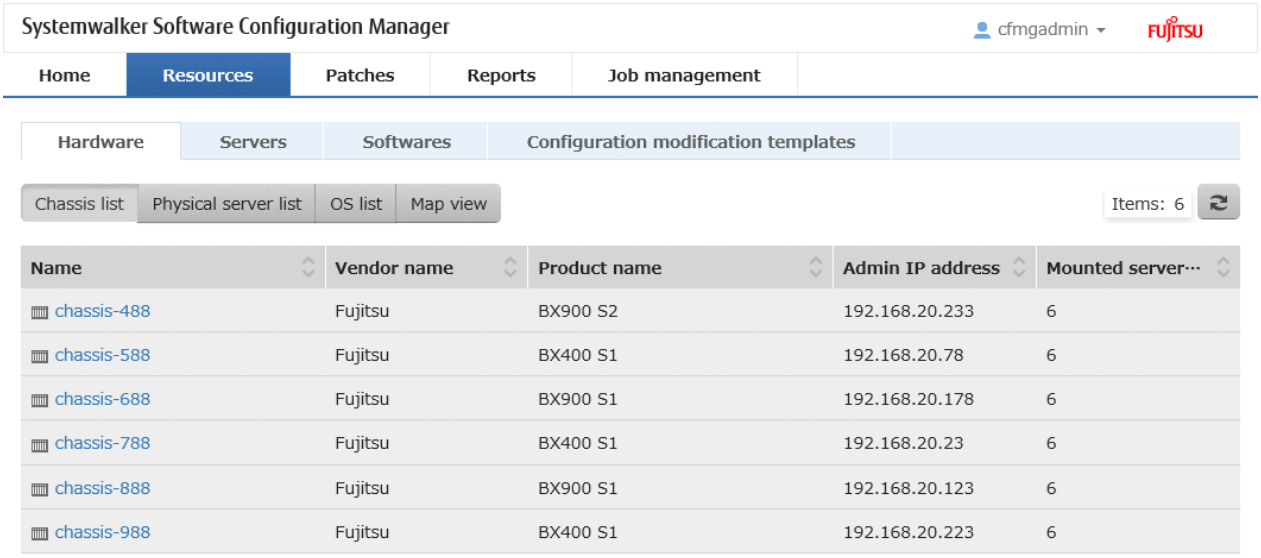
The **Hardware** window displays the list of chassis and physical server information collected by the discovery function, allowing you to view the detailed information of individual chassis and physical servers. If hypervisor is installed on the physical server, the list of guest OSs deployed on that hypervisor can be viewed as well.

Map view also allows you to confirm dependency relationships between chassis, physical servers, servers, server groups, and tenants as well as the information of the software installed on the server.

2.1.1 Chassis list

Display method

1. Log in to the management console.
2. Use either of the following methods.
   a. Select **Resources** from the menu in the management console.
   b. b.Click the link to **Hardware** in the Home window.



Display item

Displays the list of blade server chassis.

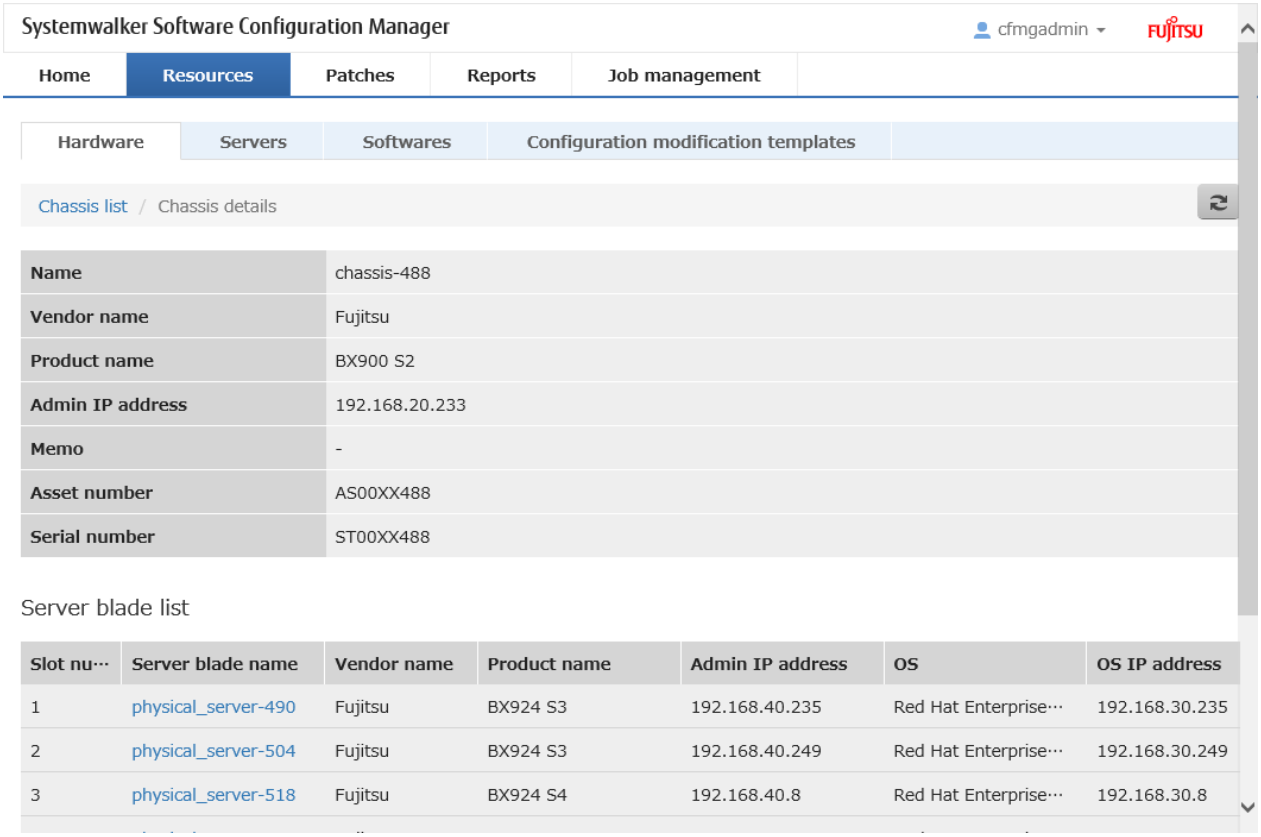
The following table shows the items that are displayed in the chassis list:

Display item	Description
Name	Displays the chassis name. Clicking a chassis name displays the **Chassis Details** window.
Vendor name	Displays the vendor name of the chassis.
Product name	Displays the product name of the chassis.
Admin IP address	Displays the admin IP address of the chassis.
Mounted server blades	Displays the number of server blades mounted on the chassis.

2.1.1.1 Chassis details

Display method

Clicking a chassis name in the chassis list displays the **Chassis Details** window.



Display item

Chassis details

The following table shows the items that are displayed in the **Chassis details** window:

Display item	Description
Name	Displays the chassis name.
Vendor name	Displays the vendor name of the chassis.
Product name	Displays the product name of the chassis.
Admin IP address	Displays the admin IP address of the chassis.
Memo	Displays the memo.
Asset number	Displays the asset number.
Serial number	Displays the serial number.
Server blade list	Displays the list of server blades mounted on the chassis.

Server blade list

The following table shows the items that are displayed in the server blade list:

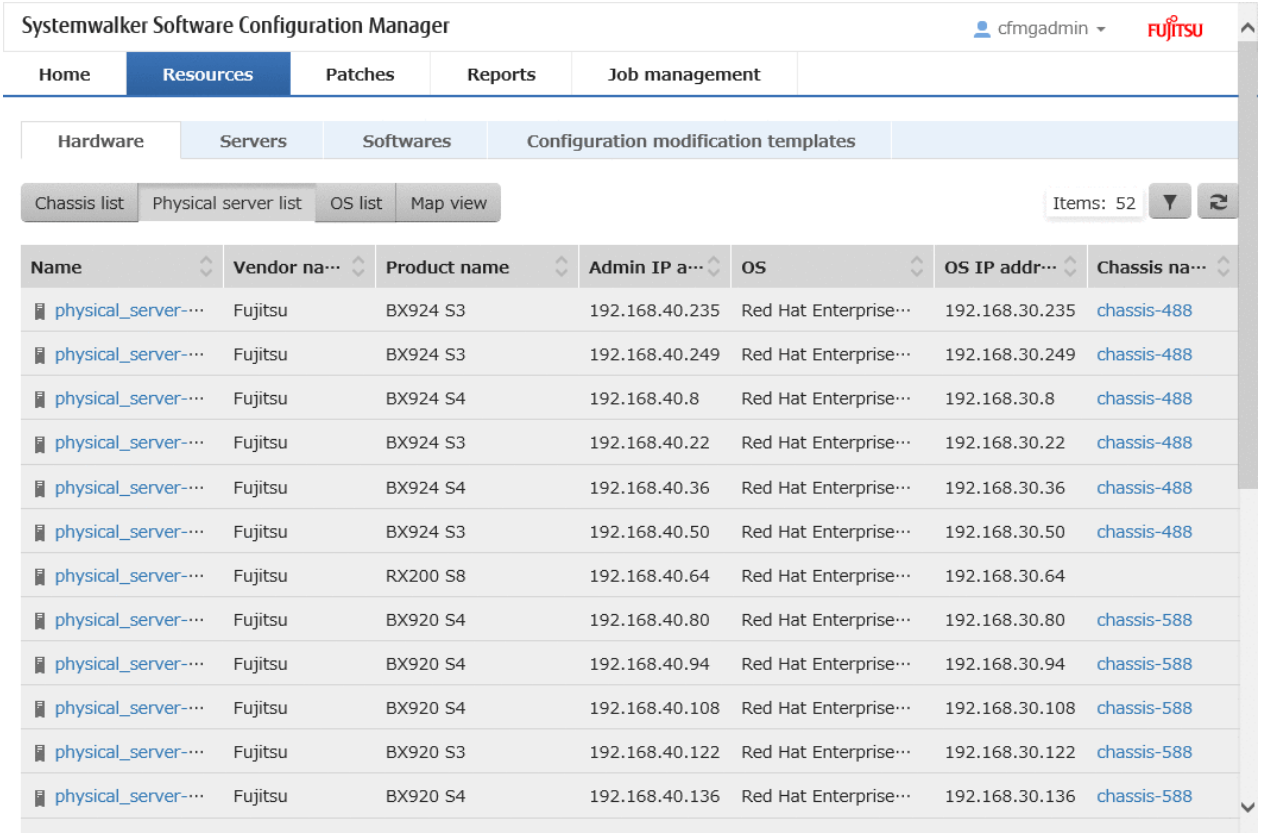
Display item	Description
Slot number	Displays the slot number.
Server blade name	Displays the server blade name. Clicking a server blade name displays the **Physical Server Details** window.
Vendor name	Displays the vendor name of the server blade.
Product name	Displays the product name of the server blade.

Display item	Description
Admin IP address	Displays the admin IP address of the server blade.
OS	Displays the operating system name.
OS IP address	Displays the IP address of the operating system.

2.1.2 Physical Server List

Display method

1. Log in to the management console.
2. Use either of the following methods to display the **Hardware** window.
   a. Select **Resources** from the menu in the management console.
   b. Click the link to **Hardware** in the **Home** window.
3. Click the **Physical server list** tab in the **Hardware** window.



Operation method

Filter search

Click the button at the top right of the window to specify the conditions for filtering the information in the physical server list.

Display item	Description
Filter	The following filter conditions can be specified. Multiple filter conditions can be specified. - Name

Display item	Description
	- Vendor name - Product name - Admin IP address - OS - OS IP address - Chassis name

Display item

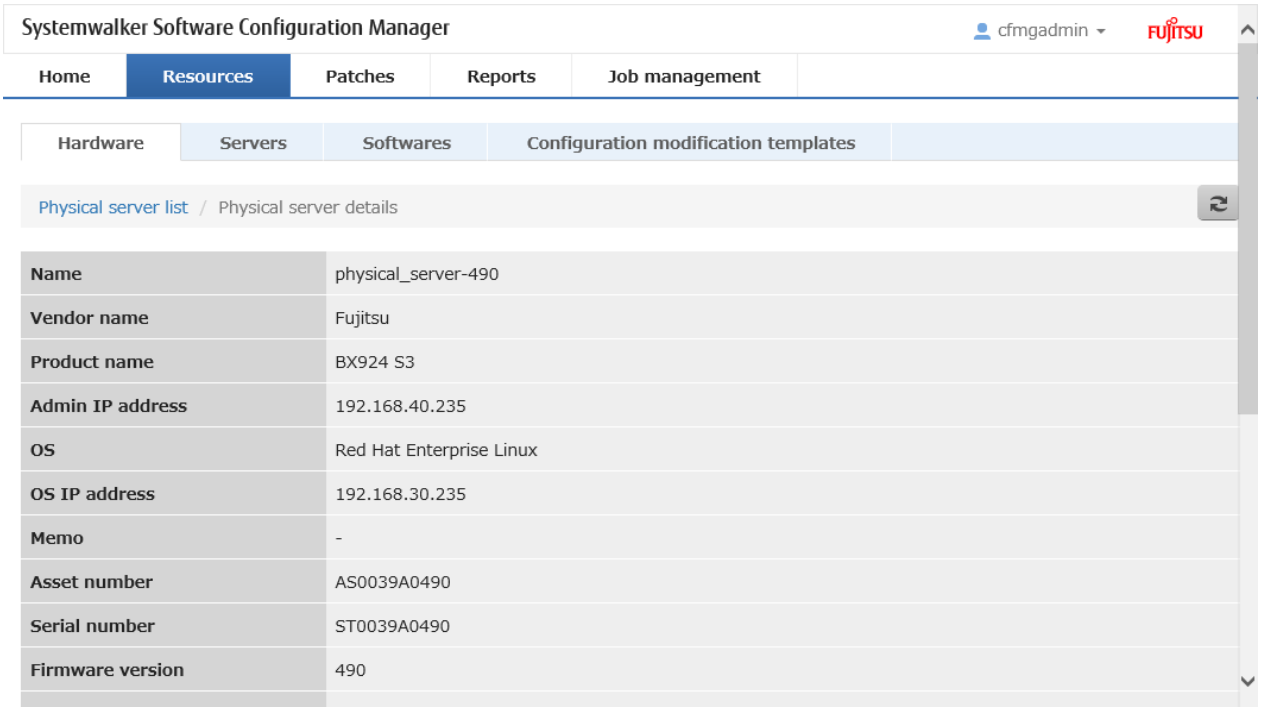
The following table shows the items that are displayed in the physical server list:

Display item	Description
Name	Displays the physical server name. Clicking a physical server name displays the **Physical Server Details** window.
Vendor name	Displays the vendor name of the physical server.
Product name	Displays the product name of the physical server.
Admin IP address	Displays the admin IP address of the physical server.
OS	Displays the operating system name.
OS IP address	Displays the IP address of the operating system.
Chassis name	For a server blade, the name of the chassis in which it is mounted is displayed. Clicking a chassis name displays the **Chassis Details** window.

2.1.2.1 Physical Server Details

Display method

Clicking a physical server name in the physical server list displays the **Physical Server Details** window.



Display item

Physical server details

The following table shows the items that are displayed in the **Physical server details (server blades)**:

Display item	Description
Name	Displays the physical server name.
Vendor name	Displays the vendor name of the physical server.
Product name	Displays the product name of the physical server.
Admin IP address	Displays the IP address of the physical server.
OS	Displays the operating system name.
OS IP address	Displays the IP address of the operating system.
Memo	Displays the memo.
Asset number	Displays the asset number.
Serial number	Displays the serial number.
Firmware version	Displays the firmware version.
BIOS version	Displays BIOS information.
CPU	Displays CPU information.
Mounted memory size	Displays the mounted memory size.
Chassis name	For a server blade, the chassis name is displayed. Clicking a chassis name displays the **Chassis Details** window.
Slot number	For a server blade, the slot number is displayed.
Server name	When an OS (except for a VM host) is installed on a physical server, the server name is displayed.
Server group name	When an OS (except for a VM host) is installed on a physical server, the server group name is displayed.
Tenant	When an OS (except for a VM host) is installed on a physical server, the tenant is displayed.
VM guest list	Displays a list of related VM guests operating on the physical server.

Server list

The following table shows the items that are displayed in the VM guest list:

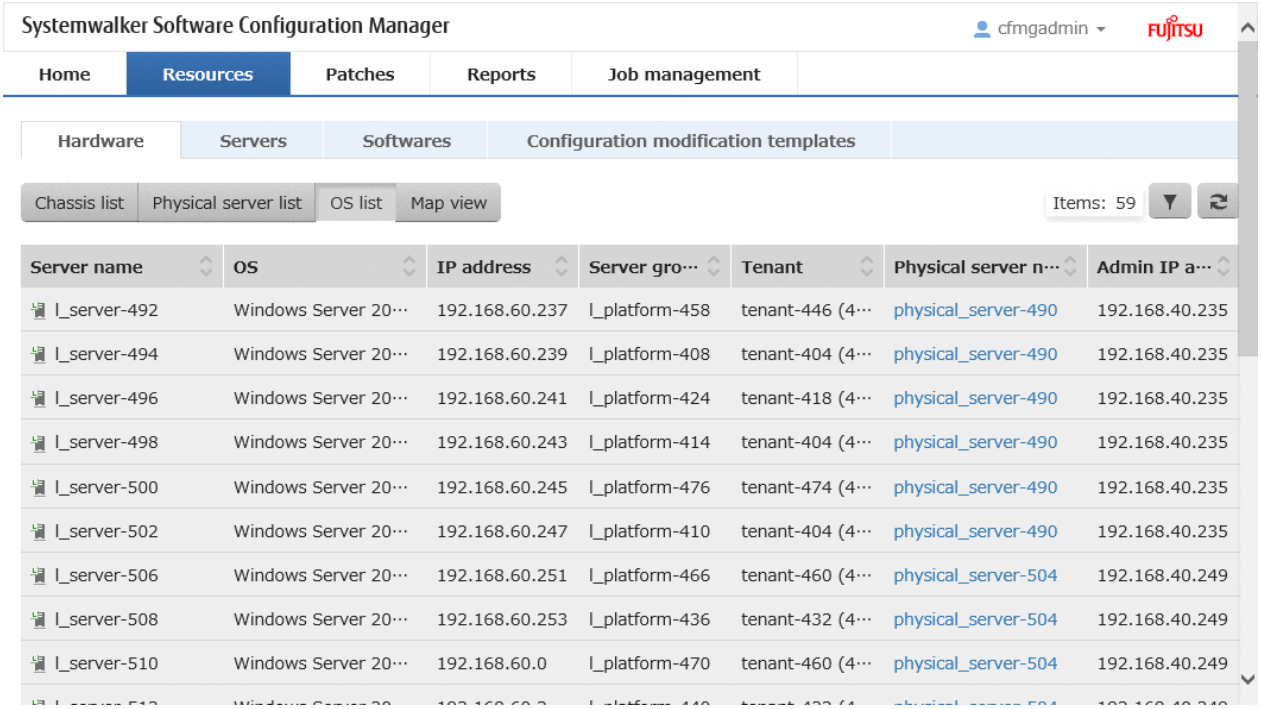
Display item	Description
Server name	Displays the VM guest name. When linked to ROR, the L-Server name is displayed.
Server group name	Displays the server group name.
Tenant	Displays the tenant.
OS	Displays the operating system name.
IP address	Displays the IP address of the operating system.

2.1.3 OS List

Display method

1. Log in to the management console.

2. Use either of the following methods to display the **Hardware** window.
    a. Select **Resources** from the menu in the management console.
    b. Click the link to **Hardware** in the **Home** window.
3. Click the **OS list** tab in the **Hardware** window.



Operation method

Filter search

Click the button at the top right of the window to specify the conditions for filtering the information in the OS list.

Display item	Description
Filter	The following filter conditions can be specified. Multiple filter conditions can be specified. - Server name - OS - IP address - Server group name - Tenant - Physical server name - Admin IP address

Display item

Displays the list of servers on which the OS is installed.

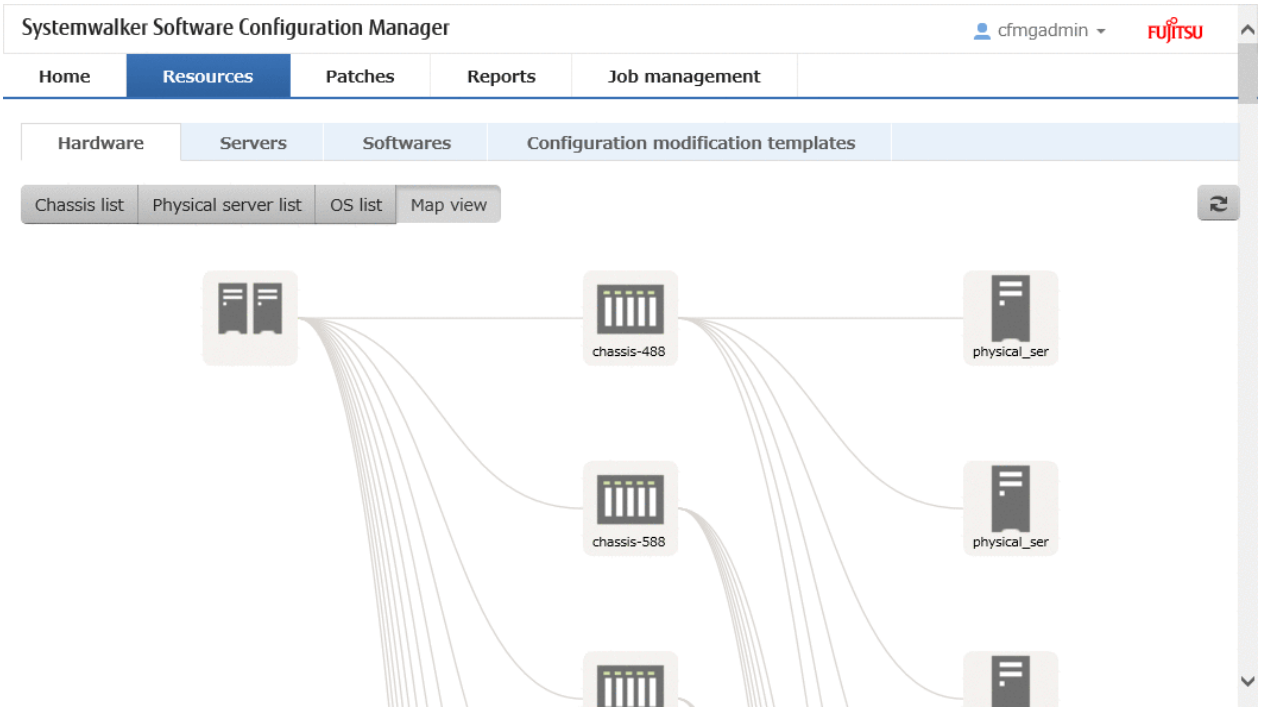
The following table shows the items displayed in the OS list:

Display item	Description
Server name	Displays the name of the server on which the OS is installed.
OS	Displays the operating system name.
IP address	Displays the IP address of the operating system.
Server group name	Displays the server group name.
Tenant	Displays the tenant.
Physical server name	Displays the physical server name. Clicking a physical server name displays the **Physical Server Details** window.
Admin IP address	Displays the admin IP address of the physical server.

2.1.4 Map view

Display method

1. Log in to the management console.
2. Use either of the following methods to display the **Hardware** window.
   a. Select **Resources** from the menu in the management console.
   b. Click the link to **Hardware** in the **Home** window.
3. Click the **Map view** tab in the **Hardware** window.



Display item

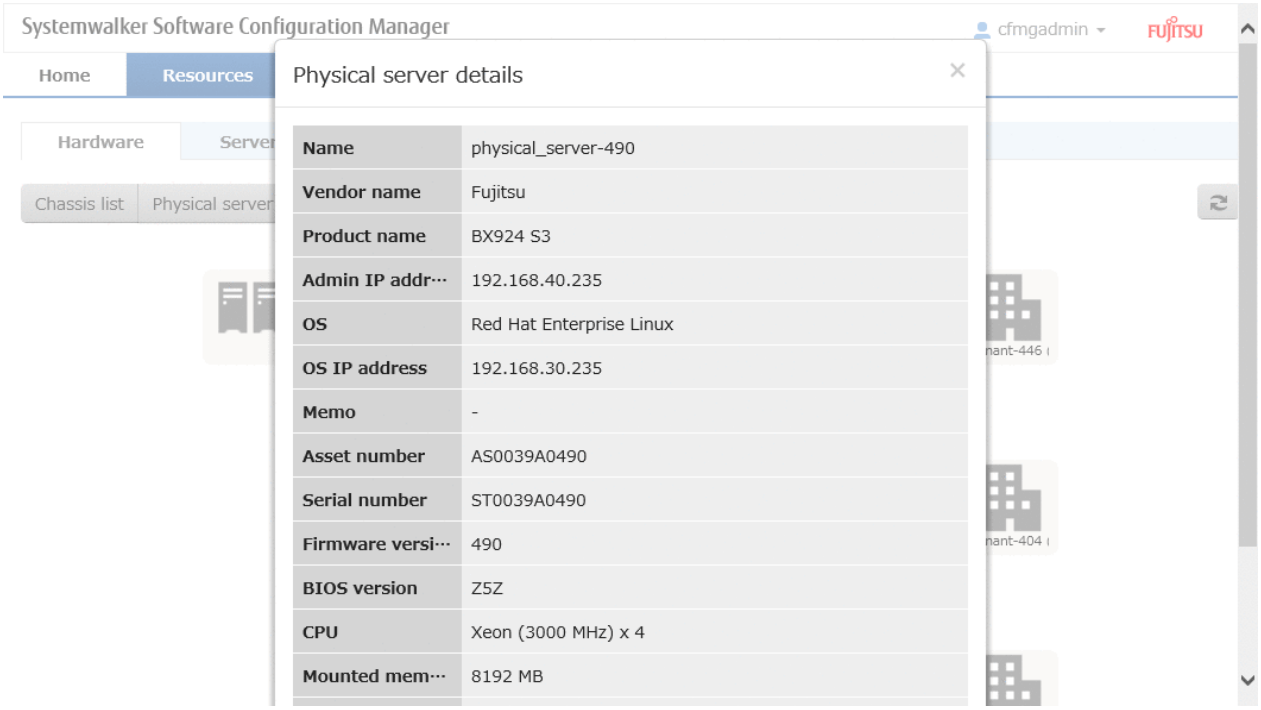
Displays relationships between chassis, physical servers, servers, L-Platforms, and tenants.

The following table shows the items that are displayed in the map list:

Selection item	Description
Root	Indicates a collection of hardware. At least one is displayed.
Chassis	Displays the relationships between chassis, physical servers, server groups, and tenants. Reselecting this item while it is still selected displays the detailed information.
Physical server	Displays the relationships between chassis, physical servers, servers, server groups, and tenants, starting from the physical server. Reselecting this item while it is still selected displays the detailed information.
Servers	Displays the relationships between chassis, physical servers, servers, server groups, and tenants, starting from the server. Reselecting this item while it is still selected displays the detailed information.
Server group	Displays the relationships between chassis, physical servers, servers, server groups, and tenants, starting from the server group. Reselecting this item while it is still selected displays the detailed information. The server group is displayed when a physical server is selected.
Tenant	Displays the relationships between chassis, physical servers, server groups, and tenants. Reselecting this item while it is still selected displays the detailed information. Displays a tenant when a physical server is selected.

2.1.4.1 Displaying Details

Reselecting the resource still selected in the map displays the detailed information.



Display item

When a chassis is selected

The following table shows the items displayed when a chassis is selected:

Display item	Description
Name	Displays the chassis name.
Vendor name	Displays the vendor name of the chassis.
Product name	Displays the product name of the chassis.
Admin IP address	Displays the admin IP address of the chassis.
Memo	Displays the memo.
Asset number	Displays the asset number.
Serial number	Displays the serial number.

When a physical server is selected

The following table shows the items displayed when a physical server is selected:

Display item	Description
Name	Displays the physical server name.
Vendor name	Displays the vendor name of the physical server.
Product name	Displays the product name of the physical server.
Admin IP address	Displays the admin IP address of the physical server.
OS	Displays the operating system name.
OS IP address	Displays the IP address of the operating system.
Memo	Displays the note.
Asset number	Displays the asset number.
Serial number	Displays the serial number.
Firmware version	Displays the firmware version.
BIOS version	Displays BIOS information.
CPU	Displays CPU information.
Mounted memory size	Displays the mounted memory size.
Slot number	For a server blade, the slot number is displayed.

When a server is selected

When a server is selected, the **Server Details** window is displayed.

For the items displayed, refer to "2.2.1 Server Details".

When a server group is selected

When a server group is selected, the following items are displayed:

Display item	Description
Name	Displays the server group name.
User ID	Displays the user ID.
User name	Displays the user name.
Phone number	Displays the phone number.

Display item	Description
Email address	Displays the email address.

When a tenant is selected

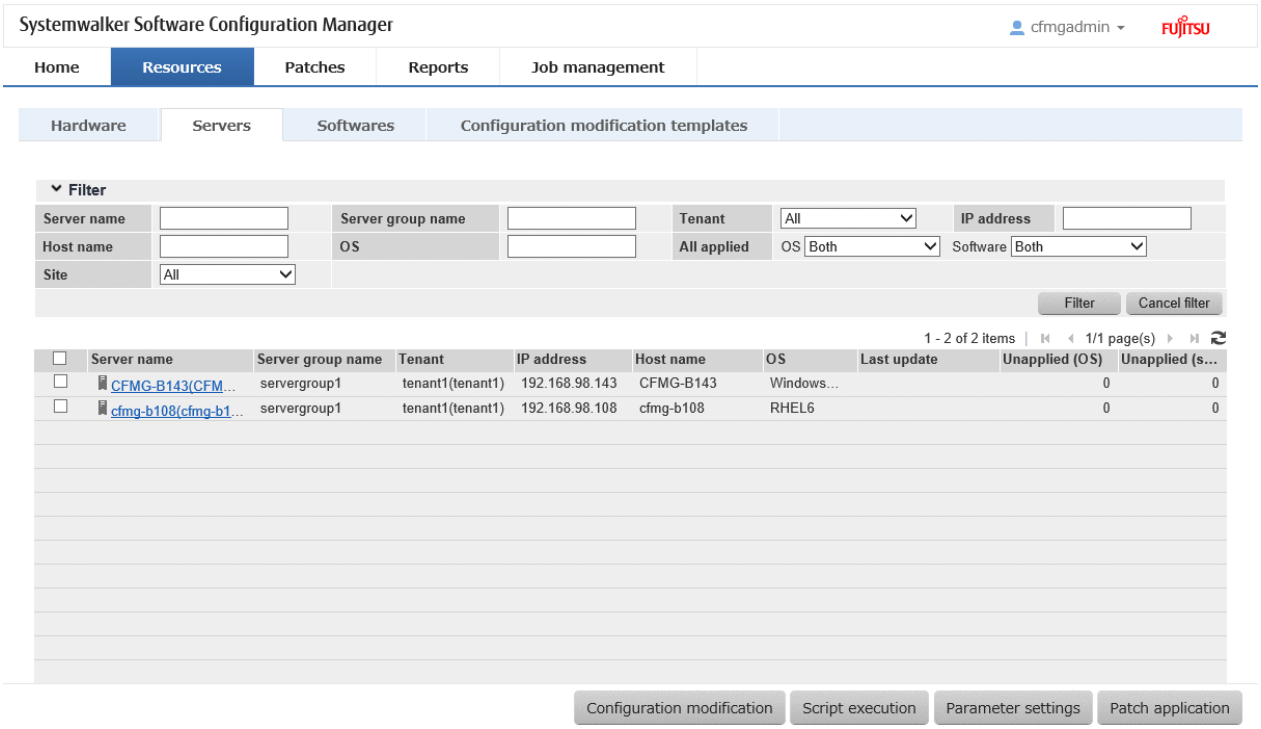
The following table shows the items displayed when a tenant is selected:

Display item	Description
Name	Displays the tenant.
User ID	Displays the user ID.
User name	Displays the user name.
Phone number	Displays the phone number.
Email address	Displays the email address.

2.2 Server

Display method

1. Log in to the management console.
2. Use either of the following methods to display the server list:
   a. Select **Resources** from the menu in the management console, and then select the **Servers** tab.
   b. Click the **Servers** link in the **Home** window.



Note

This window shows a list of the servers within the range managed by the login user.

Infrastructure administrator

Infrastructure administrators can reference information about all servers.

Dual-role administrator

Dual-role administrators can reference information about all servers.

Tenant administrator

Tenant administrators can reference information about the servers associated with their tenants (organization) to which they belong.

Tenant user

Tenant users can reference information about the servers that they manage.

Information

About Solaris servers

For Solaris servers, only the following information can be checked.

- Applied OS patches (SRU information)
- Installed software
- Application status of software patches

It is not possible to perform parameter setting or script execution on Solaris servers.

It is not possible to compare configuration baselines of Solaris servers.

Note

Conditions under which servers are counted as servers with unapplied patches

The conditions under which servers are counted as servers with unapplied patches differ with Windows patches, Linux patches, and software patches. These conditions are explained separately as below:

- Number of servers with unapplied Windows patches

  The number of servers with unapplied Windows patches is the number of servers where the patches authorized by WSUS have not been applied.

- Number of servers with unapplied Linux patches

  The number of servers with unapplied Linux patches is the number of servers where the patches registered with the yum repository server and have been defined as the management target have not been applied.

- Number of unapplied software patches

  The number of unapplied software patches is the number of patches which were registered using swcfmg_fjmwpatch_update (Fujitsu middleware patch registration command) or swcfmg_patch_def (patch information management command), but which have not been applied.

Operation method

Filter search

Specify the conditions for filtering the information in the server list.

Display item	Description
Filter	The following filter conditions can be specified. Multiple filter conditions can be specified - **Server name** - **Server group name**

Display item	Description
	- **Tenant** - **IP address** - **Host name** - **OS** - **All applied** - **Site**

Display items

The following table shows the items that are displayed in the server list:

Display item	Description
Checkbox	Checking the checkbox selects the corresponding server as a target server for patch application, parameter setting, script execution, or configuration modification.
Server name	Displays the server names. Clicking a server name link displays the **Server Details** window.
Server group name	Displays the server group name.
Tenant	Displays the tenant.
IP address	Displays the IP addresses.
Host name	Displays the host names.
OS	Displays the operating system names.
Last update	Displays the date and time when the patch application status was registered with WSUS. Not displayed for Linux patches.
Unapplied (OS)	Displays the number of OS patches that have not been applied.
Unapplied (software patches)	Displays the number of software patches that have not been applied.

Note

The number of patches in the "Unapplied (OS)" column of this window may not match the number of patches to be applied as detected by the Check for Updates function on the business server.

The inconsistency arises when some patches are provided as part of a cumulative patch. This is because Systemwalker Software Configuration Manager counts all of the patches in a cumulative patch as patches that can be applied, while the Check for Updates function does not count patches in a cumulative patch as patches that can be applied.

For example, if Patch 3 is a cumulative patch containing Patch 1 and Patch 2, then Systemwalker Software Configuration Manager will detect them as three different patches that can be applied, but the Check for Updates function will detect them as one patch that can be applied.

Patches detected	Systemwalker Software Configuration Manager	Check for Updates function
Patch 3 (containing Patch 1 and Patch 2)	D	D
Patch 2	D	-

Patches detected	Systemwalker Software Configuration Manager	Check for Updates function
Patch 1	D	-

D: Detected as a patch that can be applied

-: Not detected as a patch that can be applied

If some patches are provided as part of a cumulative patch, Systemwalker Software Configuration Manager will no longer detect such patches in a cumulative patch as patches that can be applied, by having these patches unapproved on the WSUS server.

Operation buttons

The following operations can be performed from the **Servers** window:

Operation button	Description
Patch application	Select the server using the checkboxes, and click **Patch application** button. This displays the **Patch Application** wizard, enabling the user to distribute and apply Fujitsu middleware patches for the specified server. To apply patches for software other than Fujitsu middleware, perform configuration modification.
Parameter settings	Select the server using the checkboxes, and click **Parameter settings** button. This displays the **Parameter Settings** wizard, enabling the user to configure parameters for software installed on the selected server.
Script execution	Select the server using the checkboxes, and click **Script execution** button. This displays the **Script Execution** wizard, enabling the user to run scripts on the selected server.
Configuration Modification	Select the server using the checkbox, and click the **Configuration Modification** button. This displays the **Configuration Modification** wizard, enabling configuration modification of the selected server.

2.2.1 Server Details

Display method

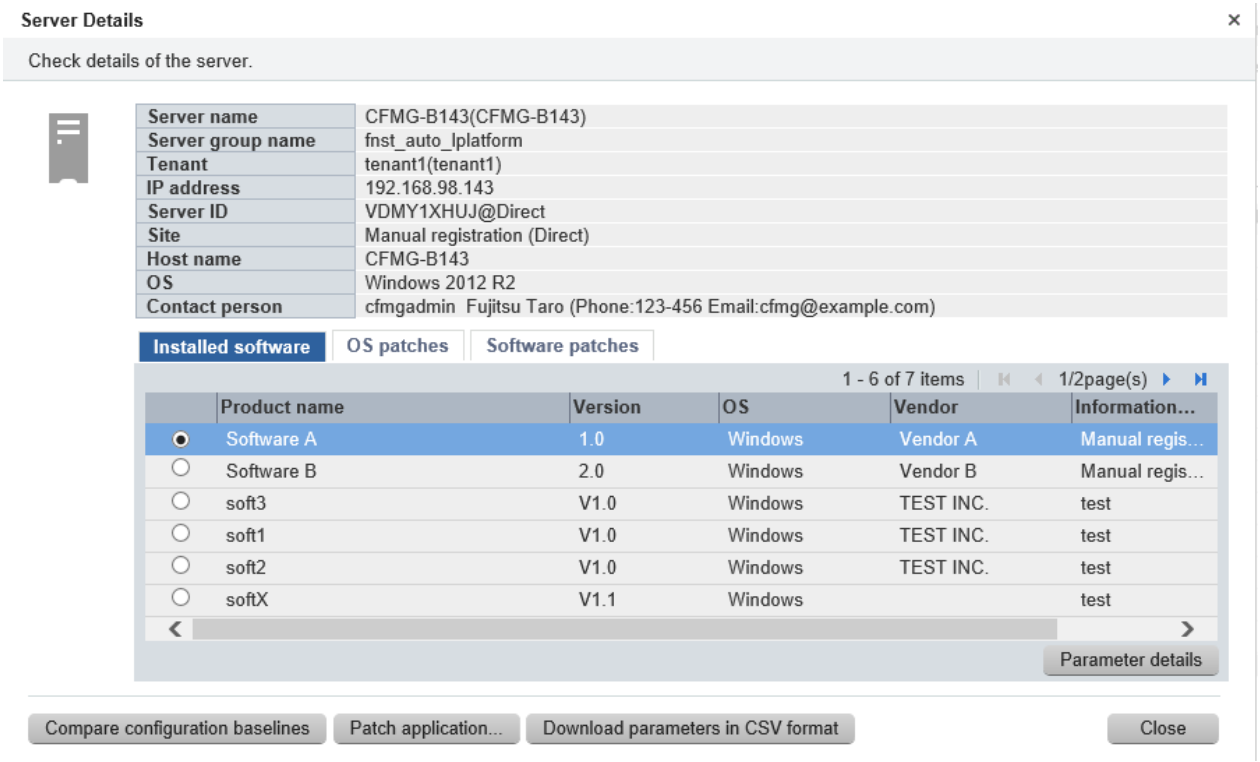
1. Use either of the following methods to display the server details:

   a. Click a server name link in the **Servers** window.

   b. Click a server name link in each window.

2. The **Server Details** window will be displayed.

   The **Server Details** window shows information about the server, the installation status of software, and the application status of OS and software patches.



Operation method

Detailed information about the server

Detailed information about the server is displayed in the top section of the window.

Item	Description
Server name	Displays the server name.
Server ID	Displays the server ID.
Server group name	Displays the server group name.
Tenant	Displays the tenant.
Site	Displays the site name.
IP address	Displays the IP address.
Host name	Displays the host name.
OS	Displays the operating system name.
Contact person	Displays the user ID, user name, telephone number and email address.

Information about installed software

Clicking the Installed software tab in the bottom section of the window displays a list of software that has been installed.

Item	Description
Product name	Displays the product names of the software products that have been installed.
Version	Displays the versions of the software products.
OS	Displays the operating systems (platforms).
Vendor	Displays the vendors of the software products.

Operation button

The following operation can be performed from the **Installed software** tab:

Operation button	Description
Parameter details	Select the software using the radio buttons and click **Parameter details** button to display the **Parameter Details** window.

Information about OS patch application

Clicking the **OS patches** tab in the bottom section of the window displays a list of the patches that have been applied and a list of the patches that have not been applied.

Clicking the **Unapplied patches** link displays a list of unapplied patches.

Clicking the **Applied patches** link displays a list of applied patches.

Table 2.1 Windows patches

Item	Description
Patch name	Displays the patch names.
Class	Displays the classification levels of the patches. - **Required**: Patches that are specified as "Required" in the operation policy settings - **Recommended**: Patches that are specified as "Recommended" in the operation policy settings
Patch type	Displays the patch types. (This indicates the classification of updates, which represents the WSUS update program type.) - **Security Updates** - **Critical Updates** - **Feature Packs** - **Service Packs** - **Tools** - **Drivers** - **Updates** - **Update Rollups** - **Definition Updates**
Product name	Displays the product name (operating system name) corresponding to each patch.
Overview	Displays an overview (or title) of each patch.
Release date	Displays the date when each patch was released.

Table 2.2 Linux patches

Item	Description
Package name	Displays the names of the RPM packages. Clicking a package name link displays the **Patch Details** window.
Version	Displays the versions of the packages.
Release	Displays the release numbers of the packages.

Item	Description
Architecture	Displays the architecture for each package.
Overview	Displays an overview of each package. Displays in English.
Release date	Displays the date when the package information was registered with Systemwalker Software Configuration Manager.

Table 2.3 For Solaris patches

Item	Description
SRU information	Displays SRU information. SRU information includes information on the "entire" package.

Information

For Solaris patches, only the information for **Applied patches** is displayed.

Software patch application information

When the **Software patches** tab in the bottom section of the window is selected, the application status of software patches is displayed.

Item	Description
Patch name	Displays the patch names.
Class	Displays the classification levels of the patches. - **Required**: Patches that are specified as "Required" in the operation policy settings - **Recommended**: Patches that are specified as "Recommended" in the operation policy settings
Importance	Displays the importance of each patch. - **Recommended** - **Important** - **Security**
Update type	Displays the update types of the patches. - **Urgent**
Product name	Displays the product names.
OS	Displays the operating systems (platforms).
Update title	Displays an overview (title) of each patch.
Release date	Displays the release date. For Fujitsu middleware, the date when the patch information was registered with Systemwalker Software Configuration Manager is displayed.

Operation buttons

The following operations can be performed from the **Server Details** window:

Operation button	Description
Compare configuration baselines	Compares configuration baselines. Refer to "2.5 Compare Configuration Baselines" for details.

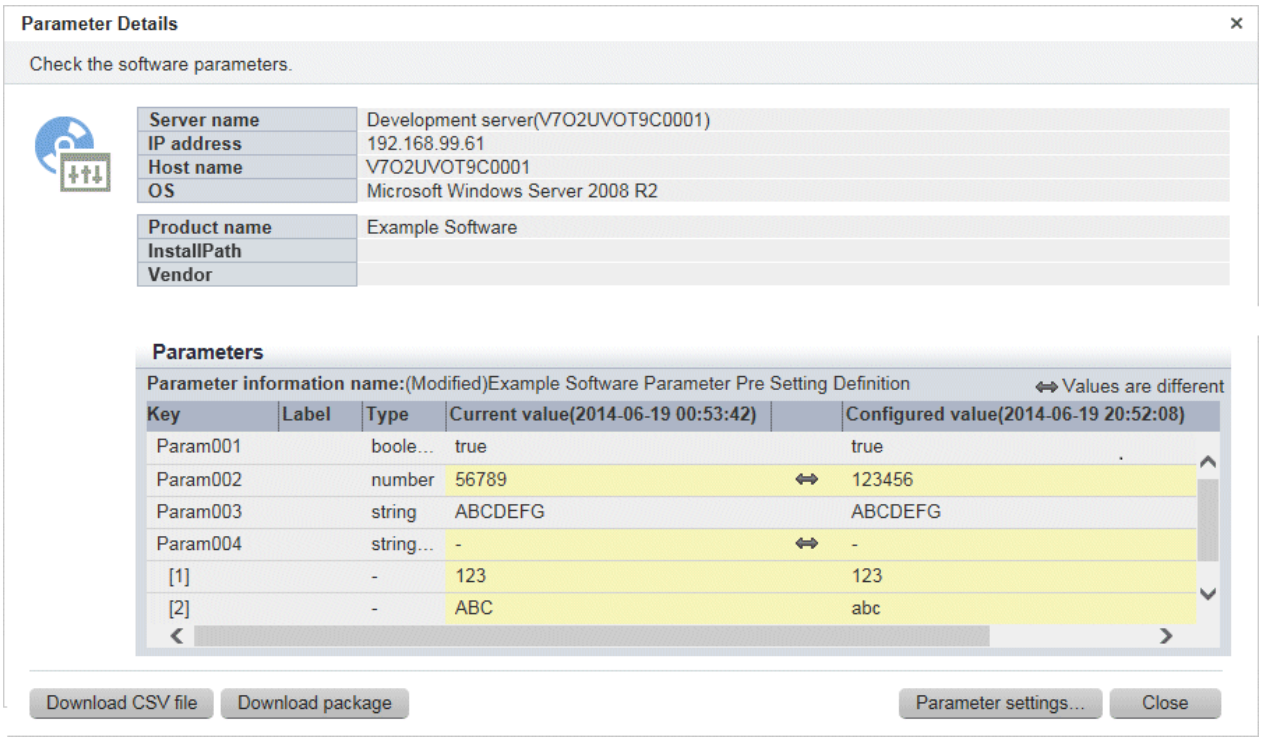
Operation button	Description
Patch application	Displays the **Patch Application** wizard, enabling the user to distribute and apply unapplied Fujitsu middleware patches to the relevant server. To apply patches for software other than Fujitsu middleware, perform configuration modification.
Download parameters in CSV format	Outputs information on software parameters in CSV format.
Close	Closes the window.

2.2.2 Parameter Details

Display method

1. Select the software to reference using the radio buttons on the **Installed software** tab in the **Server Details** window. Click **Parameter details** button.
2. The **Parameter Details** window will be displayed.

   The **Parameter Details** window displays the server and software information, as well as the values currently configured in the parameters, and those configured prior to the current values.



Operation method

Server information

Server information is displayed in the top section of the window.

Item	Description
Server name	Displays the server name.
IP address	Displays the IP address.
Host name	Displays the host name.
OS	Displays the operating system name.

Software information

Software information is displayed in the middle section of the window.

Item	Description
Product name	Displays the product name of installed software.
Version	Displays the software version.
OS	Displays the operating system type (platform).

Parameter information

Parameter information is displayed in the bottom section of the window.

Item	Description
Key	Displays the parameter key value.
Label	Displays the parameter label. Note that labels are not displayed for array type elements or map type subkeys.
Type	Displays the parameter type: - string - number - boolean - string array - map
Current value	Displays the parameter value that was discovered.
Configured value	Displays the value last set using parameter settings.

If there is a difference between **Current value** and **Configured value**, display this difference using the ó symbol.

Operation buttons

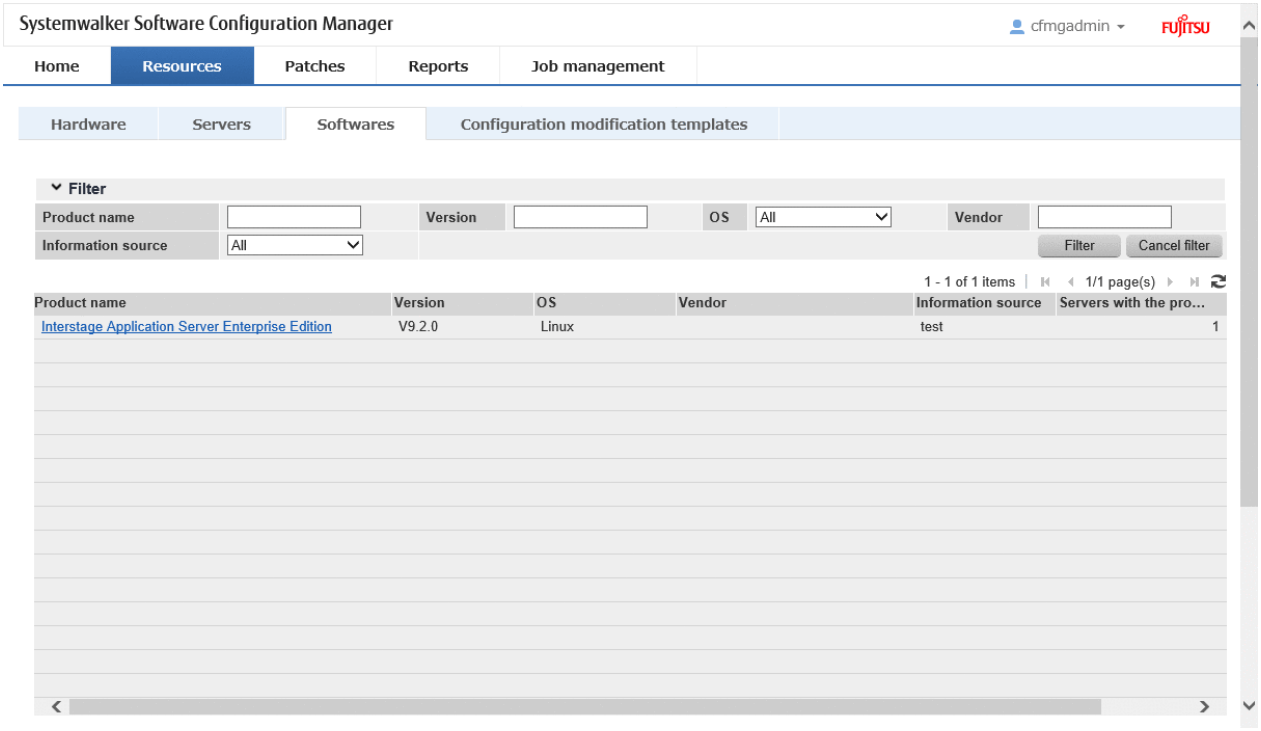
The following operations can be performed from the **Parameter Details** window:

Operation button	Description
Download CSV file	Outputs information on parameters in CSV format.
Download package	Downloads the registered parameter package.
Parameter settings	Displays the **Parameter Settings** wizard, enabling the user to configure parameters for the relevant server and software.
Close	Closes the window.

2.3 Software

Display method

1. Log in to the management console.
2. Use the following method to display the software list:
    a. Select **Resources** from the menu in the management console, and then select the **Software** tab.
    b. Click the **Software** link in the **Home** window.



Note

A list of software installed on the servers within the range managed by the login user will be displayed.

Infrastructure administrator

Infrastructure administrators can reference information about the software installed on all the servers.

Dual-role administrator

Dual-role administrators can reference information about the software installed on all the servers.

Tenant administrator

Tenant administrators can reference information about the software installed on the servers associated with the tenants (organization) to which they belong.

Tenant user

Tenant users can reference information about the software installed on the servers that they manage.

Operation method

Filter search

Specify the conditions for filtering the information in the software list.

Display item	Description
Filter	The following filter conditions can be specified. Multiple filter conditions can be specified. - **Product name** - **Version** - **OS** - **Vendor**

Display items

The following table shows the items that are displayed in the software list:

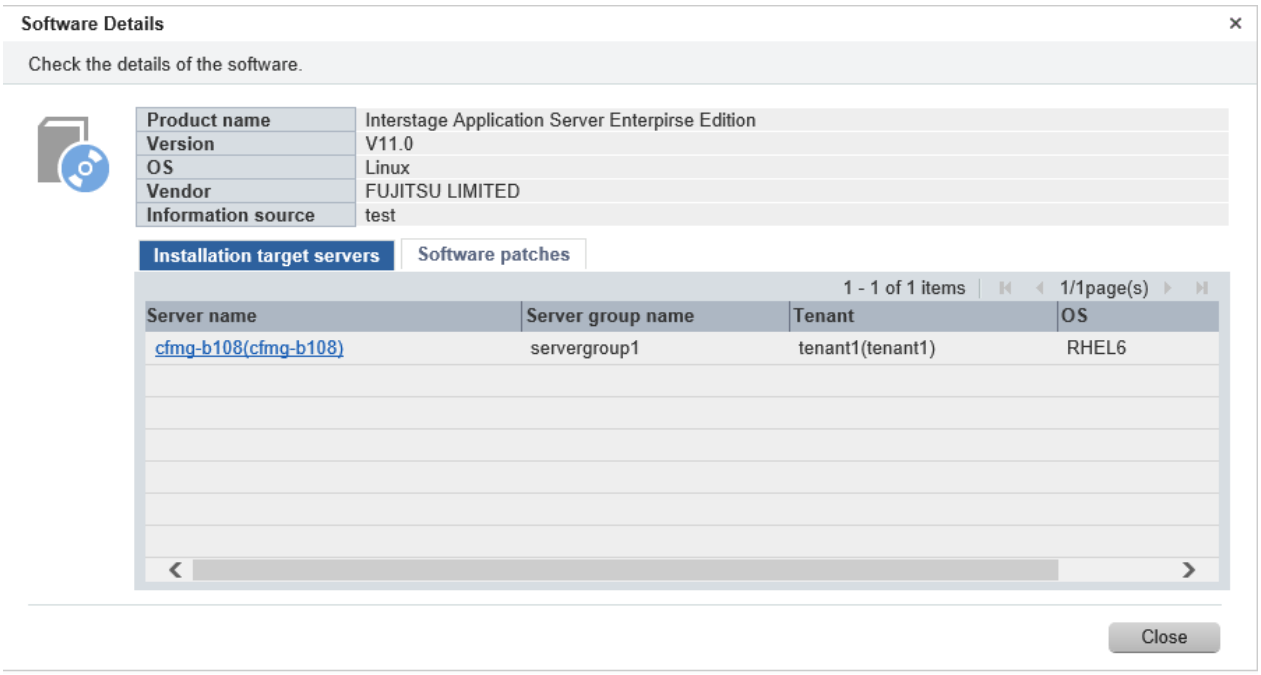
Display item	Description
Product name	Displays the product names of the software products that have been installed.
Version	Displays the versions of the software products.
OS	Displays the operating systems (platforms).
Vendor	Displays the vendors of the software products.
Servers with the product	Displays the number of servers where the software has been installed.

2.3.1 Software Details Window

Display method

1. Click a product name link in the **Software** window.
2. The **Software Details** window will be displayed.

   The **Software Details** window displays information about the software, together with a list of the servers where it has been installed and a list of the registered patches for that software.



Operation method

Software information

Information about the software is displayed in the top section of the window.

Item	Description
Product name	Displays the product name of installed software.
Version	Displays the version of the software.
OS	Displays the operating system (platform).
Vendor	Displays the vendor of the software.

Installation target servers

When the **Installation target servers** tab in the bottom section of the window is selected, a list of servers where the software has been installed is displayed.

Item	Description
Server name	Displays the server names.
Server group name	Displays the server group name.
Tenant	Displays the tenant.
OS	Displays the operating systems.

Software patches

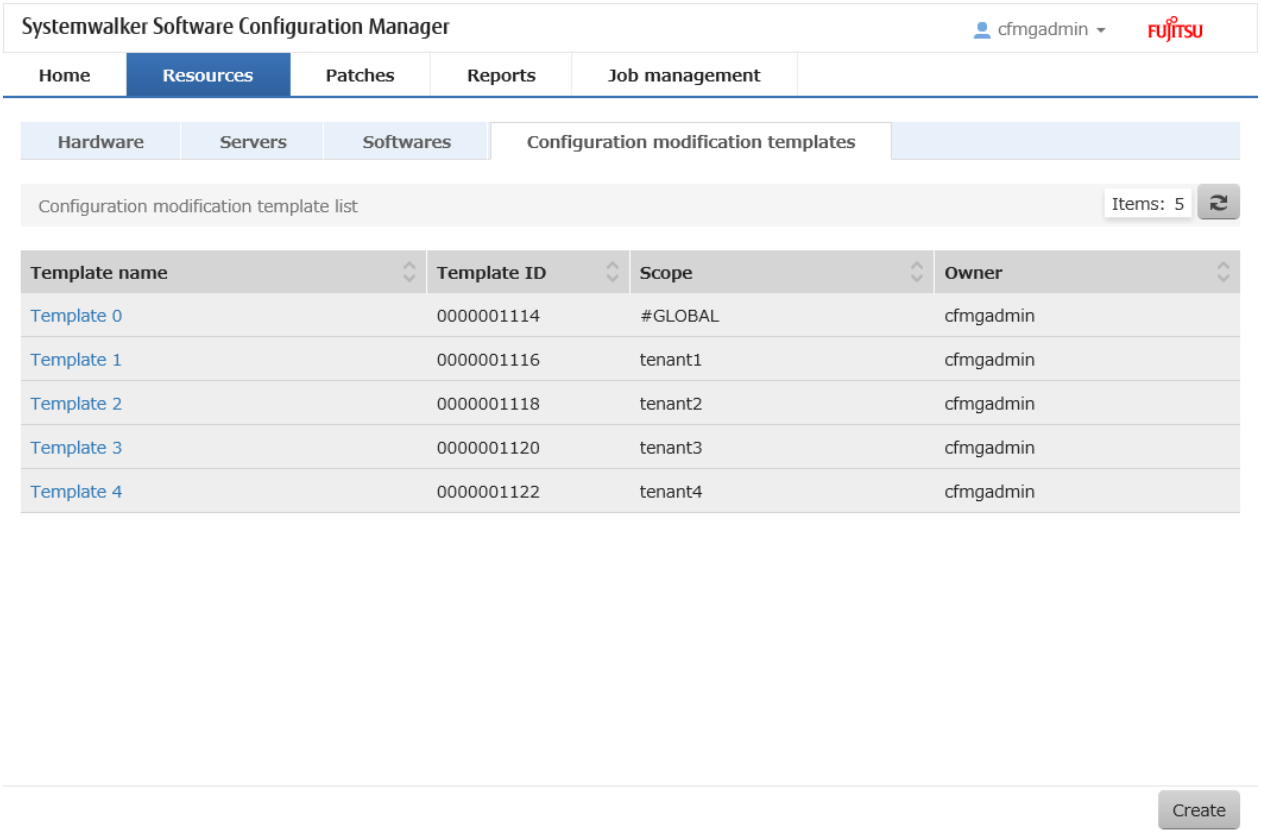
When the **Software patches** tab in the bottom section of the window is selected, the application status of software patches is displayed.

Item	Description
Patch name	Displays the patch names.
Class	Displays the classification levels of the patches. - **Required**: Patches that are specified as "Required" in the operation policy settings - **Recommended**: Patches that are specified as "Recommended" in the operation policy settings
Importance	Displays the importance of each patch. - **Recommended** - **Important** - **Security**
Update type	For Fujitsu middleware patches, the update type of the patch is displayed. - **Urgent**
Update title	Displays an overview (title) of each patch.
Unapplied servers	Displays the number of servers where the patch has not been applied.

2.4 Configuration Modification Templates

Display method

1. Log in to the management console.
2. Use either of the following methods to display the list.
   a. Select **Resources** from the menu of the management console, and then select the **Configuration modification templates** tab.
   b. Click the **Configuration modification template** link on the **Home** window.



Operation Method

Display items

The following table shows the items that are displayed in the configuration modification template list:

Display item	Description
Template name	Displays the template name. Clicking a template name displays the **Configuration modification template details** window.
Template ID	Displays the template ID.
Scope	Displays the scope.
Administrator	Displays the administrator.

Operation Buttons

The following operations can be performed from the **Configuration modification template list** window:

Operation button	Description
Create	The **Configuration Modification Template** wizard is displayed.

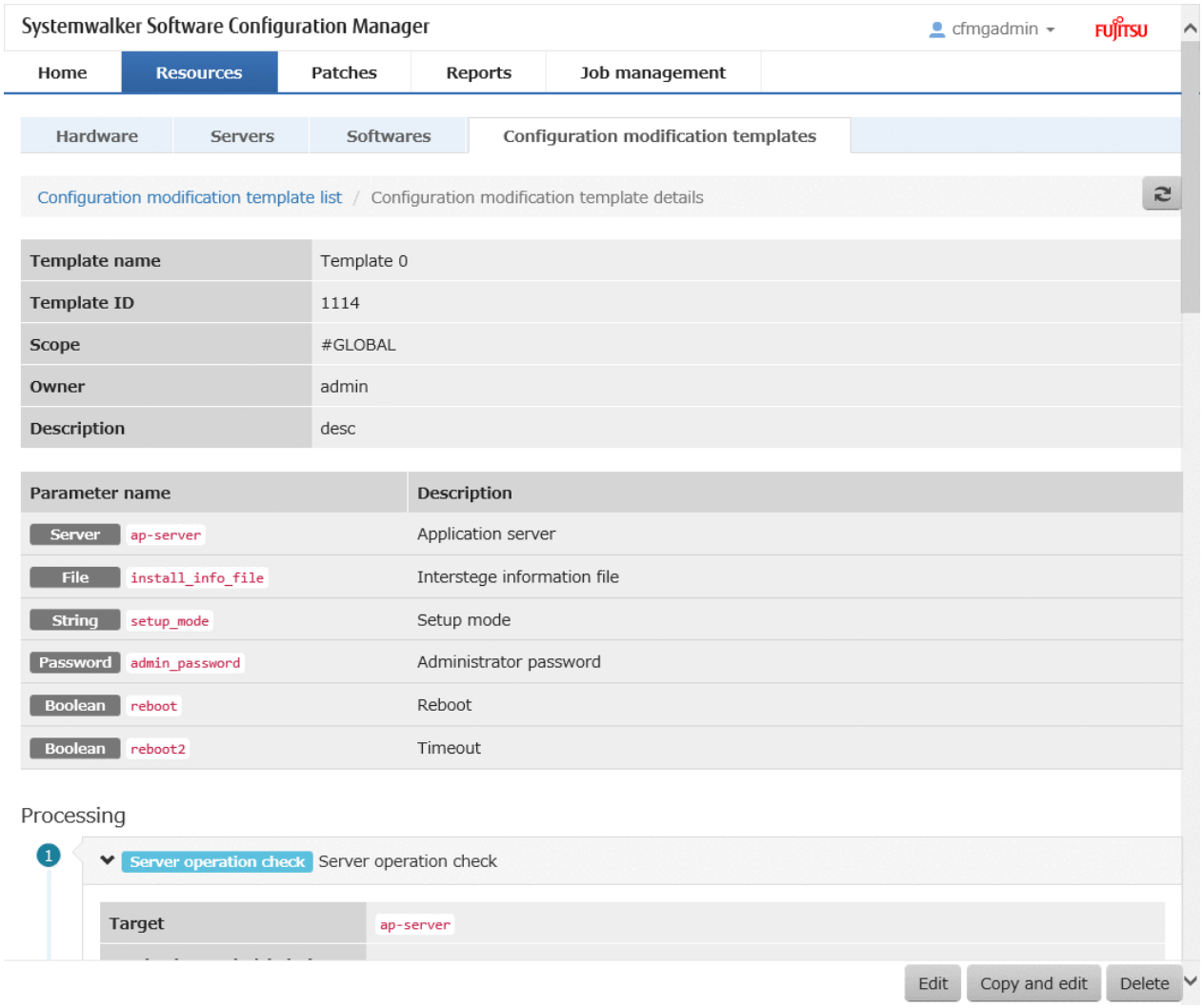
2.4.1 Details of the Configuration Modification Template

Display method

1. Click a template name on the **Configuration modification template list** window.

2. The **Configuration modification template details** window is displayed.

   In the **Configuration modification template details** window, the detailed information of the configuration modification template is displayed.



Operation Method

Template Information

Template information is displayed in the top section of the window.

Display item	Description
Template name	Displays the template name.
Template ID	Displays the template ID.
Scope	Displays the scope.
Administrator	Displays the administrator.
Description	Displays a description.

Parameter

Parameter information is displayed in the middle section of the window.

Display item	Description
Parameter name	Displays the type and name of the parameter.
Description	Displays a description.

Process

Process information is displayed in the bottom section of the window. The following information is displayed in the order processes are executed.

Display information	Description
Process type	Displays the type of the process.
Process name	Displays the name of the process.
Setting information	Displays the setting information configured for the process.

Operation Buttons

The following operations can be performed from the **Configuration modification template details** window:

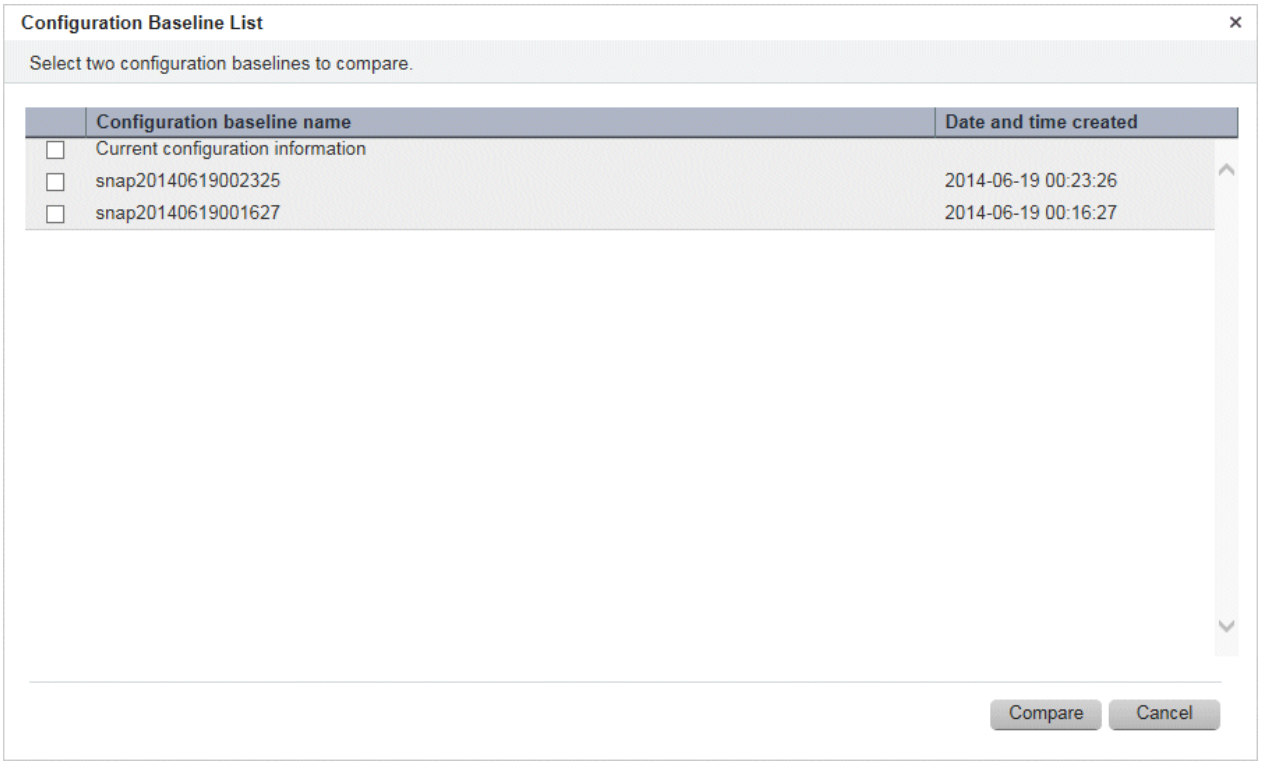
Operation button	Description
Edit	The **Configuration Modification Template** wizard is displayed. Edits details of the configuration modification template.
Copy and edit	The **Configuration Modification Template** wizard is displayed. Creates a new configuration modification template based on an already created configuration modification template.
Delete	Deletes the configuration modification template.

2.5 Compare Configuration Baselines

Display method

1. Click **Compare configuration baselines** in the **Server Details** window.

   The **Configuration Baseline List** window will be displayed.



Operation method

Display items

Item	Description
Configuration baseline name	Displays the configuration baseline names. **Current configuration information** is displayed at the top of the list.
Date and time created	Displays the date and time when the configuration baseline was created. The creation time for the **Current configuration information** is not displayed.

Operation buttons

The following operations can be performed from the **Server Details** window:

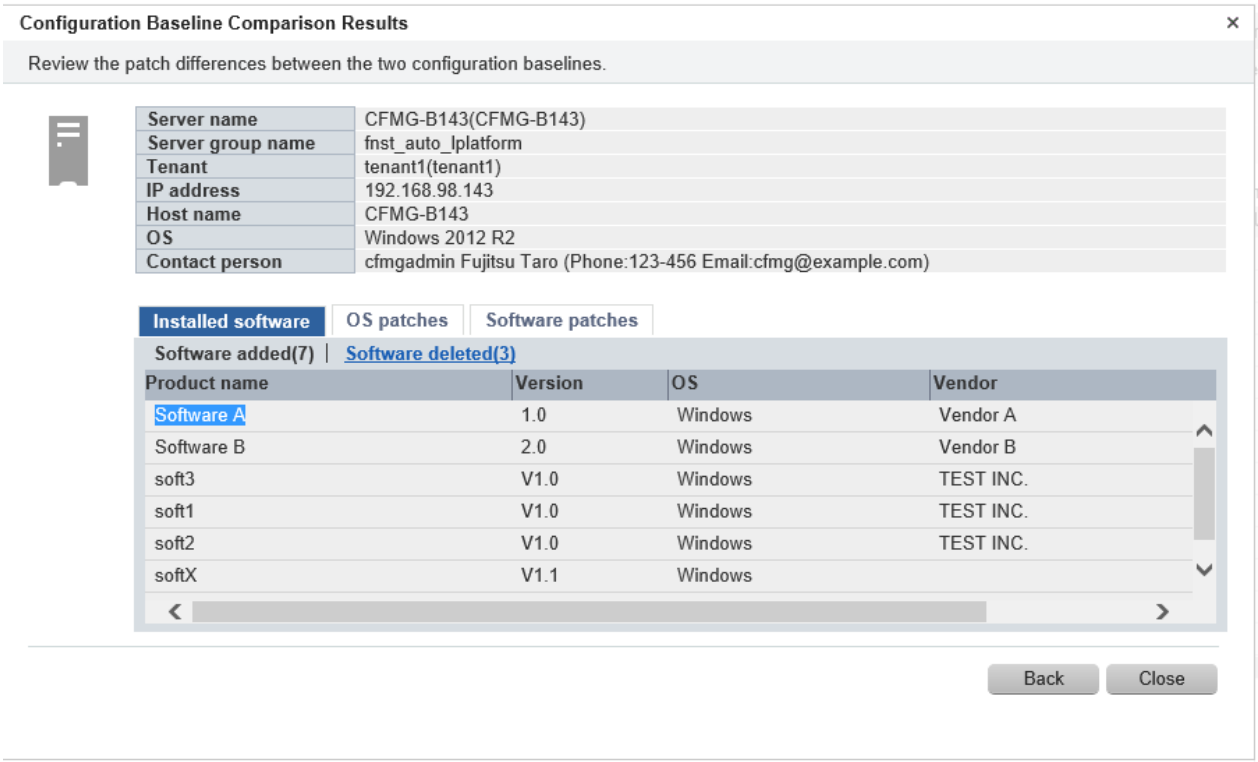
Operation button	Description
Compare	Compares the two selected configuration baselines.
Cancel	Returns to the **Server Details** window.

2.5.1 Configuration Baseline Comparison Results

Display method

1. Select the checkboxes for the two configuration baselines to be compared in the **Configuration Baseline List** window.
2. Click **Compare**.

   The **Configuration Baseline Comparison Results** window will be displayed.



Operation method

Detailed information about the server

Detailed information about the server is displayed in the top section of the window.

Item	Description
Server name	Displays the server name.
Server group name	Displays the server group name.
Tenant	Displays the tenant.
IP address	Displays the IP address.
Host name	Displays the host name.
OS	Displays the operating system
Contact person	Displays the user ID, user name, telephone number and email address.

Information about the differences in installed software

When the **Installed software** tab in the bottom section of the window is selected, a list of the software products that have been added between the two configuration baselines will be displayed, together with a list of the software products that have been removed.

Item	Description
Product name	Displays the product names of the software products that have been installed.
Version	Displays the versions of the software products.
OS	Displays the operating systems.
Vendor	Displays the vendors of the software products.

Information about the differences in OS patches

When the **OS patches** tab in the bottom section of the window is selected, a list of the patches that have been added between the two configuration baselines will be displayed, together with a list of the patches that have been removed.

Table 2.4 Windows patches

Item	Description
Patch name	Displays the patch names. Clicking a patch name link displays the **Patch Details** window.
Class	Displays the classification levels of the patches. - **Required**: Patches that are specified as "Required" in the operation policy settings - **Recommended**: Patches that are specified as "Recommended" in the operation policy settings
Patch type	Displays the patch types. (This indicates the classification of updates, which represents the WSUS update program type.) - **Security Updates** - **Critical Updates** - **Feature Packs** - **Service Packs** - **Tools** - **Drivers** - **Updates** - **Update Rollups** - **Definition Updates**
Product name	Displays the product name (operating system name) corresponding to each patch.
Release date	Displays the date when each patch was released.
Overview	Displays an overview (or title) of each patch.

For Linux patches, lists of the patches that have been changed, added and removed will be displayed.

Table 2.5 Linux patches

Item	Description
Package name	Displays the names of the RPM packages. Clicking a package name link displays the **Patch Details** window.
Version	Displays the versions of the packages.
Release	Displays the release numbers of the packages.
Architecture	Displays the architecture for each package.
Overview	Displays an overview of each package. Displays in English.
Release date	Displays the date when the package information was registered with Systemwalker Software Configuration Manager.

Note: In the list of patches that have been changed, the version/release information is displayed using the format "new version/release (old version/release)".

Software patch difference information

When the **Software patches** tab in the bottom section of the window is selected, a list of the patches that have been added between the two configuration baselines will be displayed, together with a list of the patches that have been removed.

Item	Description
Patch name	Displays the patch names.
Class	Displays the classification levels of the patches. - **Required**: Patches that are specified as "Required" in the operation policy settings - **Recommended**: Patches that are specified as "Recommended" in the operation policy settings
Importance	Displays the importance of each patch. - **Recommended** - **Important** - **Security**
Update type	Displays the update types of the patches. - **Urgent**
Product name	Displays the product names.
OS	Displays the operating systems (platforms).
Release date	Displays the date when the patch information was registered with Systemwalker Software Configuration Manager.

Operation buttons

The following operations can be performed from the **Configuration Baseline Comparison Results** window:

Operation button	Description
Back	Returns to the **Configuration Baseline List** window.
Close	Returns to the **Server Details** window.

2.6 Patch Application Wizard

Patch application is set up by first selecting the servers where the patches are to be applied.

Point

The roles of the people who distribute and apply patches

The explanations in this section assume that the roles of the people who distribute and apply patches can be classified as follows:

Infrastructure administrator

- Infrastructure administrators are responsible for patch management (management for WSUS, yum repository servers and the media library).
- Infrastructure administrators do not distribute or apply patches.

- When an error occurs with the patch distribution/application processing, a message may be output to the event log or syslog. If this happens, infrastructure administrators need to check the content of the message and take the necessary action such as reviewing the environment settings.

Tenant administrator

- Tenant administrators use the management console to distribute and apply patches to the servers for the tenants to which they belong.

Tenant user

- Tenant users distribute and apply patches to those servers that they manage themselves.

Dual-role administrator

- Dual-role administrators have the roles of both infrastructure administrators and tenant administrators. When acting as a tenant administrator, a dual-role administrator can distribute and apply patches to the servers in all tenancies.

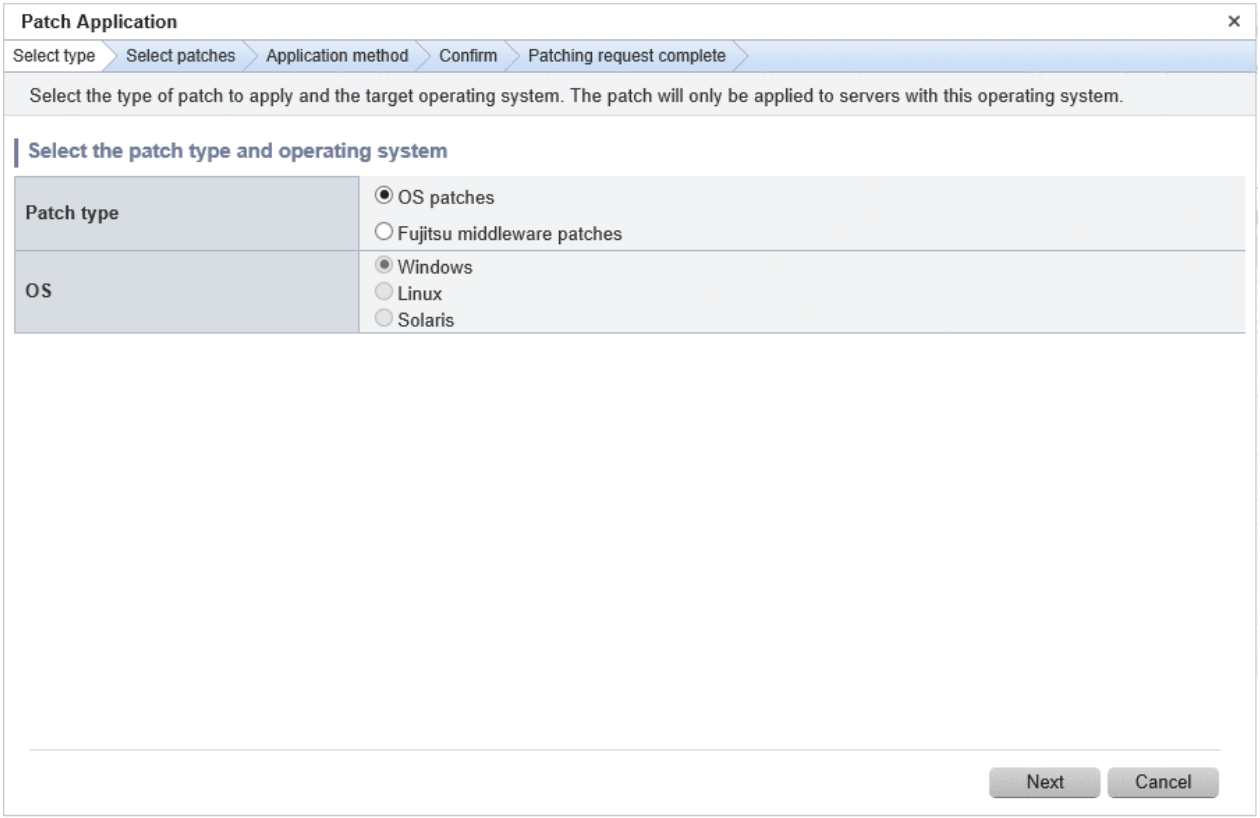
Display method

1. Click **Patch application** button in one of the following windows:
   - **Servers** window
   - **Server Details** window
2. Perform the following patch application setup and confirmation operations in the wizard:
   a. Select the patch type
   b. Select the patches to be applied
   c. Set the application method
   d. Check the settings
   e. Completion

2.6.1 Select Type

If either of the following operations is performed, the **Select type** window of the **Patch Application** wizard will be displayed:

- Use the checkboxes in the **Servers** window to select servers, and then click **Patch application** button.
- Click **Patch application** button in the **Server Details** window.



Operation method

Selecting patch types

Select the patch type and operating system for the patch to be applied.

Item	Description
Patch type	Select either of the following as the type of the patch to be applied: - **OS patches** - **Fujitsu middleware patches**
OS	Select either of the following as the operating system to which the patch is to be applied: - **Windows** - **Linux** - **Solaris** If only Windows servers, only Linux servers, or only Solaris servers have been selected, the radio buttons will be grayed out so that they cannot be selected.

Operation buttons

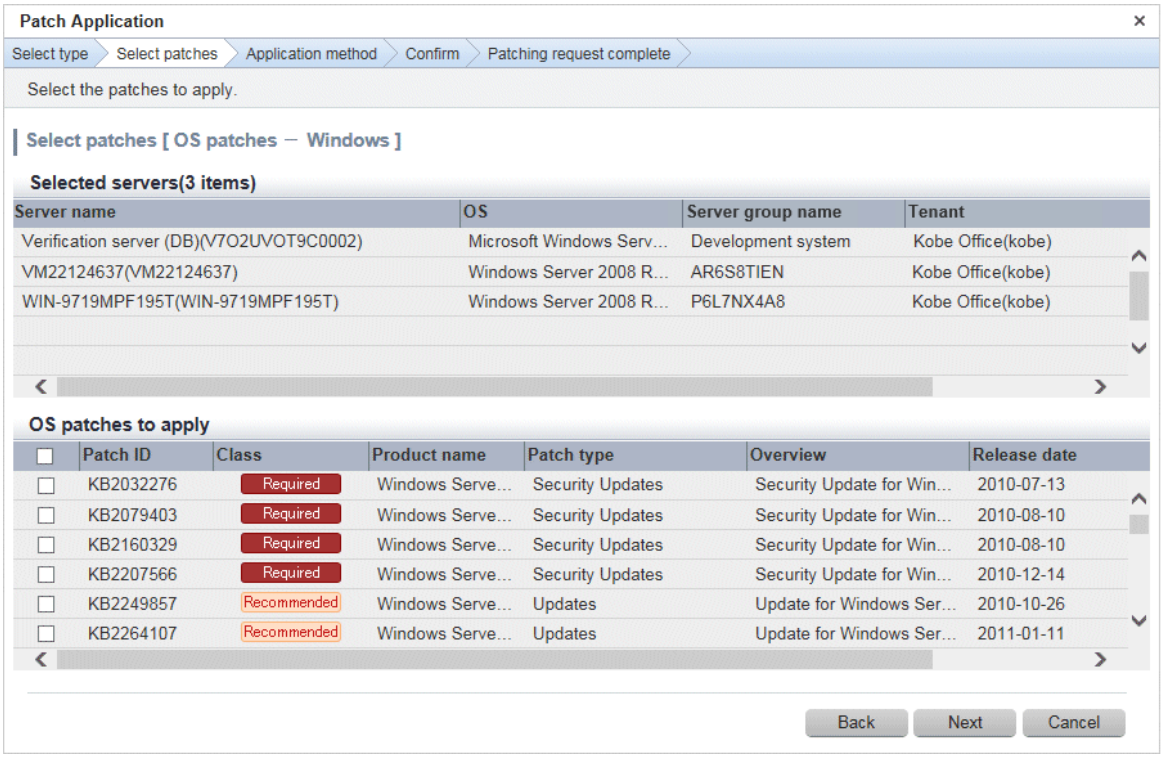
Operation button	Description
Next	Moves to the **Select servers** window.
Cancel	Closes the **Patch Application** wizard.

2.6.2 Select Patches

When **Next** is clicked in the **Select type** window, the **Select patches** window is displayed.

The patches that can be applied to the selected servers will be displayed in the list of patches.

Select the patches to be applied.



Operation method

Selected servers

This list displays the servers to which the patches are to be applied.

Item	Description
Server name	Displays the server names.
OS	Displays the operating system names.
Server group name	Displays the server group name.
Tenant	Displays the tenant.

Selecting patches

Select the patches to be applied.

Table 2.6 Windows patches

Item	Description
Patch name	Displays the patch names.
Class	Displays the classification levels of the patches. - **Required**: Patches that are specified as "Required" in the operation policy settings - **Recommended**: Patches that are specified as "Recommended" in the operation policy settings
Product name	Displays the product name (operating system name) corresponding to each patch.
Patch type	Displays the patch types. (This indicates the classification of updates, which represents the WSUS update program type.)

Item	Description
	- **Security Updates** - **Critical Updates** - **Feature Packs** - **Service Packs** - **Tools** - **Drivers** - **Updates** - **Update Rollups** - **Definition Updates**
Overview	Displays an overview (or title) of each patch.
Release date	Displays the date when each patch was released.

Table 2.7 Linux patches

Item	Description
Package name	Displays the names of the RPM packages. Clicking a package name link displays the **Patch Details** window.
Version	Displays the versions of the packages.
Release	Displays the release numbers of the packages.
Architecture	Displays the architecture for each package.
Overview	Displays an overview of each package. Displays in English.
Release date	Displays the date when the package information was registered with Systemwalker Software Configuration Manager.

Table 2.8 Fujitsu middleware patches

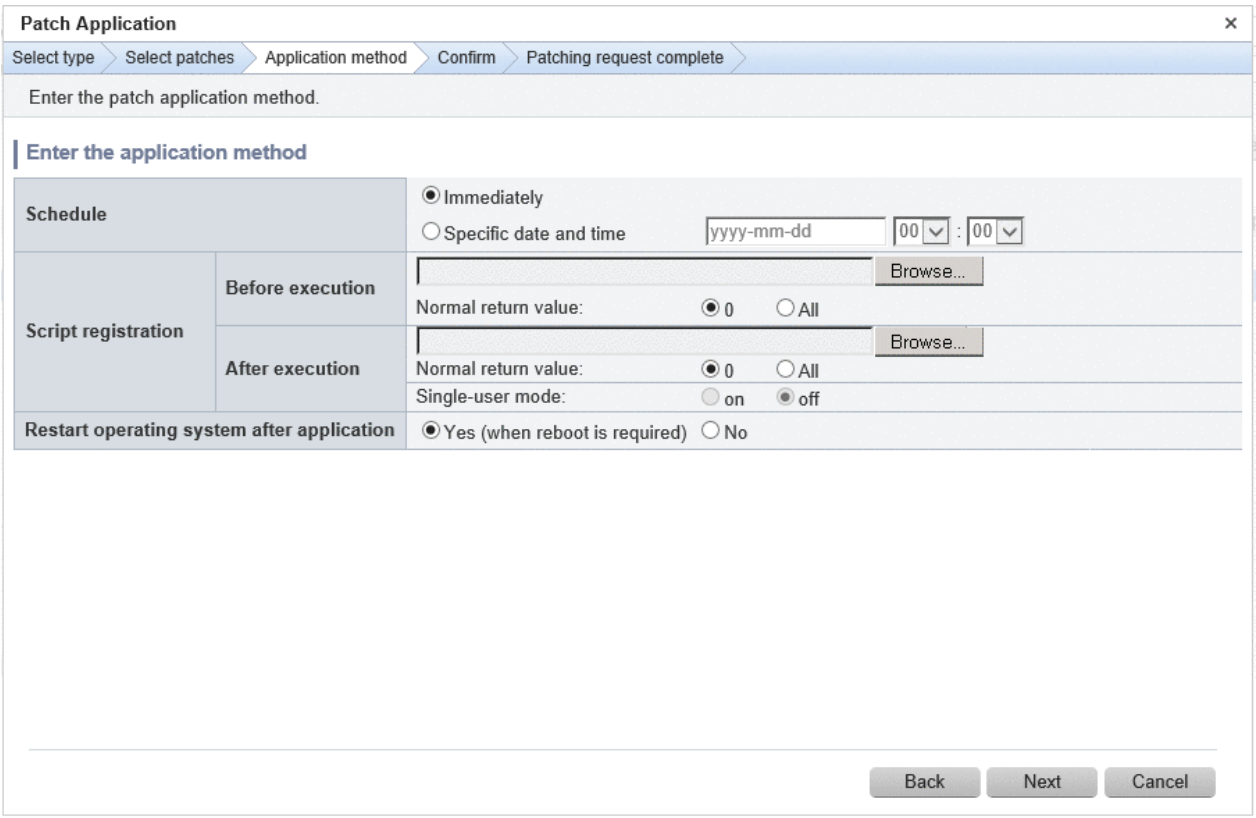
Item	Description
Patch name	Displays the patch names.
Class	Displays the classification levels of the patches. - **Required**: Patches that are specified as "Required" in the operation policy settings - **Recommended**: Patches that are specified as "Recommended" in the operation policy settings
Importance	Displays the importance of each patch. - **Recommended** - **Important** - **Security**
Update type	Displays the update types of the patches. - **Urgent**
Product name	Displays the product names.
OS	Displays the operating systems (platforms).
Release date	Displays the date when the patch information was registered with Systemwalker Software Configuration Manager.

Operation buttons

Operation button	Description
Back	Returns to the **Select servers** window.
Next	Moves to the **Application method** window if a patch has been selected using a checkbox.
Cancel	Closes the **Patch Application** wizard.

2.6.3 Application Method

When **Next** is clicked in the **Select patches** window, the **Application method** window is displayed.



Operation methods

Setting up the application method

Item	Description
Schedule	Specify a schedule. - **Immediately**: Select this option to perform the processing as soon as settings in the wizard are complete. - **Specific date and time**: Specify the date and time when processing is to be executed. Specify a date and time that is later than the current date and time on the admin server.
Script	Specify the scripts to be executed before and after patch distribution/application, as well as the return values to determine the operations have completed successfully during script execution. Also specify whether to execute a post-

Item	Description
	execution script at single-user execution level when distributing Fujitsu middleware patches. To apply Fujitsu middleware patches, a script specifying the application processing must be created and then registered as a post-execution script. It is recommended to create the scripts registered here so that they output "0" as the return value to indicate normal completion and a value other than "0" as the return value to indicate an error. For the script to be registered, specify the full path to the file that is stored on the local machine where the browser is running. Specify one of the following values for the return value to use to determine that the operation has completed successfully. - **0: The return value "0" is handled as normal termination, whereas values other than "0" are handled as errors.** - **All: All return values are handled as normal termination.** Configure whether to execute the script at single-user execution level by specifying one of the following values: If the execution target is a Windows server, "on" cannot be specified. - on: Switches the execution level to single-user and executes a script. - off: Executes a script without switching the execution level. Refer to "Creating Scripts and Specifying Commands" in the *Operation Guide* for information on the scripts that are registered here. If an error occurs, the user can select the process to take when the corresponding script fails (such as "retry", "continue processing", or "cancel processing") from the Job management window or by using the job information management command. Refer to "Chapter 5 Job Management" for details on the Job management window. Refer to "Job Information Management Command" in the *Reference Guide* for details on the command.
Restart operating system after application	Select whether to restart the server after the patch is distributed and applied. When executing the post-execution script at single-user execution level, the OS is restarted after the script is executed. Therefore, it is not necessary to select "Yes". - **Yes** The behavior varies depending on the patch type, as follows: - **OS patches** The server will only be restarted for those patches that need to have the server restarted. - **Fujitsu middleware patches** The server will be restarted without fail. - **No** The server will not be restarted.

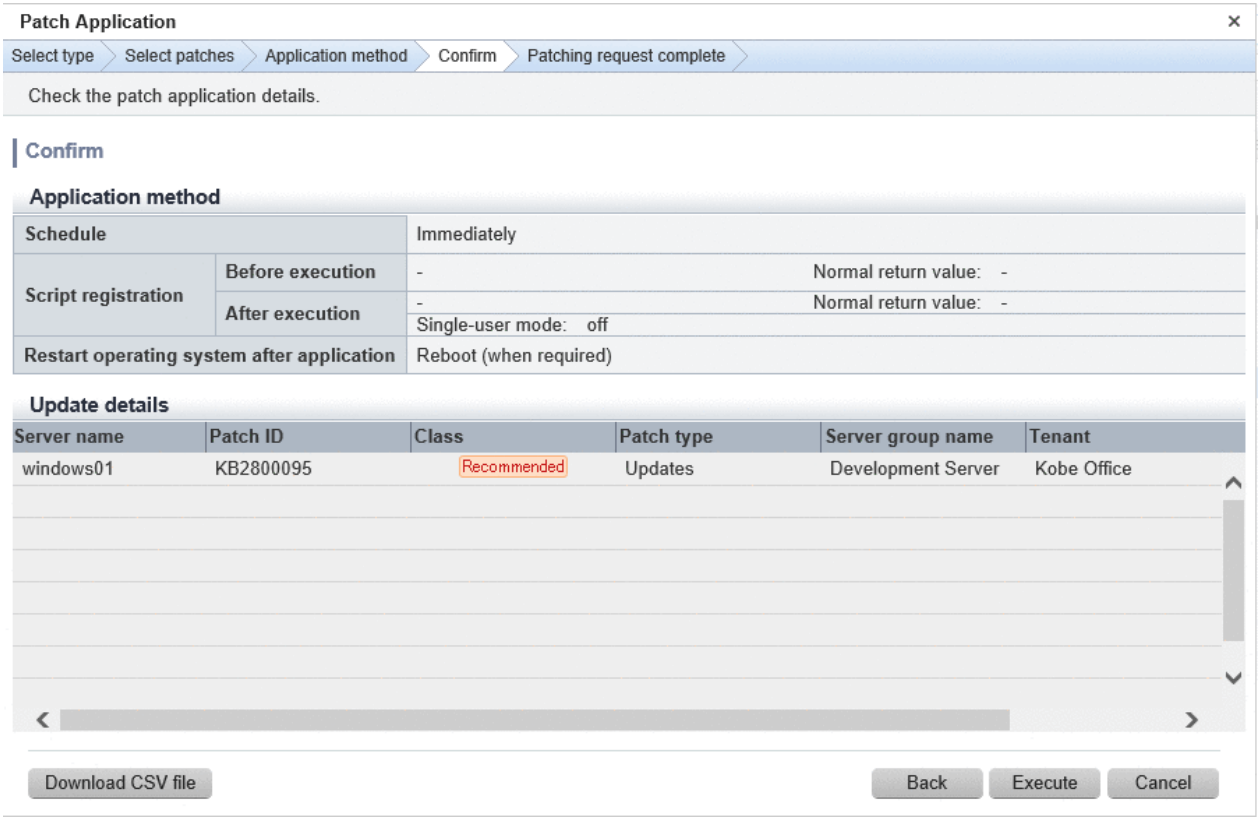
Operation buttons

Operation button	Description
Back	Returns to the **Select patches** window.
Next	Moves to the confirmation window.
Cancel	Closes the **Patch Application** wizard.

2.6.4 Confirm

When **Next** is clicked in the **Application method** window, the **Confirm** window is displayed.

Check the settings that have been entered.



Operation method

Application method

This section displays the settings that have been specified in the **Application method** window.

Update details

Item		Description
Server name		Displays the server names.
For Windows	**Patch name**	Displays the patch names.
	Class	Displays the classification levels ("Required" or "Recommended") of the patches.
	Patch type	Displays the patch types. (This indicates the classification of updates, which represents the WSUS update program type.)
For Linux	**Package name**	Displays the names of the packages.
	Version	Displays the versions of the packages.
	Release	Displays the release numbers of the packages.
For Fujitsu middleware	**Patch name**	Displays the patch names.
	Importance	Displays the importance of each patch ("Recommended", "Important" or "Security").
	Update type	Displays the update type of each patch ("Urgent").
Server group name		Displays the server group name.

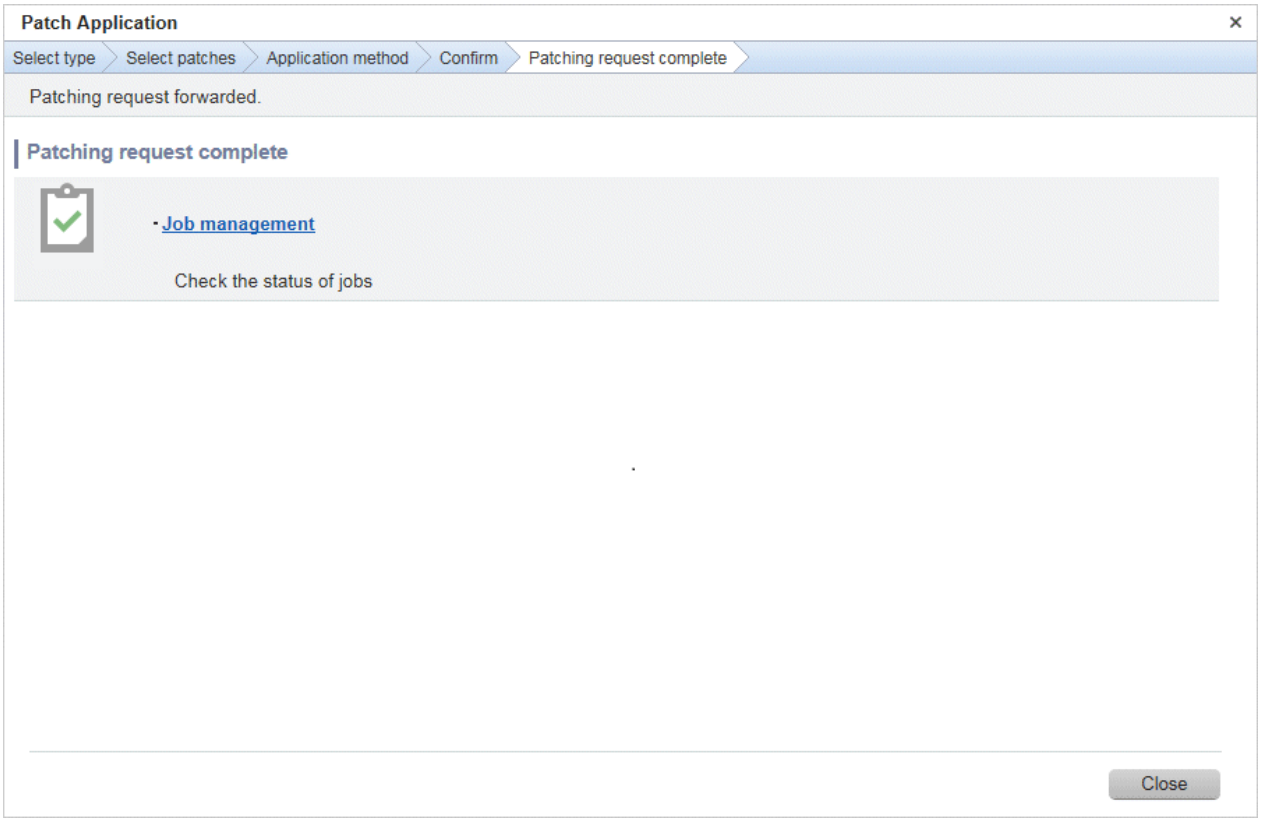
Item	Description
Tenant	Displays the tenant.

Operation buttons

Operation button	Description
Download CSV file	Outputs the information displayed in **Update details** to a CSV file.
Back	Returns to the **Application method** window.
Execute	Executes the patch application.
Cancel	Closes the **Patch Application** wizard.

2.6.5 Patching Request Complete

When **Next** is clicked in the **Confirm** window, the **Patching request complete** window is displayed.



Operation method

Job management

Item	Description
Job management	Moves to the **Job management** window where the user can check the status of the patch application operation that was executed. The status of the patch application operation that was executed can also be checked by using the job information management command. Refer to "Job Information Management Command" in the *Reference Guide* for details.

Operation button

Operation button	Description
Close	Closes the **Patch Application** wizard.

2.7 Parameter Settings Wizard

This wizard configures the software parameters.

Display method

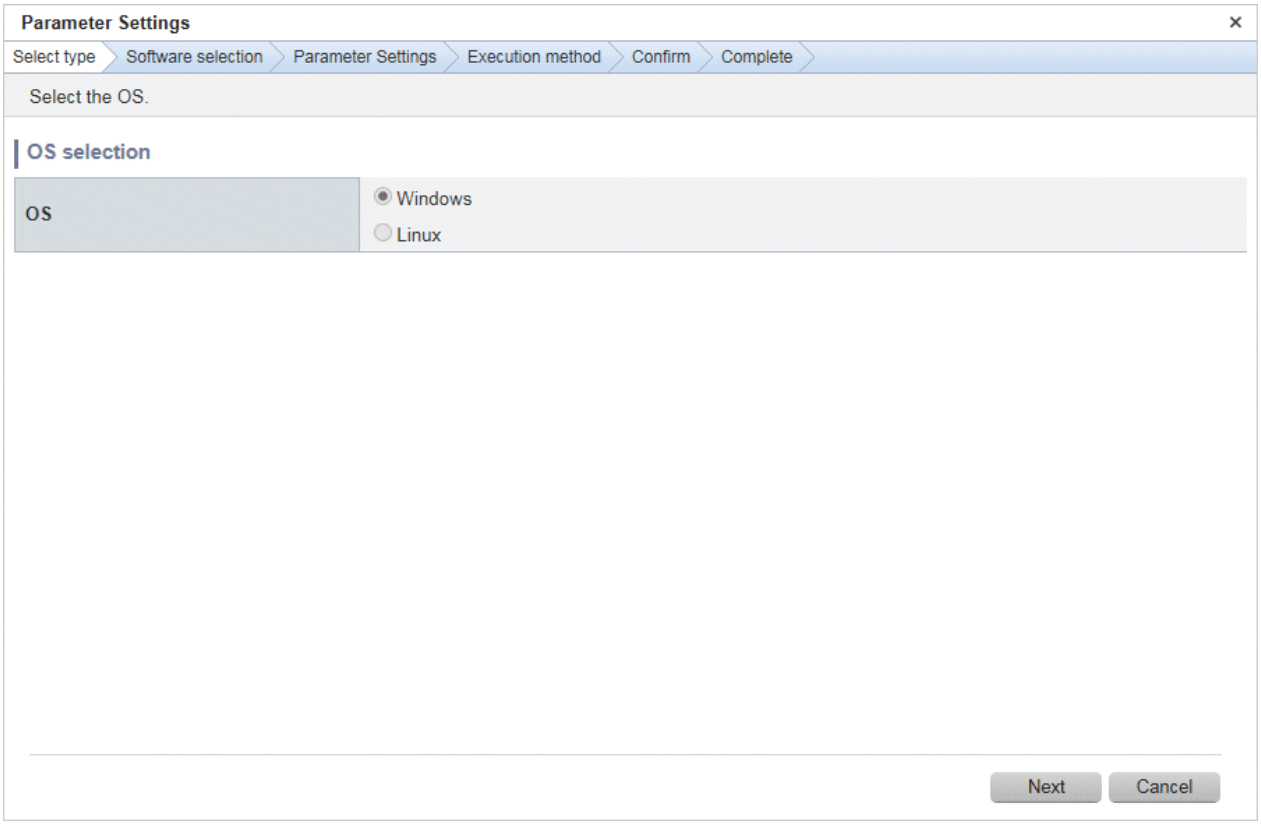
1. Click **Parameter settings** button in one of the windows below:
   - **Servers** window
   - **Parameter Details** window
2. The parameter settings and checks listed below are carried out using the wizard:
   a. Select the OS of the server on which the parameters will be configured
   b. Select the software to which parameters apply
   c. Select the parameters to be configured
   d. Edit the parameters for custom configurations
   e. Configure how the parameters will be executed
   f. Check the settings
   g. Patching request complete

2.7.1 OS Selection

If the operation below is performed, the **Select type** window of the **Parameter Settings** wizard will be displayed.

- Use the checkboxes in the **Servers** window to select the server and click **Parameter settings** button.

Note that the **Select type** window will not appear if the **Parameter Settings** wizard is displayed by clicking **Parameter settings** button in the **Parameter Details** window.



Operation method

OS Selection

Select the OS of the server on which the parameters will be configured.

Item	Description
OS	Select one of the following operating systems for the server on which the parameter settings are to be applied: - Windows - Linux If only Windows servers or Linux servers have been selected, the radio buttons will be grayed out so that they cannot be selected.

Operation buttons

Operation button	Description
Next	Moves to the **Software Selection** window.
Cancel	Closes the **Parameter Settings** wizard.

2.7.2 Software Selection

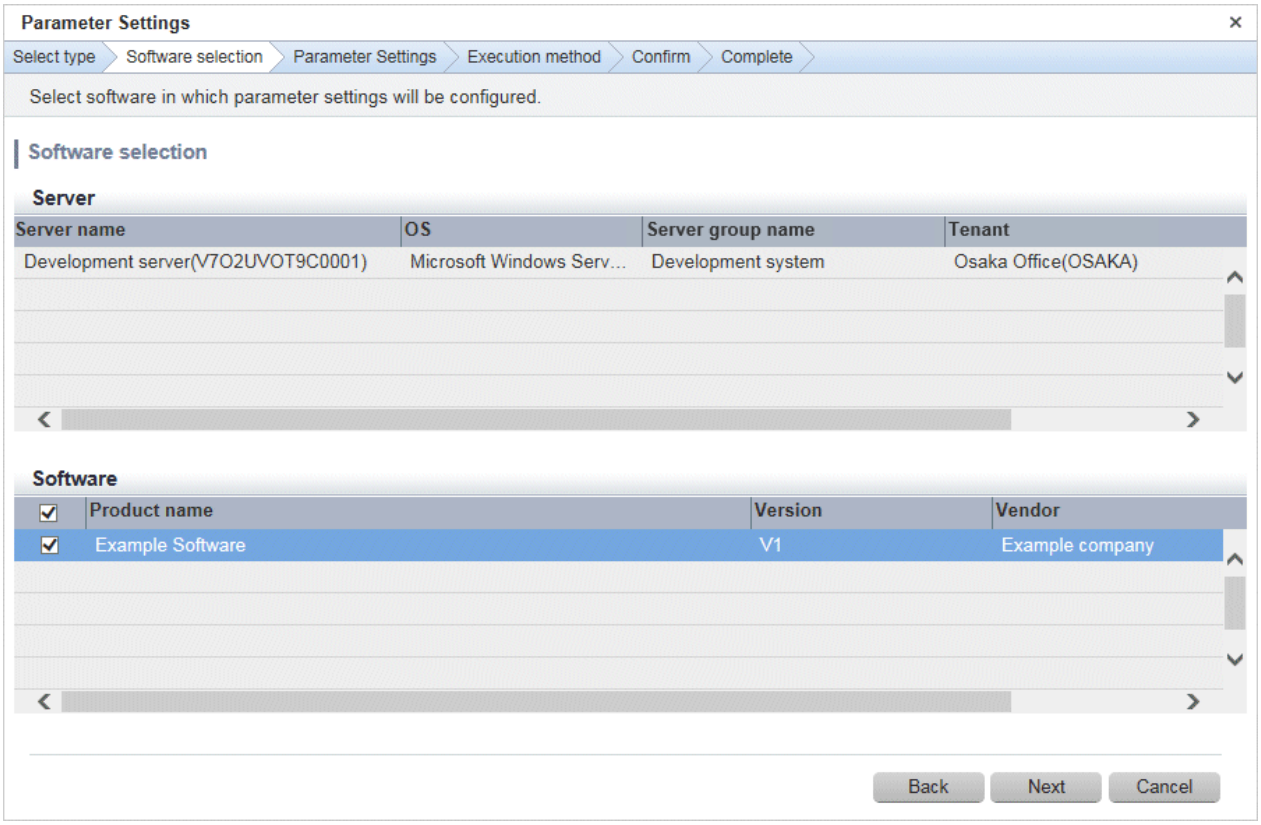
Click **Next** in the **Select type** window to display the **Software Selection** window.

The **Software list** displays the software on the selected server for which parameters can be configured.

Select the software for which parameters are to be set.

Note that the **Software list** will not be displayed if there is no software on the selected server for which parameters can be configured. Click **Cancel** to reselect the server.

Also, note that the **Software Selection** window will not appear if the **Parameter Settings** wizard is displayed by clicking **Parameter settings** button in the **Parameter Details** window.



Operation method

Servers

This list displays the servers for which parameters can be configured.

Item	Description
Server name	Displays the server name.
OS	Displays the operating system name.
Server group name	Displays the server group name.
Tenant	Displays the tenant.

Software

Select the software for which parameters are to be set.

Item	Description
Product name	Displays the product name(s).
Version	Displays the version.
Vendor	Displays the vendor.

Operation buttons

Operation button	Description
Back	Returns to the **Select type** window.
Next	Moves to the **Parameter Settings** window if software is selected.

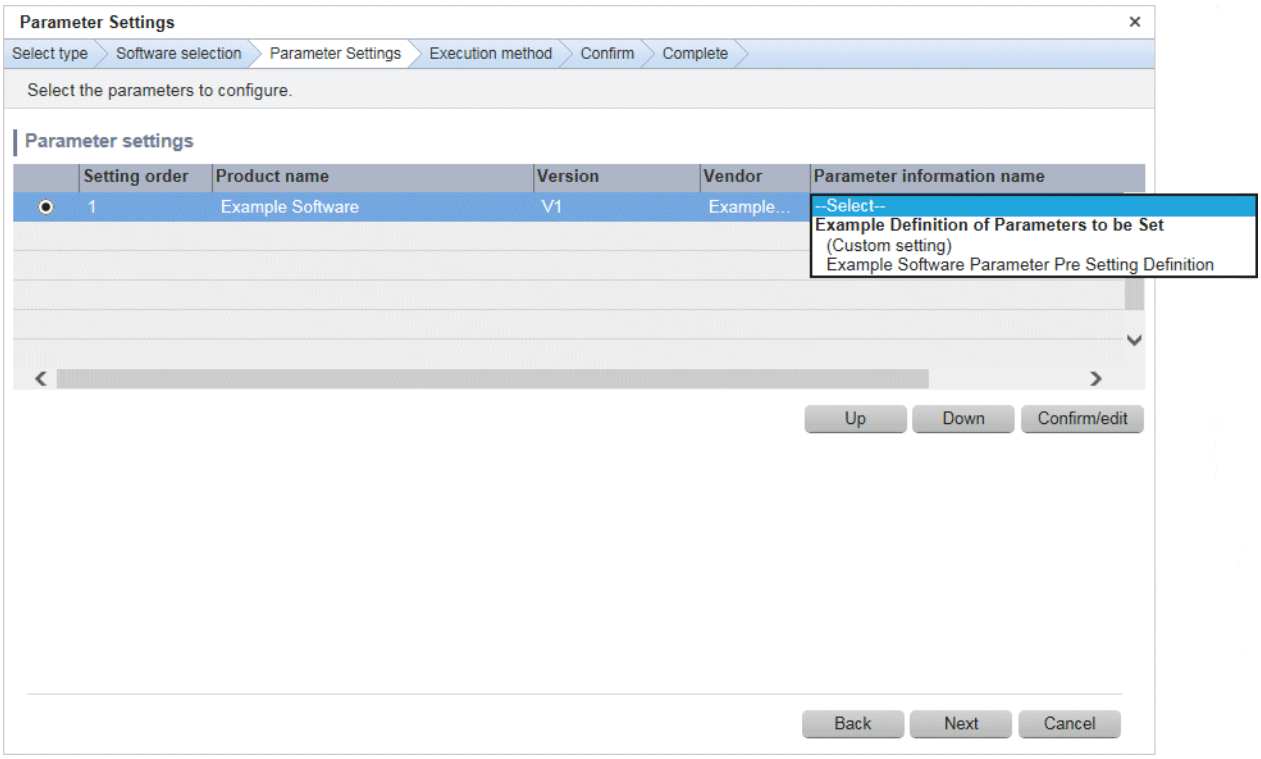
Operation button	Description
Cancel	Closes the **Parameter Settings** wizard.

2.7.3 Parameter Settings

Perform any of the following operations to display the **Parameter Settings** window:

- Click **Next** in the **Software Selection** window.
- Click **Parameter settings** button in the **Parameter Details** window to display the **Parameter Settings** wizard.

Select the **Parameter information name** for the parameters to be configured in each type of software.



Operation method

Parameter configuration

Select the parameter information to be configured in each type of software.

Item	Description
Setting order	Displays the sequence in which the parameters are to be set. Parameters are configured in descending order from the top. To change the configuration sequence, use the radio buttons to select the software and click **Up** or **Down** to modify the order.
Product name	Displays the product name(s).
Version	Displays the version.
Vendor	Displays the vendor.
Parameter information name	Allows you to select the parameter information to be set. If **(Custom setting)** is selected, click **Confirm/edit** to display the **Edit Parameter Information** window and customize the parameter settings.

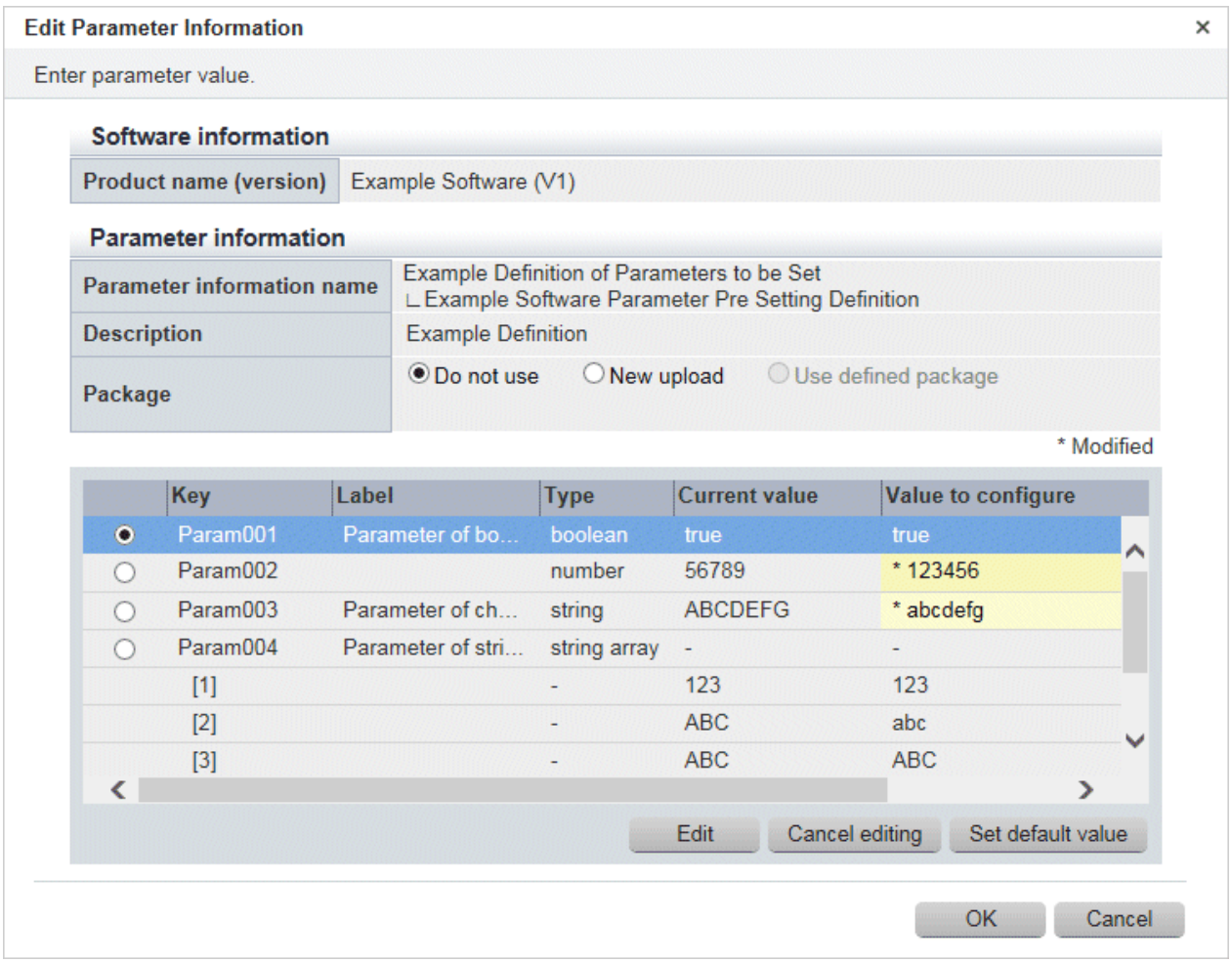
Operation buttons

Operation button	Description
Confirm/edit	Enables checking/editing of the parameters set in the software selected using radio buttons. The **Edit Parameter Information** window is displayed.
Up	The selected software will move up one position in the parameter settings order.
Down	The selected software will move down one position in the parameter settings order.
Back	Returns to the **Software Selection** window.
Next	Moves to the **Execution Method** window if parameter information names are selected for all software.
Cancel	Closes the **Parameter Settings** wizard.

2.7.4 Editing Parameter Information

Display the **Edit Parameter Information** window by selecting the parameter information name to configure in the software on the **Parameter Settings** window, and then click **Confirm/edit**.

Edit the parameters to be set.



Operation method

Software information

Item	Description
Product name (version)	Displays the product name and version.

Parameter information

Item	Description
Parameter information name	Displays the parameter information name.
Reference source	Select the parameter information name to be referenced in Custom Setting.
Description	Displays a description of the parameter information name.
Package	Allows you to select the parameter package method using one of the following radio buttons: - **Do not use**: Do not use a package. - **New upload**: Use the **Browse** button to specify the package file to be uploaded. - **Use defined package**: Use the package registered in the parameter information.
Key	Displays the parameter key.
Label	Displays the parameter label.
Type	Displays the parameter type: - string - number - boolean - string array - map
Current value	Displays the parameter value that was discovered.
Value to configure	Displays the value last set using parameter settings.

Operation buttons

Operation button	Description
Browse	Specifies the path of the package file to be uploaded.
Download	Downloads the package file registered in the parameter information.
Edit	Edits the value to be configured in the selected key. Displays the **Edit Values** window.
Cancel editing	Returns the value configured for the key selected using radio buttons to its value prior to the edit.
Set default value	Sets the value configured for the key selected using radio buttons as the default in the parameter settings definition.
OK	Confirms the configured details and closes the **Edit Parameter Information** window.
Cancel	Discards the configured details and closes the **Edit Parameter Information** window.

Information

- Parameters that can be set

  Use the parameter settings definitions associated with your software to define the parameters that can be set in the software. Refer to the section on software products in "Parameter Reference" for information on the parameter settings definitions for software pre-registered with this product. For other software, check its parameter settings definitions.

- Specifying a parameter package

  The parameter settings definitions determine what can be specified for parameter packages. Check the parameter settings definitions for your software.

- Notes regarding files to be included in a parameter package

  In some cases parameter setting fails because the format of a file contained in a parameter package is invalid. Exercise caution when using the following due to their effect on file format:

  - Linefeed

    In Windows, use CR+LF. In Linux, use LF.

  - Byte order mark (BOM)

    Including the UTF-8 byte order mark (BOM) can cause an error.

  - Character encoding

    The default character encoding is different in Windows and Linux.

  - Japanese is prohibited in file names

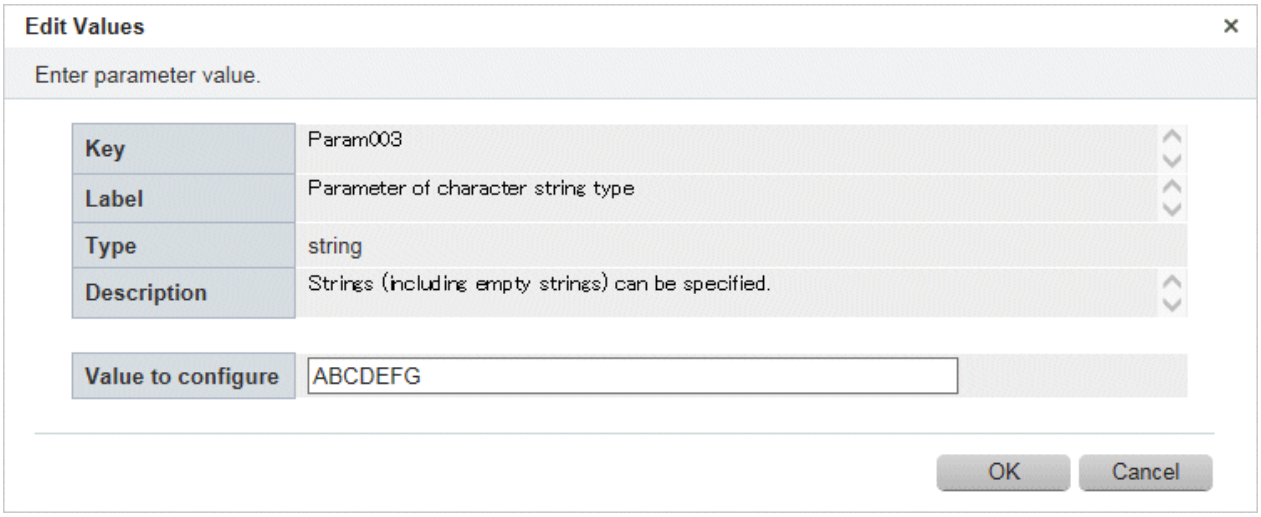
    You cannot use Japanese in file names. Other restrictions conform to operating system conventions.

2.7.5 Editing Values

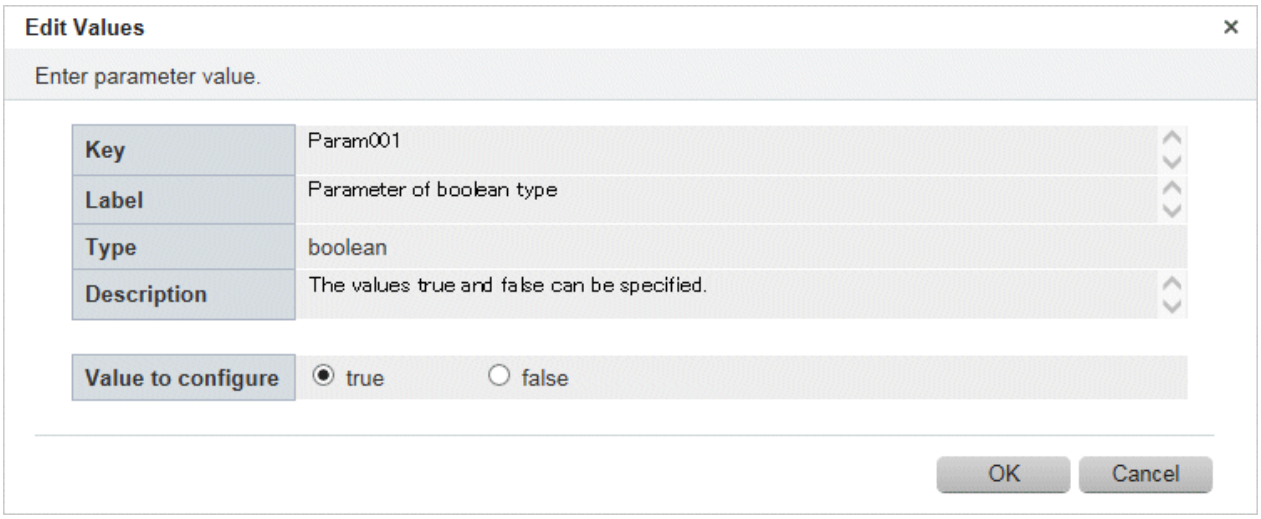
To display the **Edit Values** window, select a parameter key in the **Edit Parameter Information** window, and then click **Edit**.

Edit the parameters to be set.

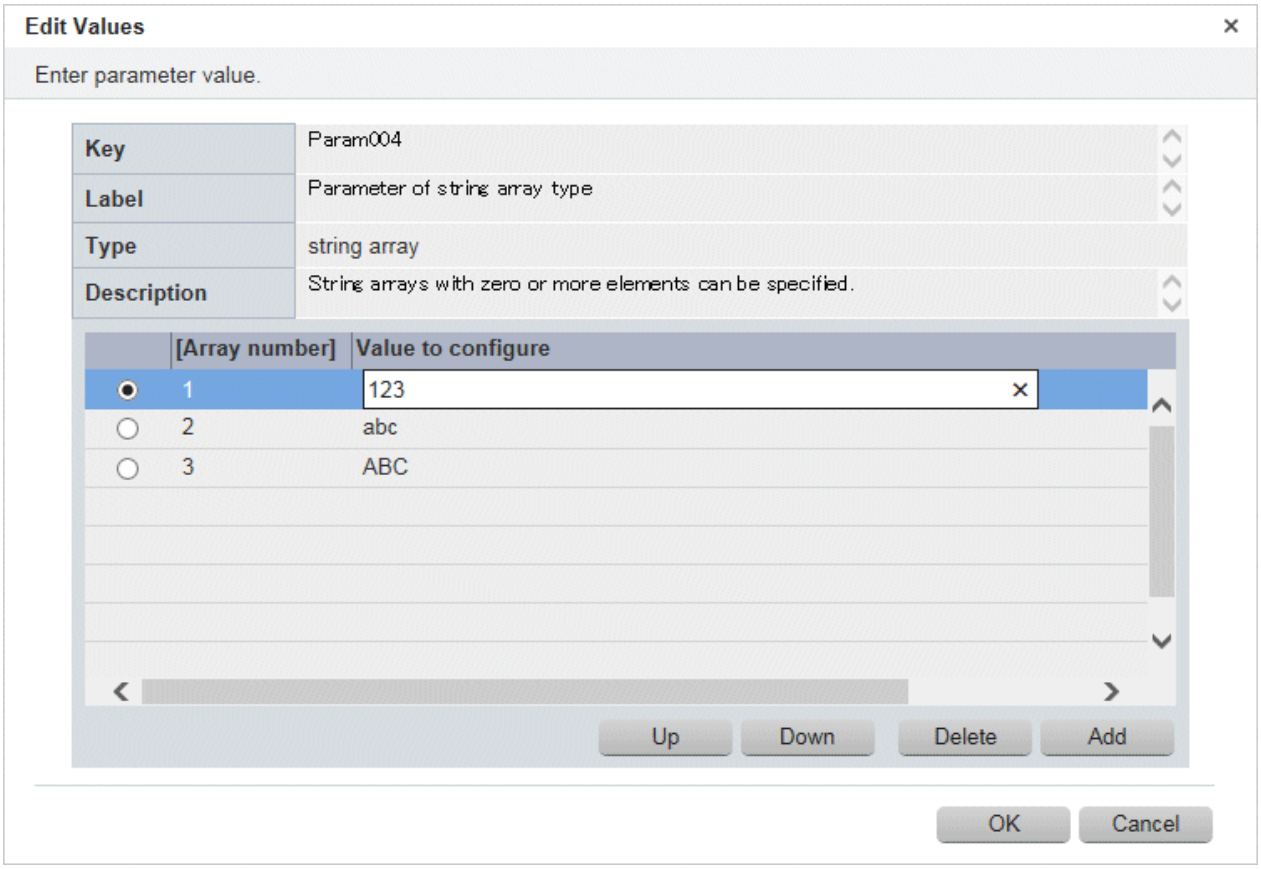
'string' or 'number' parameter key types



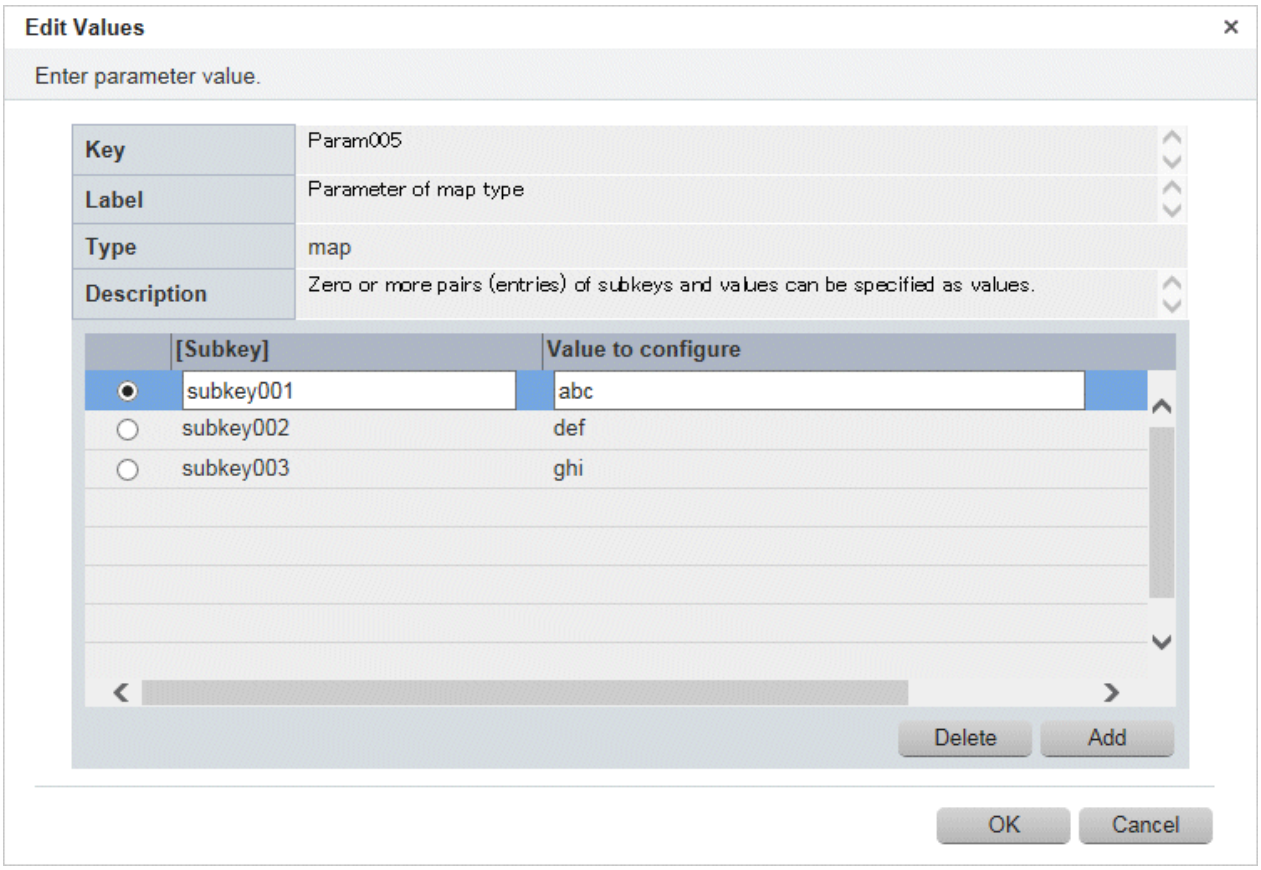
'boolean' parameter key types



'string array' parameter types



'map' parameter types



Operation method

Software information

Item	Description
Key	Displays the parameter key.
Label	Displays the parameter label.
Type	Displays the parameter type.
Description	Displays a description of the parameter.
Value to configure	- 'string' or 'number' types: Enter the parameter value. - 'boolean' types: Use the radio buttons to select "true" or "false". - 'string array' type: Enter the value by using the radio button to select the appropriate array number**.** The **Up** and **Down** buttons may be used to change the array sequence for the values thus entered. Arrays may also be added or deleted. - 'map' type: Select the relevant subkey radio button and enter the value. A subkey can also be edited, added or deleted.

Operation buttons

Operation button	Description
Up	Move the selected array up one position.
Down	Move the selected array down one position.
Add	Adds an array below the last line.
Delete	Deletes the selected array.
OK	Confirms the configured details and closes the **Edit Values** window.
Cancel	Discards the configured details and closes the **Edit Values** window.

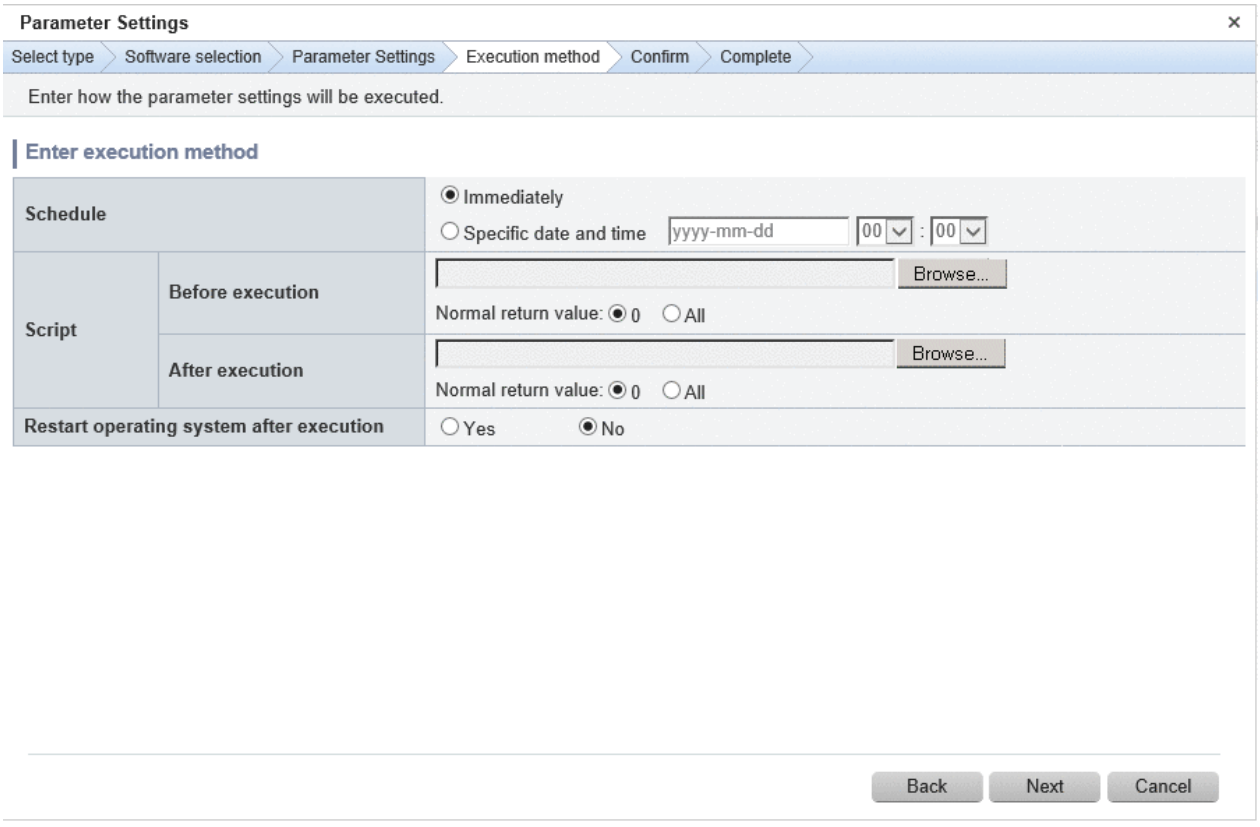
Note

When specifying the variables of the host name for the value

The information of the host name cannot be collected on OpenStack servers. When configuring the parameters for an OpenStack server, an empty string is specified for the variable values of the host name.

2.7.6 Execution Method

Click **Next** in the **Parameter Settings** window to display the **Execution Method** window.



Operation method

Execution method input

Item	Description
Schedule	Specify a schedule.

Item	Description
	- **Immediately**: Select this option to immediately execute processing when the settings in the wizard are complete. - **Specific date and time**: Specify the date and time when the processing is to be executed. Specify a date and time that is later than the current date and time on the admin server.
Script	Specify the scripts to be executed before and after setting the parameters, as well as the return values to determine the operations have completed successfully during script execution. It is recommended to create the scripts registered here so that they output "0" as the return value to indicate normal completion and a value other than "0" as the return value to indicate an error. For the script to be registered, specify the full path to the file that is stored on the local machine where the browser is running. Specify one of the following values for the return value to use to determine that the operation has completed successfully. - 0: The return value "0" is handled as normal termination, whereas values other than "0" are handled as errors. - All: All return values are handled as normal termination. Refer to "Creating Scripts and Specifying Commands" in the *Operation Guide* for information on the scripts that are registered here. If an error occurs, the user can select the process to take when the corresponding script fails (such as "retry", "continue processing", or "cancel processing") from the **Job management** window or by using the job information management command. Refer to "Chapter 5 Job Management" for details on the **Job management** window. Refer to "Job Information Management Command" in the *Reference Guide* for details on the command.
Restart operating system after execution	Select whether to restart the server after parameters have been set. - **Yes**: Restart server. - **No**: Do not restart server.

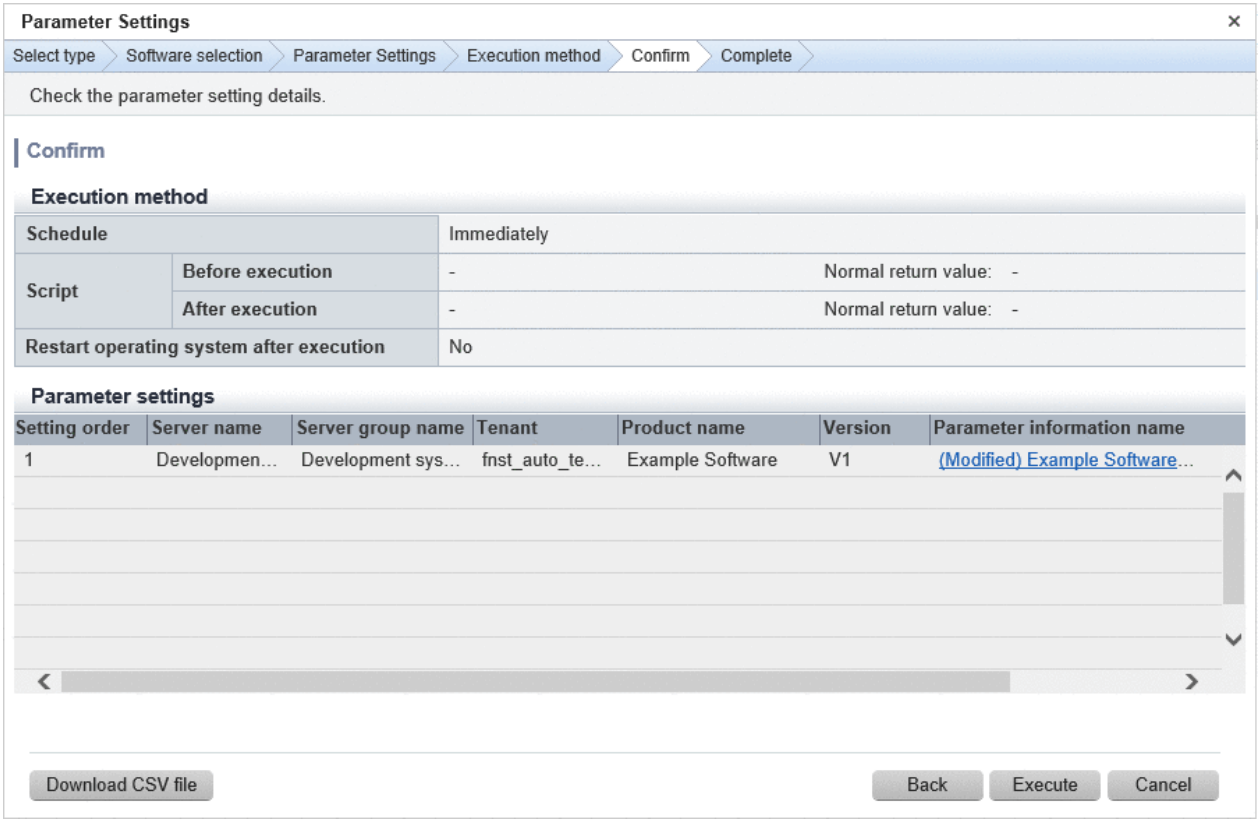
Operation buttons

Operation button	Description
Back	Returns to the **Parameter Settings** window.
Next	Moves to the confirmation window.
Cancel	Closes the **Parameter Settings** wizard.

2.7.7 Confirmation

Click **Next** in the **Execution Method** window to display the **Confirm** window.

Check the settings that have been entered.



Operation method

Parameter settings

Item	Description
Setting order	Displays the order in which parameters will be configured for each server.
Server name	Displays the server name.
Server group name	Displays the server group name.
Tenant	Displays the tenant.
Product name	Displays the software product name.
Version	Displays the software version.
Parameter information name	Displays the parameter information name to be set. Details of the parameters to be configured can be confirmed by displaying the **Check Parameter Information** window from the link.

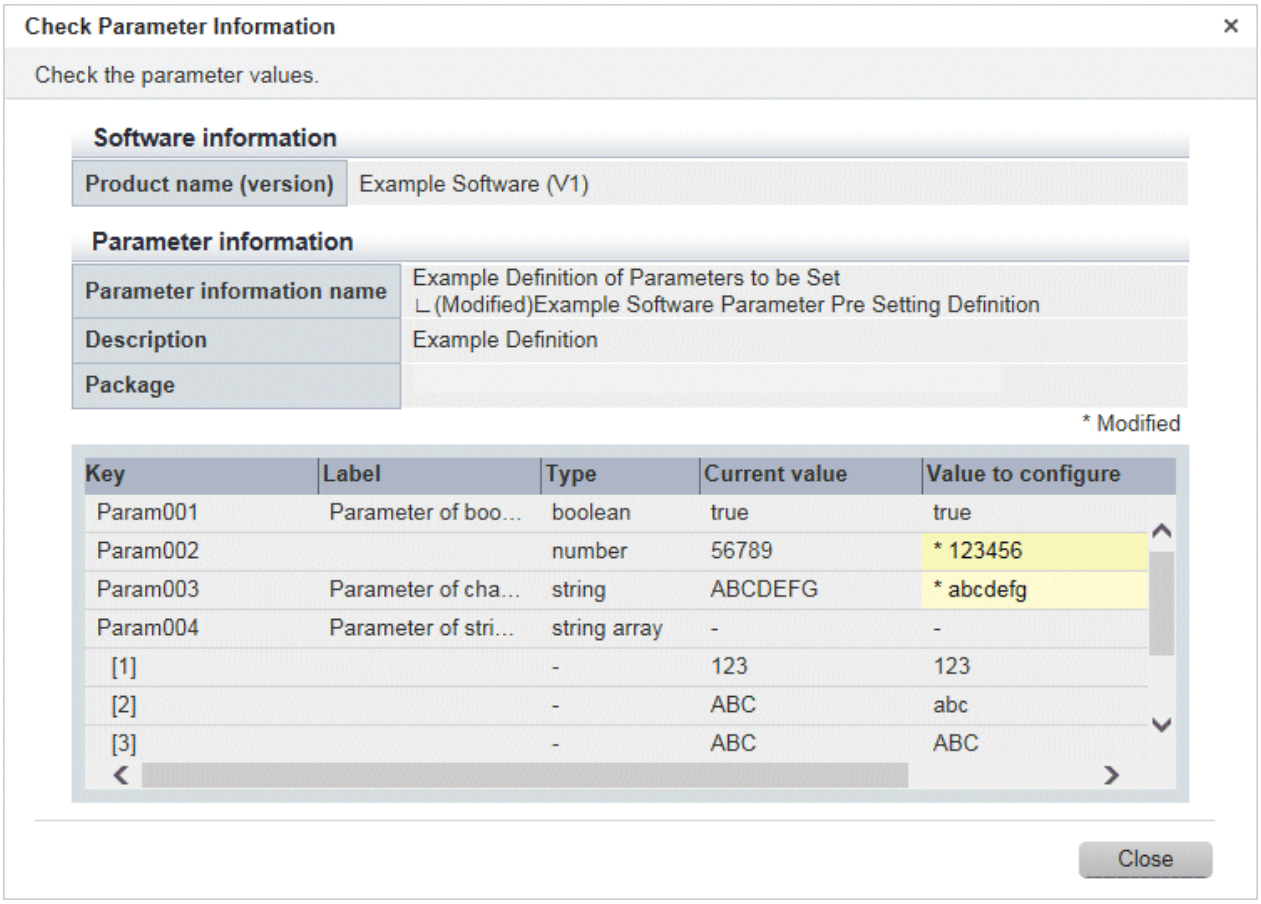
Operation buttons

Operation button	Description
Download CSV file	Outputs information displayed in Parameter settings to a file in CSV format.
Back	Returns to the **Execution Method** window.
Execute	Executes the parameter setting as a job. When multiple servers are selected, one job is executed for each server.
Cancel	Closes the **Parameter Settings** wizard.

2.7.8 Checking Parameter Information

Perform the following operations to display the **Check Parameter Information** window.

- Click a **Parameter information name** link in the list of parameter settings in the **Confirm** window.



Operation method

Software information

Item	Description
Product name (version)	Displays the product name and version.

Parameter information

Item	Description
Parameter information name	Displays the parameter information name.
Description	Displays a description of the parameter information name.
Package	Displays the package name.
Key	Displays the parameter key.
Label	Displays the parameter label.
Type	Displays the parameter type: - string - number - boolean - string array - map
Current value	Displays the parameter value that was discovered.

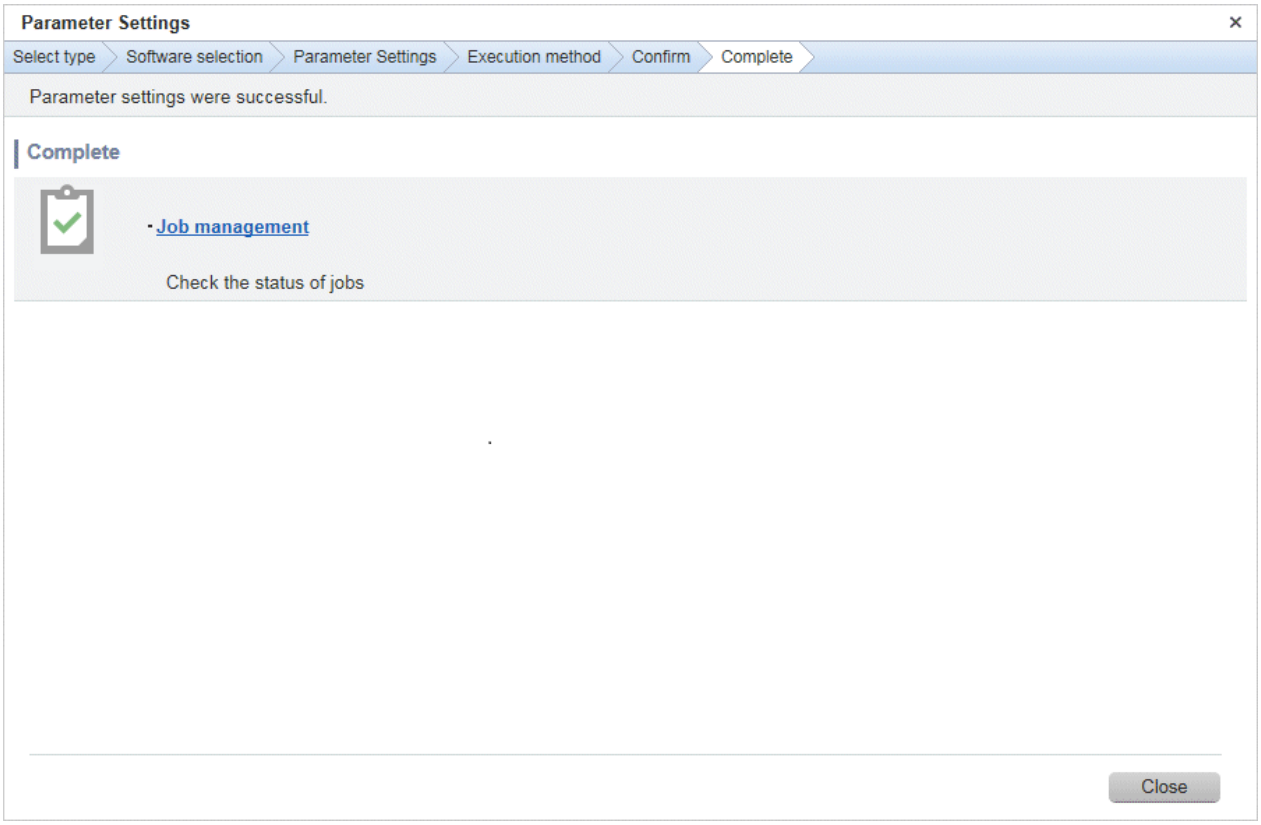
Item	Description
Value to configure	Displays the value last set using parameter settings.

Operation buttons

Operation button	Description
Download	Downloads a package.
Close	Closes the **Check Parameter Information** window.

2.7.9 Complete

Click **Next** in the **Confirm** window to display the **Complete** window.



Operation method

Job management

Item	Description
Job management	Moves to the **Job management** window, where the status of the executed parameters can be checked. The status of the parameter setting that was executed can also be checked by using the job information management command. Refer to "Job Information Management Command" in the *Reference Guide* for details.

Operation button

Operation button	Description
Close	Closes the **Parameter Settings** wizard.

2.8 Script Execution Wizard

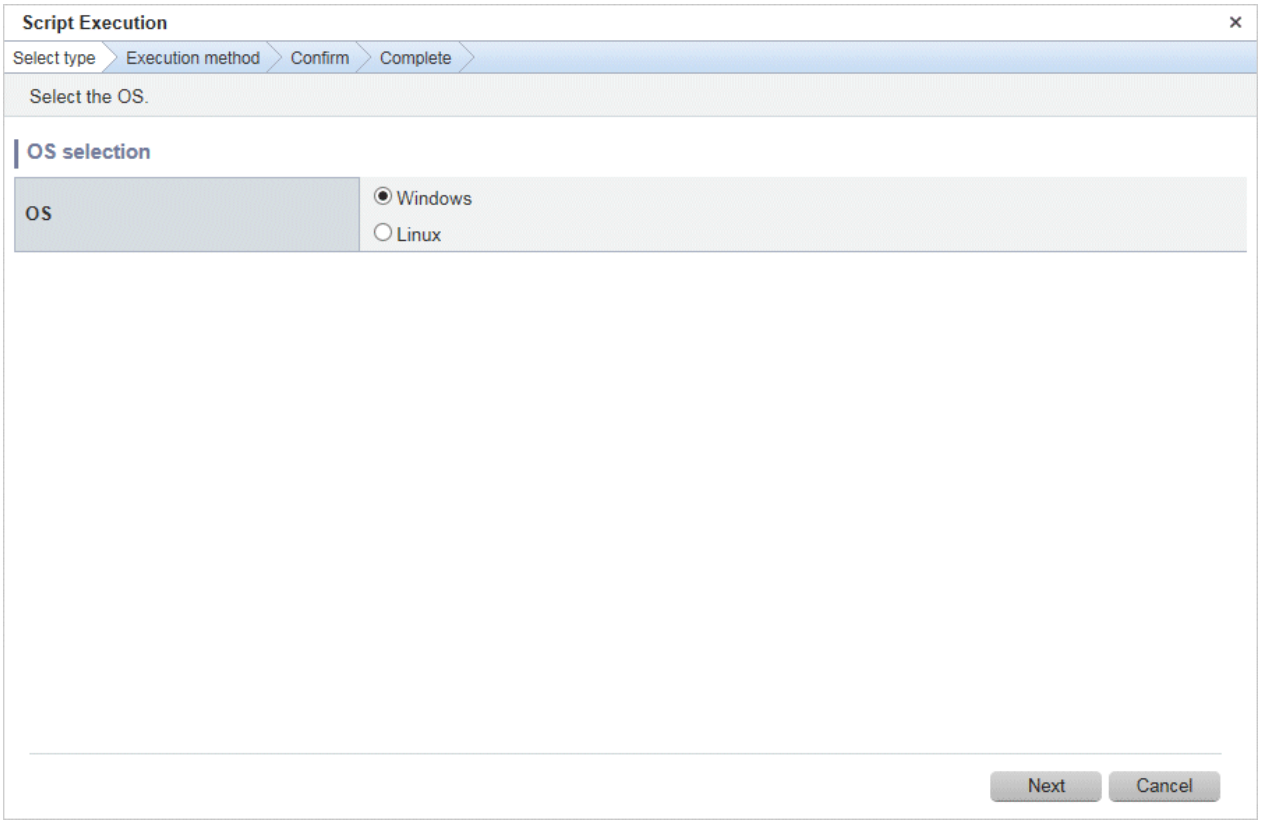
This wizard configures the settings for running scripts on servers.

Display method

1. Click **Script execution** button in the window below:
   - **Servers** window
2. The script execution settings and checks listed below are carried out in wizard format:
   a. Select the OS of the server on which the script will be run
   b. Configure how the scripts will be run
   c. Check the settings
   d. Complete

2.8.1 OS Selection

To display the **Select type** window in the **Script Execution** wizard, use the checkboxes in the **Servers** window to select a server, and then click **Script execution** button.



Operation method

OS Selection

Select the OS of the server on which the scripts will be run.

Item	Description
OS	Select one of the following operating systems for the server on which the scripts are to be executed:

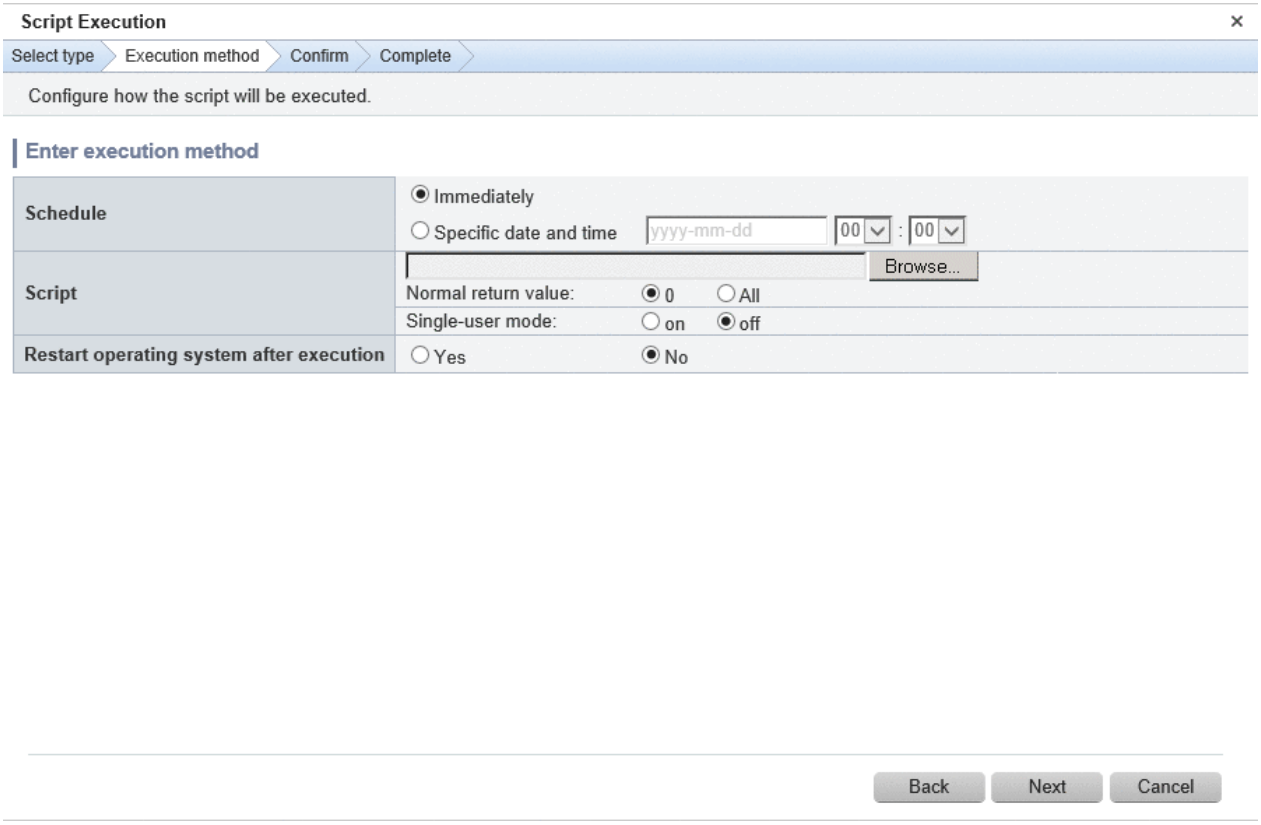
Item	Description
	- Windows - Linux If only Windows servers or Linux servers have been selected, the radio buttons will be grayed out so that they cannot be selected.

Operation buttons

Operation button	Description
Next	Moves to the **Execution Method** window.
Cancel	Closes the **Script Execution** wizard.

2.8.2 Execution Method

Click **Next** in the **Select type** window to display the **Execution Method** window.



Operation method

Execution method input

Item	Description
Schedule	Specify a schedule. - **Immediately**: Select this option to immediately execute processing when the settings in the wizard are complete. - **Specific date and time**: Specify the date and time when the processing is to be executed. Specify a date and time that is later than the current date and time on the admin server.

Item	Description
Script	Specify the script to be executed and the return value to determine the operation has completed successfully during script execution. Also specify whether to execute a post-execution script at single-user execution level. It is recommended to create the scripts registered here so that they output "0" as the return value to indicate normal completion and a value other than "0" as the return value to indicate an error. For the script to be registered, specify the full path to the file that is stored on the local machine where the browser is running. Specify one of the following values for the return value to use to determine that the operation has completed successfully. - 0: The return value "0" is handled as normal termination, whereas values other than "0" are handled as errors. - All: All return values are handled as normal termination. Configure whether to execute the script at single-user execution level by specifying one of the following values: If the execution target is a Windows server, "on" cannot be specified. - on: Switches the execution level to single-user and executes a script. - off: Executes a script without switching the execution level. Refer to "Creating Scripts and Specifying Commands" in the *Operation Guide* for information on the scripts that are registered here. If an error occurs, the user can select the process to take when the corresponding script fails (such as "retry", "continue processing", or "cancel processing") from the **Job management** window or by using the job information management command. Refer to "Chapter 5 Job Management" for details on the **Job management** window. Refer to "Job Information Management Command" in the *Reference Guide* for details on the command.
Restart operating system after execution	Select whether to restart the server after the script has been executed. - **Yes**: Restart server. - **No**: Do not restart server.

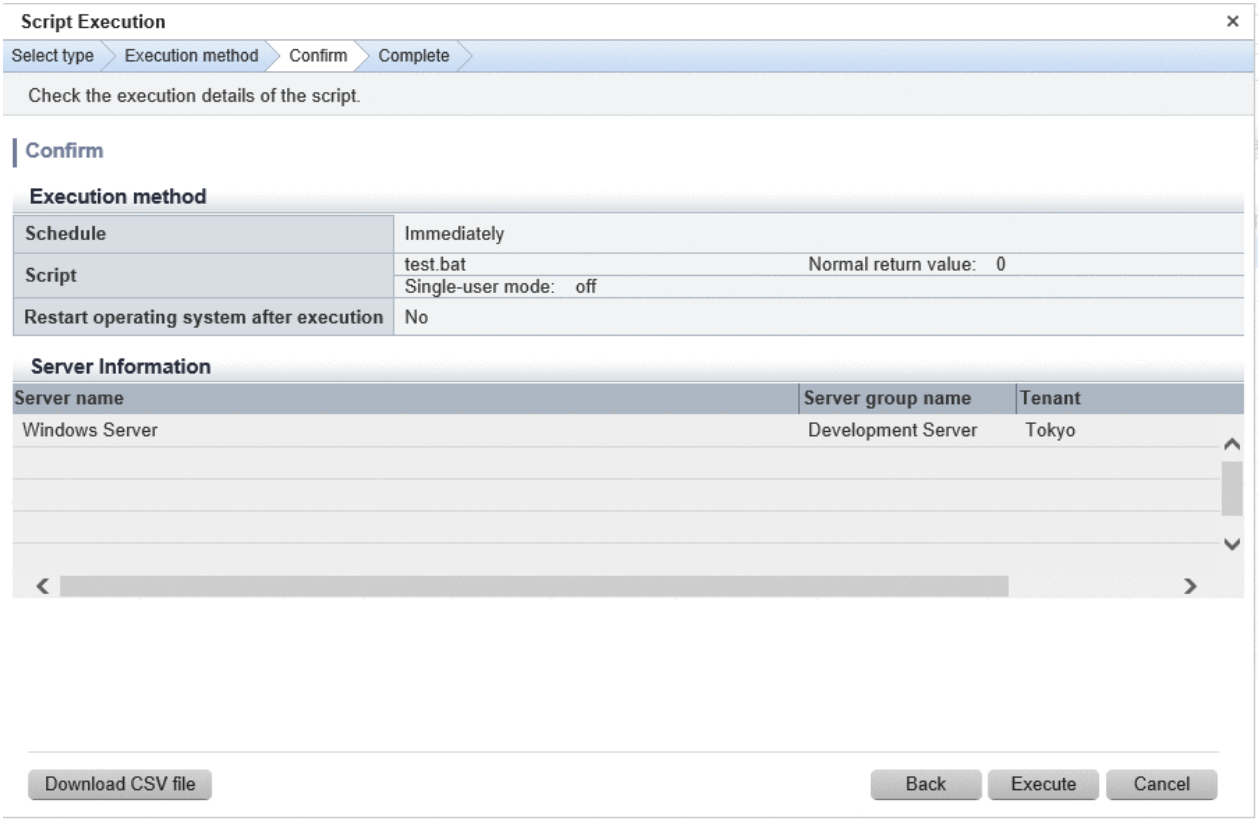
Operation buttons

Operation button	Description
Back	Returns to the **Select type** window.
Next	Moves to the confirmation window.
Cancel	Closes the **Script Execution** wizard.

2.8.3 Confirm

Click **Next** in the **Execution Method** window to display the **Confirm** window.

Check the settings that have been entered.



Operation method

Server information

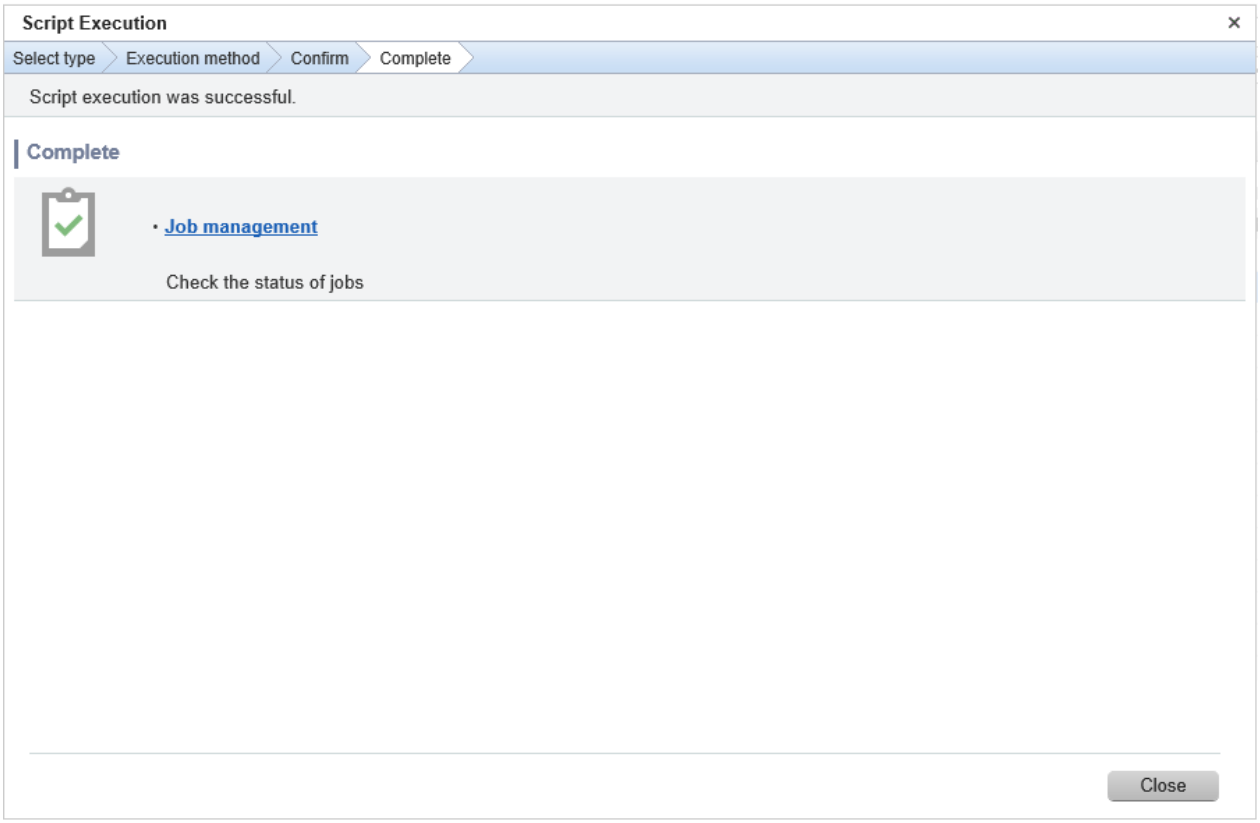
Item	Description
Server name	Displays the server name.
Server group name	Displays the server group name.
Tenant	Displays the tenant.

Operation buttons

Operation button	Description
Download CSV file	Outputs information displayed in **Server information** to a file in CSV format.
Back	Returns to the **Execution Method** window.
Execute	Executes a script.
Cancel	Closes the **Script Execution** wizard.

2.8.4 Complete

Click **Execute** in the **Confirm** window to display the **Complete** window.



Operation method

Job management

Item	Description
Job management	Moves to the **Job management** window, where the status of script execution can be checked. The status of script execution can also be checked by using the job information management command. Refer to "Job Information Management Command" in the *Reference Guide* for details.

Operation button

Operation button	Description
Close	Closes the **Script Execution** wizard.

2.9 Configuration Modification Template Wizard

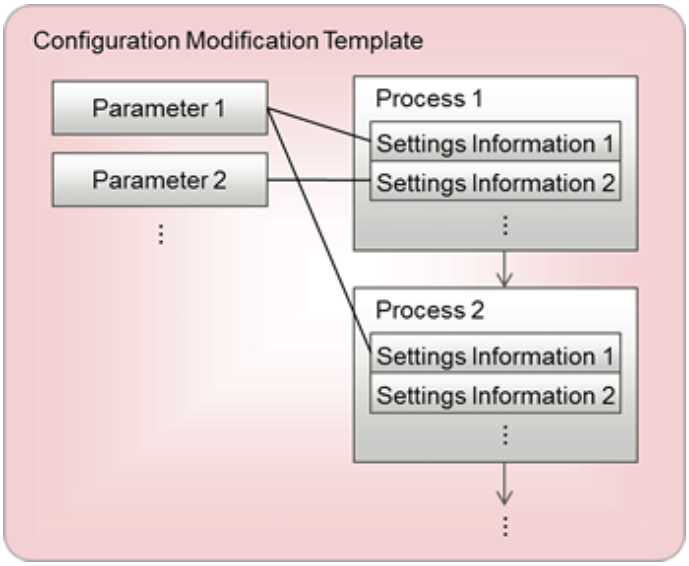
In the **Configuration Modification Template** wizard window, perform creation, reference, and editing of configuration modification templates.

2.9.1 Configuring Configuration Modification Templates

This section explains configuration of configuration modification templates. The information comprising a configuration modification template is as follows.

Information	Description
Process	A process of configuration modification that is executed from the configuration modification template. Multiple processes are executed sequentially.

Information	Description
Setting information	A parameter to define the behavior of a process.
Parameter	Parameters of the configuration modification template. The setting information of the process can be defined as parameters of the template. For the parameter, the values are specified when performing configuration modification using the configuration modification template. A high rate of reuse of templates is possible by defining the setting information that is frequently modified as parameters.



2.9.2 Creating Configuration Modification Templates

This section explains the flow of creating a configuration modification template. Create a configuration modification template based on the information provided by the software vendor described in manuals.

2.9.2.1 Definition of Template Information

Decide the information of a configuration modification template. Specify the following information:

Item	Description
Name	A template name. Specify a character string of up to 85 characters (excluding <, >, &, ", ', |, and ,). Names cannot be omitted.
Scope	The scope of the template. For dual-role administrators and infrastructure administrators, global is configured as the default value. Select the desired scope. For tenant administrators and tenant users, the scorpe is fixed to the tenant belonged to. Scopes cannot be omitted.
Description	A description of a tenant. Specify a character string of up to 256 characters. Descriptions can be omitted.

2.9.2.2 Definition of Process

Define the process to execute. Select the desired process from the following processes, and decide the order for execution. The same type of process can be selected multiple times. After this operation, specify a character string of up to 85 characters (excluding <, >, &, ", ', |, and ,) for the name of selected process. The name of the process type is configured as the default value. Process names cannot be omitted.

Process type	Description
Server operation check	Checks the operational status of the business server. Use this process to check the operational status of a server before installation.
Script execution	Transfers the specified scripts to the business server, and executes them. Use this process for executing the installer.

Process type	Description
	Refer to "Creating Scripts and Specifying Commands" in the *Operation Guide* for information on the scripts that can be executed here.
OS restart	Restarts the OS of the business server. Use this process when restarting an OS after installing software that requires restarting after installation.
Command execution	Executes the commands specified for the business server. Use this process for executing the installer. Refer to "Creating Scripts and Specifying Commands" in the *Operation Guide* for information on the commands that can be executed here.
File distribution	Distributes the files specified for the business server. Use this process for distributing the installer. - When files with the same names exist in the distribution destination, they are overwritten. - When the business server is Linux or Solaris, the access authority of distributed files is 644.
File collection	Collects files from the business server, and stores them in the specified directory of the admin server. For the storage location, specify a directory under the reference directory that is the standard storage location. Use this process when collecting execution results such as installation logs, etc. - When there is no directory for the storage location, one will be automatically created. - When files with the same names exist in the storage location, they are overwritten. - When the admin server is Linux, the access authority for the collected file is 755.

Reference directory for the storage location

The reference directories for the storage location are the following directories of the admin server. For details on how to modify the reference directory for the storage location, refer to "Changing the Reference Directory for the Storage Location" in the *Operation Guide*.

[Windows]

%ProgramData%\Fujitsu\SWCFMGM\storagedir

[Linux]

/var/opt/FJSVcfmgm/storagedir

2.9.2.2.1 Work Directory

A work directory is the directory created for each job on the business server, when configuration modification is executed. There are the following features:

- Script execution, scripts executed when commands are executed, and current directories of the commands
- Can be specified for file distribution, file collection, distribution destination, and collection files
- Automatically deleted when the job is completed

Note

- Note that the work directories are not deleted by command execution or by processing of script execution. If the work directories are deleted, configuration modification may not be executed correctly.
- When a job is completed, the work directory is not deleted in the following cases. In this case, manually delete the following directories after a job is completed. Be careful not to delete a work directory for which a job has not been completed by accident.
  - When the business server is not operating correctly
  - When command execution was performed asynchronously [Linux/Solaris]
  - When command execution was performed asynchronously and a command is being executed when the job is completed [Windows]

  [Windows]

[*Systemwalker Software Configuration Manager installation directory*]\SWCFMGB\var\process\<*Job ID*>_<yyyyMMddHHmmss>

[Linux/Solaris]

/var/opt/FJSVcfmgb/process/<*Job ID*>_<yyyyMMddHHmmss>

2.9.2.3 Definition of Setting Information

Define the setting information of the process. Define the following setting information values according to the process types. For values, specify the fixed value or a parameter.

- For the fixed values, the values that can be specified differ depending on the setting information.
- For parameters, specify the parameter in the following format: For parameter names, alphanumeric characters (up to 256 characters), and ".", "_", and "-" can be used. However, parameter names must start with an alphabetic character. Parameter names cannot be omitted.

{{Parameter name}}

- When specifying the work directory in the setting information, enter the variables. Enter the variables in the following format:

#{Variable name}

The available variable is shown below.

Variable Name	Description
work.directory	Work directory

- In some setting information, both the fixed value and the parameter can be specified at the same time.

Example:

timeout={{param}}

- A single parameter can be specified for multiple pieces of setting information. In this case, the setting information that can be specified differs based on the parameter types used. For details, refer to "Specifiable parameter types for setting information" in "2.9.2.4 Definition of Parameters".

Process type	Setting information	Description	Use with parameters
Server operation check	Target	The target of process execution. - Targets cannot be omitted.	-
	Monitoring time	The monitoring time of servers. - Specify the monitoring time, in minutes, using a number between 0 and 1440. - When 0 is specified, the operational status is checked once. When it has been confirmed that the server is operating, the operation completes normally. - When a value larger than 0 is specified, the operation check can be executed multiple times during the specified monitoring time. The operation completes when the operational status is confirmed. - 0 is configured as the default value. - Monitoring time cannot be omitted.	-

Process type	Setting information	Description	Use with parameters
Script execution	Target	The target of process execution. - Targets cannot be omitted.	-
	Script	A script file for execution. - Up to 155 alphanumeric characters, blank spaces, and the following symbols can be used in the file name. ~, _, -, ., (,) - Refer to "Creating Scripts and Specifying Commands" in the *Operation Guide* for information on the scripts that can be executed here. - Scripts cannot be omitted.	-
	Argument	An argument of the scripts to execute. - Specify 3,800 or less characters, including the file names of the scripts. (*1) - When omitted, the scripts are executed without arguments.	Y
	Normal return value	A return value to determine that the operation has completed successfully. - Specify the return value to use to determine that the operation has completed successfully. Multiple return values can be specified separated by commas ",". - When all return values are used to indicate an operation was completed successfully, specify only an asterisk (*). - When the same return value is specified multiple times, an error occurs. - 0 is configured as the default value. - Normal return values cannot be omitted.	Y
	Single-user mode	Specify whether to execute at single-user execution level. This setting is only valid when the execution target is Linux or Solaris. - When "true" is specified, the execution level is switched to single-user and then the script is executed. After the script is executed, the execution level is switched back to the level that it was before switchover. - When "false" is specified, the script is executed without switching the execution level. - When something other than "true" or "false" is specified, an error will occur. - "false" is specified by default. - In single-user mode, this item cannot be omitted.	
OS restart	Target	The target of process execution. - Targets cannot be omitted.	-
Command execution	Target	The target of process execution. - Targets cannot be omitted.	-
	Command	The file path of the command to execute. When the blank spaces are included in the file path, enclose the file path in double quotes """ based on the OS specifications. When the work directory is also included in the file path, enclose the file path in double quotes """.	Y

Process type	Setting information	Description	Use with parameters
		- Refer to "Creating Scripts and Specifying Commands" in the *Operation Guide* for information on the commands that can be executed here. - Commands cannot be omitted.	
	Argument	An argument for the command to be executed. - Specify using 3,800 or less characters, including commands. (*1) - When omitted, the commands are executed without arguments.	Y
	Normal return value	A return value to determine that the operation has completed successfully. - Specify the return value to use to determine that the operation has completed successfully. Multiple return values can be specified separated by commas ",". - When all return values are used to indicate an operation was completed successfully, specify only an asterisk (*). - When the same return value is specified multiple times, an error occurs. - 0 is configured as the default value. - Normal return values cannot be omitted. - When "true" is specified, the value specified for this item is ignored.	Y
	Single-user mode	Specify whether to execute at single-user execution level. This setting is only valid when the execution target is Linux or Solaris. - When "true" is specified, the execution level is switched to single-user and then the script is executed. After the script is executed, the execution level is switched back to the level that it was before switchover. - When "false" is specified, the command is executed and waits for completion. - When something other than "true" or "false" is specified, an error will occur. - "false" is specified by default. - In single-user mode, this item cannot be omitted.	-
File distribution	Target	The target of process execution. - Targets cannot be omitted.	-
	Distribution file	A file to distribute. - Alphanumeric characters, blank spaces, and the following symbols can be used for the file name. ~, _, -, ., (,) - Distribution files cannot be omitted.	-
	Distribution destination	The directory path of the distribution destination of the file. - Specify the directory path using an absolute path. - Even if blank spaces are included in the directory path, it is not necessary to enclose the directory path in double quotes """. - Environment variables cannot be used. - Alphanumeric characters, blank spaces, double-byte characters, and the following symbols can be used for the directory name.	Y

Process type	Setting information	Description	Use with parameters
		~, _, -, ., (,) - Specify using 254 or less characters, including the file names of the distribution files. (*1) - Directories in the installation directory of this product cannot be specified. - #{work.directory} (work directory) is configured as the default value. - Distribution destinations cannot be omitted.	
File collection	Target	The target of process execution. - Targets cannot be omitted.	-
	Collection file	The file path for file collection. - Specify the file path using an absolute path. - Even if blank spaces are included in the file path, it is not necessary to enclose the file path in double quotes """. - Environment variables cannot be used. - Specify a file path of up to 255 characters. (*1) - Alphanumeric characters, blank spaces, and the following symbols can be used for the file name. ~, _, -, ., (,) - Alphanumeric characters, blank spaces, double-byte characters, and the following symbols can be used for the directory name. ~, _, -, ., (,) - It is only possible to collect one file. Wildcards, such as asterisks "*", cannot be used. - Collection files cannot be omitted.	Y
	Storage location	The directory path for the storage location of collection files. - Specify the directory path using a relative path from the reference directory for the storage location. Directories above the reference directory for the storage location cannot be specified. - Even if blank spaces are included in the directory path, it is not necessary to enclose the directory path in double quotes """. - Environment variables cannot be used. - Specify the file path of the reference directory for the storage location, including the file name of the collection file, using 254 characters or less. - Alphanumeric characters, blank spaces, double-byte characters, and the following symbols can be used for the directory name. ~, _, -, ., (,) - The storage location cannot be omitted.	Y

Y: Both a fixed value and a parameter can be specified at the same time.

N: Either a fixed value or a parameter can be specified.

*1: When the work directory is included in the specified value, the number of characters for the work directory must be 100.

2.9.2.4 Definition of Parameters

Defines the parameter. A description using 256 or less characters can be attached to a parameter. Descriptions can be omitted.

For the parameter, specify the values when executing configuration modification from the configuration modification template. The specifiable values differ based on the parameter types.

Parameter type	Description
Servers	A server. Specify a server among the business servers for the value.
File	A file. Specify a file from among the assets for the value. The file can also be uploaded from the management console. In this case, the file size that can be uploaded is up to 2 MB. A file name using a character string of up to 255 printable ASCII characters can be specified.
Character string	A character string. Specify the desired character string. Empty strings can also be specified.
Numeric value	A numeric value. Specify a numeric value from "-2,147,483,648" to "2,147,483,647".
Truth value	A truth value. Specify "true" or "false" for the truth value.
Password	A password. Specify the desired password using a character string. For the value, "****" is displayed. Empty strings can also be specified.

Specifiable parameter types for setting information

The following table shows the types of parameter that can be specified in the setting information. The parameter types that are not character strings can also be handled as character strings. When a server is handled as a character string, the IP address of the server used as the value is evaluated as a character string. When a file is handled as a character string, the name of the file used as the value is evaluated as a character string.

Process type	Setting information	Specifiable parameter type
Server operation check	Target	Servers
	Monitoring time	Numeric value
Script execution	Target	Servers
	Script	File
	Argument	Character string
	Normal return value	Character string
	Single-user mode	Truth-value
OS restart	Target	Servers
Command execution	Target	Servers
	Commands	Character string
	Argument	Character string
	Normal return value	Character string
	Single-user mode	Truth-value
File distribution	Target	Servers
	Distribution file	File
	Distribution destination	Character string
File collection	Target	Servers
	Collection file	Character string
	Storage location	Character string

2.9.2.5 Advisory Notes when Creating a Configuration Modification Template to Perform Software Installation

This section explains advisory notes about creating a configuration modification template to perform installation. Only software for which silent installation can be performed can be installed for configuration modification. Perform silent installation by executing commands or scripts according to the following advisory notes:

Software requiring restarting during installation

When the server must be restarted during installation, do so by executing commands or scripts after performing silent installation. When installing software that is automatically restarted during installation, use the following installation methods:

Software for which automatic restart during installation can be prevented

Perform silent installation preventing automatic restart by executing commands or scripts, and then restart the server.

Software for which automatic restart during installation cannot be prevented

Perform silent installation by executing commands or scripts. The last process of configuration modification must be command execution or script execution. When executing commands or scripts, perform silent installation asynchronously in order to recover the commands or scripts immediately after silent installation.

When using Windows, the commands can be executed asynchronously using Start-Process of PowerShell. OS standard start commands cannot be used. An example of the command to execute is shown below.

Example:

```
powershell -Command Start-Process -FilePath 'C:\wok\setup.exe'
```

Software for which the executing user must be specified during installation

When software requires installation using a user with Administrator authority or a domain user, perform silent installation after changing the executing user by executing commands or scripts. Based on the OS type of the business server, the executing user can be changed using the following methods:

[Windows]

Use PsTools provided by Microsoft. Distribute PsTools to the business server in advance, and then specify the command and user to use to execute PsTools. An example of the command to execute is shown below. For details on PsTools, refer to the information provided by Microsoft.

Example:

```
C:\tmp\PsExec.exe /accepteula \\localhost -u "cfmg.local\cfmgadmin" -p "systemwalker#1" "C:\work\setup.exe"
```

[Linux/Solaris]

Use the OS standard su command. An example of the command to execute is shown below.

Example:

```
su - cfmgadmin -c /tmp/setup.sh
```

Software for which a window opens during installation

When a window of Windows software is opened when performing silent installation, silent installation cannot be performed using commands or scripts. When executing commands or scripts, perform silent installation asynchronously in order to recover the commands or scripts immediately after silent installation.

When using Windows, the commands can be executed asynchronously using Start-Process of PowerShell. OS standard start commands cannot be used. An example of the command to execute is shown below.

Example:

```
powershell -Command Start-Process -FilePath 'C:\wok\setup.exe'
```

2.9.3 Operation Method

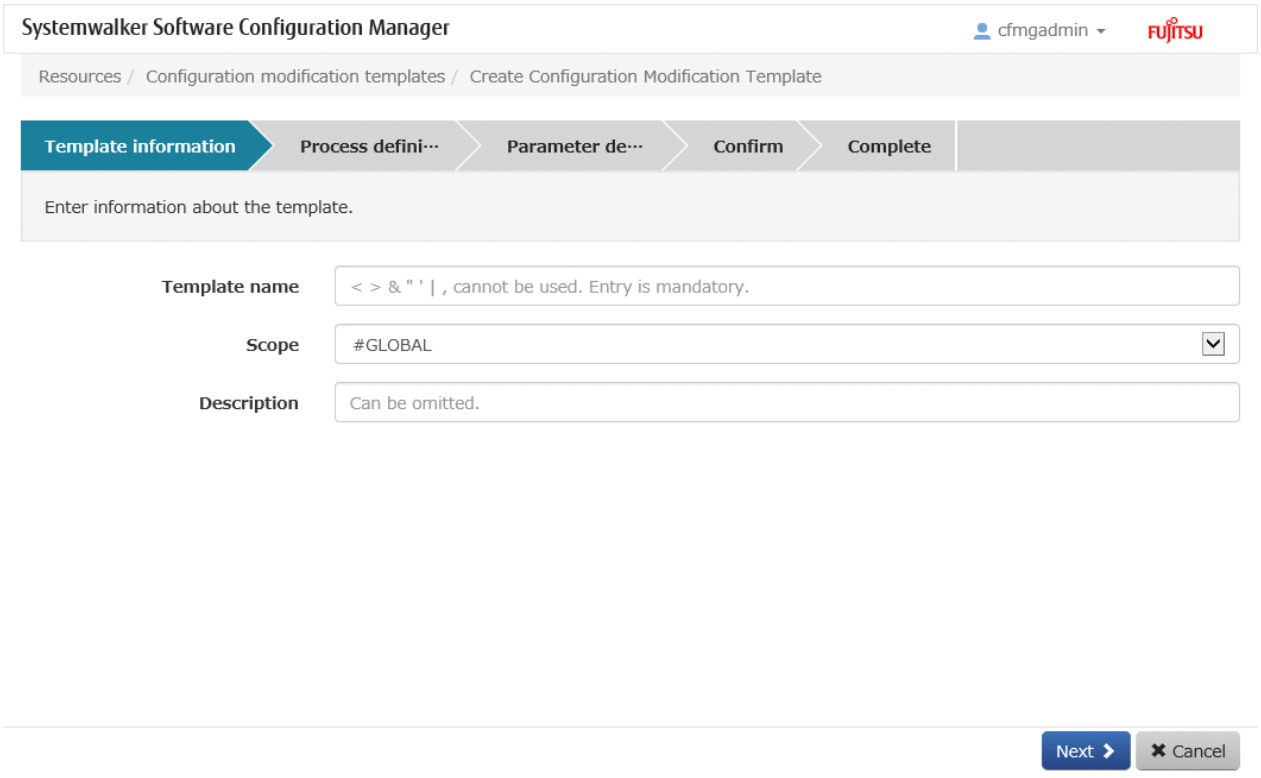
This section explains the operation procedure of the **Configuration Modification Template Wizard** window.

Display method

1. Use the following method to display the software list:
    a. Click the **Create** button in the **Configuration modification template list** window.
    b. Click the **Edit** button in the **Configuration modification template details** window.
    c. Click the **Copy and edit** button in the **Configuration modification template details** window.
2. Perform the following operations in the wizard format:
    a. Entry of template information
    b. Definition of processes
    c. Definition of parameters
    d. Confirmation of template details
    e. Completion

2.9.3.1 Template Information

Enter the template information.



Operation Method

Template Information

Item	Description
Template name	Enter the template name.
Scope	Enter the scope.

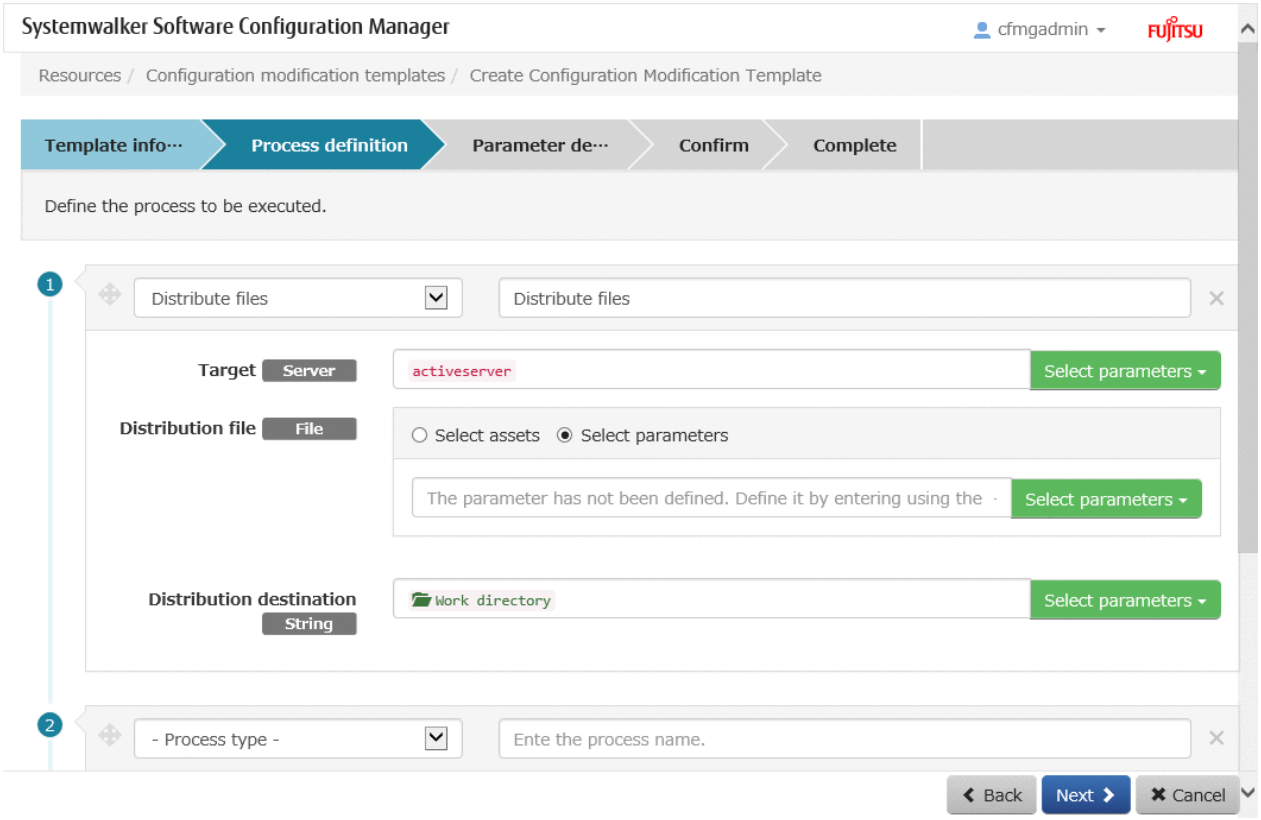
Item	Description
Description	Enter the description.

Operation Buttons

Operation button	Description
Next	Moves to **Process definition**.
Cancel	Closes the **Configuration Modification Template** wizard.

2.9.3.2 Process Definition

When **Next** is clicked in the **Template information** window, the **Process definition** window is displayed.



Operation Method

Define processes and the settings information in the order to be used for execution. Configure the following information for each process. Dragging a process enables to changing of the order of execution.

Item	Description
Process type	Selects the type of the process. When the process type is selected, the values can be specified from the displayed settings information. When performing processing of file collection, note the following points: - Tenant administrators and tenant users cannot create templates that include file collection. - When a tenant administrator or a tenant user acquires files collected when performing file collection, it is necessary to contact the infrastructure administrator and acquire files on the admin server.
Process name	Enters the name of the process.

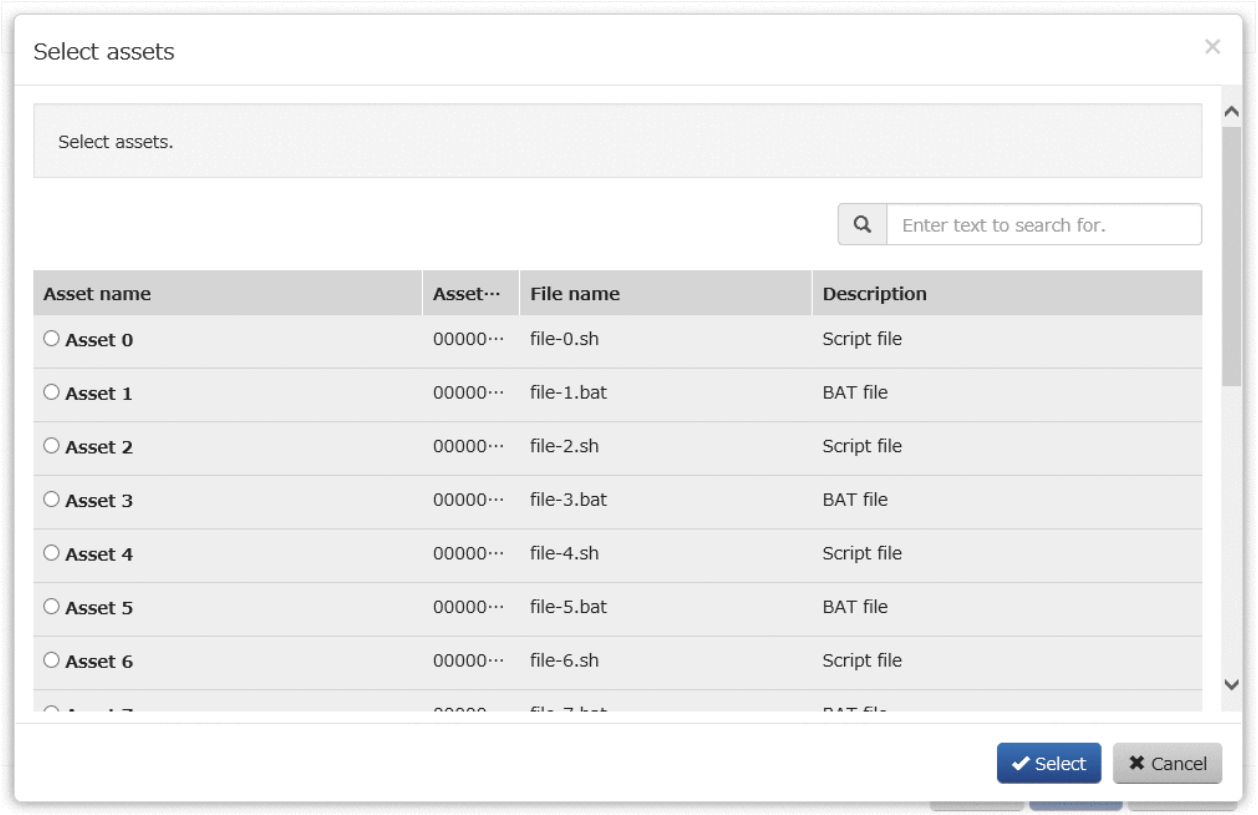
Item	Description
Setting information	Specifies the values of setting information. The specifiable setting information differs depending on the process type. Refer to "2.9.2.3 Definition of Setting Information" for details. Use the following method to specify the values of the setting information: - When specifying a fixed value, enter the value directly. - When specifying a parameter, enter {{parameter_name}}. - Fixed values cannot be specified for the target setting information. Ensure that a parameter is specified. - When using a parameter that is already specified using other settings information, the parameter can be selected from the **Select parameters** button. - When specifying both a fixed value and a parameter at the same time, enter the values directly. In this case, enter {{parameter_name}} for the parameter. - For the setting information of scripts and distribution files, it is necessary to select values from assets using the radio buttons or to specify the parameters. **Select assets**: Select the values from assets. When **Select** is clicked, the **Select assets** window is displayed, and the asset can be selected. Select an asset in the **Select assets** window, and then select the version of the asset. When selecting "**Newest**", the latest version is automatically selected when executing configuration modification. **Select parameters**: Specify the parameter for the value.

Operation Buttons

Operation button	Description
Add	Adds the process.
Select	Displays the **Select assets** window.
Back	Returns to **Template information**.
Next	Moves to **Parameter definition**.
Cancel	Closes the **Configuration Modification Template** wizard.

2.9.3.3 Select assets

Click the **Select** button in the **Process definition** window to display the **Select assets** window. When a tenant administrator or a tenant user uses assets, contact the infrastructure administrator in advance, and request registration of the assets.



Operation Method

Filter search

Clicking the button at the top right of the window enables filtering of the assets to display. Displays the asset name, asset ID, file name, and description including the values entered in the right part of the section.

Display Item

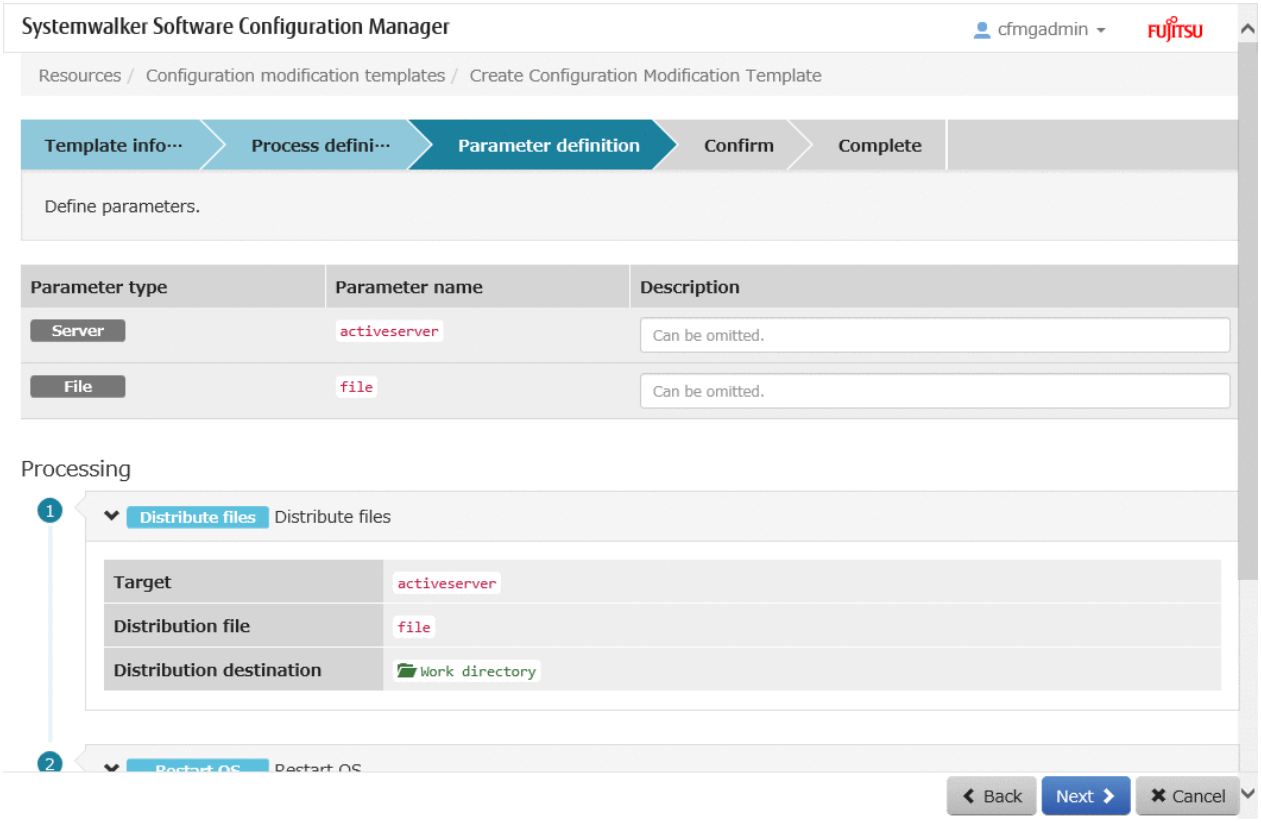
Item	Description
Asset name	Displays the asset name.
Asset ID	Displays the asset ID.
File Name	Displays the name of the file.
Description	Displays a description.

Operation Buttons

Operation button	Description
Select	When selecting an asset using the radio button and clicking the **Select** button to display the **Process definition** window, the asset selected in the setting information is specified.
Cancel	Returns to the **Process definition** window.

2.9.3.4 Definition of Parameters

Click **Next** in the **Process definition** window to display the **Parameter definition** window.



Operation Method

Define the parameters. The parameters specified in the setting information are displayed in the **Process definition** window.

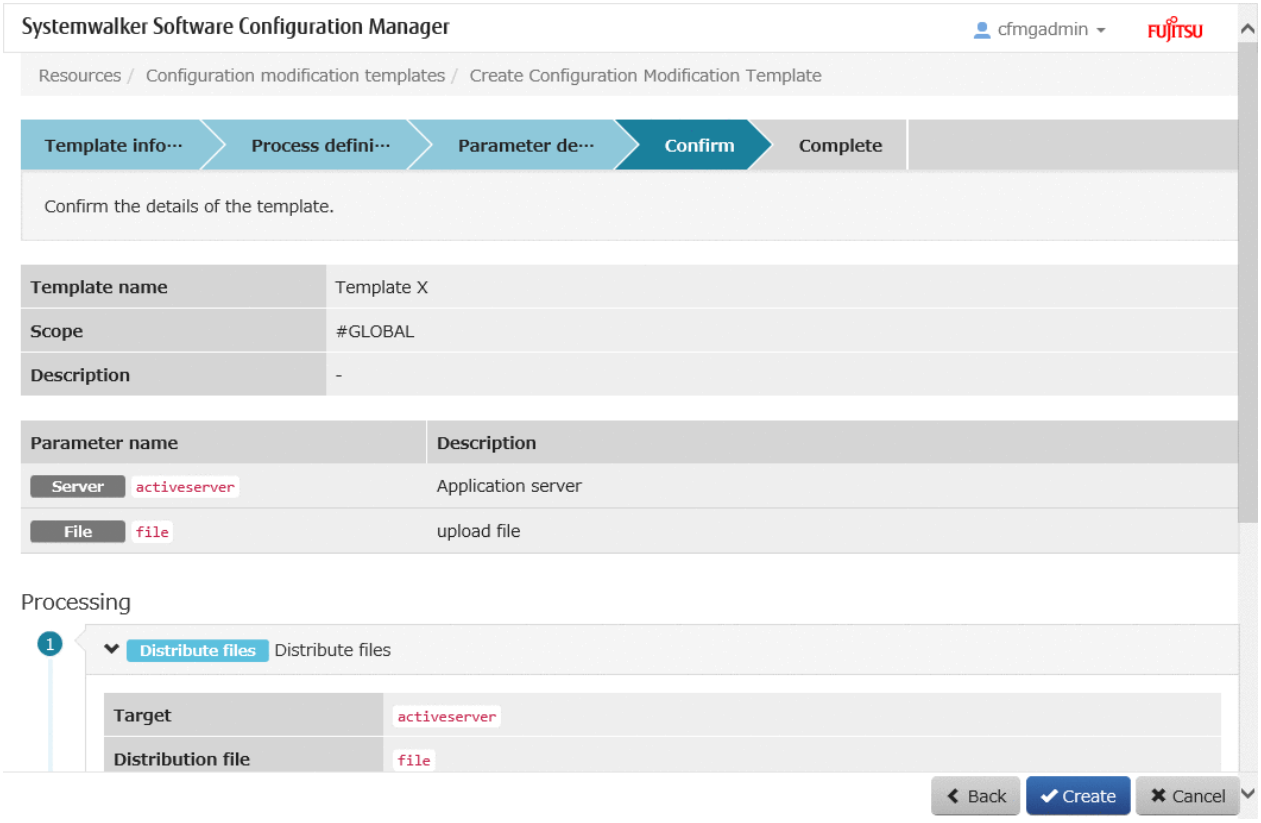
Item	Description
Parameter type	Displays the parameter type. The parameter type may be able to be selected depending on the setting information specified by the parameter. Refer to "2.9.2.4 Definition of Parameters" for details.
Parameter name	Displays the parameter name.
Description	Enter the description.

Operation Buttons

Operation button	Description
Back	Returns to **Process definition**.
Next	Moves to **Confirm**.
Cancel	Closes the **Configuration Modification Template** wizard.

2.9.3.5 Confirm

Click **Next** in the **Parameter definition** window to display the **Confirm** window.



Operation Method

Template Information

Template information is displayed in the top section of the window.

Display item	Description
Template name	Displays the template name.
Template ID	Displays the template ID. The template ID is displayed when started using the **Edit** button.
Scope	Displays the scope.
Description	Displays a description.

Parameter

Parameter information is displayed in the middle section of the window.

Display item	Description
Parameter name	Displays the type and name of the parameter.
Description	Displays a description.

Process

Process information is displayed in the bottom section of the window. The following information is displayed in the order processes are executed.

Display information	Description
Process type	Displays the type of the process.
Process name	Displays the name of the process.

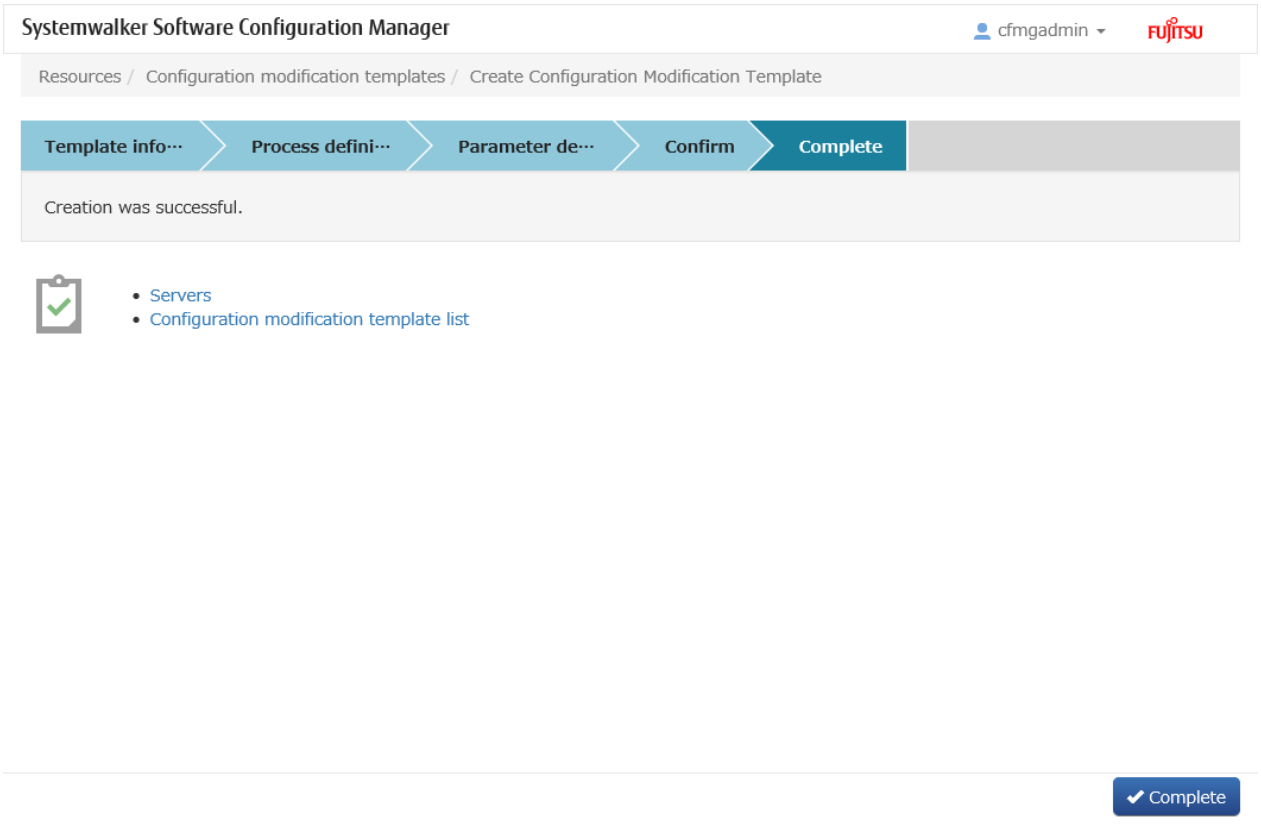
Display information	Description
Setting information	Displays the setting information configured for the process.

Operation Buttons

Operation button	Description
Back	Returns to **Parameter definition**.
Create	Creates the configuration modification template. The created template is available immediately. Templates which have created and saved temporarily in the middle of editing cannot be used. Therefore, make it clear in the template name or description that the template cannot be used, and ensure the template is not used. The template is displayed when starting using the **Create** button or the **Copy and edit** button.
Updates	Edits the details of the configuration modification template. The template ID is displayed when started using the **Edit** button.
Cancel	Closes the **Configuration Modification Template** wizard.

2.9.3.6 Complete

Click the **Next** or **Updates** button in the **Confirm** window to display the **Complete** window.



Operation Method

Display details

Display item	Description
Servers	Moves to the **Servers** window.
List of **Configuration Modification Templates**	Moves to the **Configuration modification template list** window.

Operation Buttons

Operation button	Description
Complete	Closes the **Configuration Modification Template** wizard.

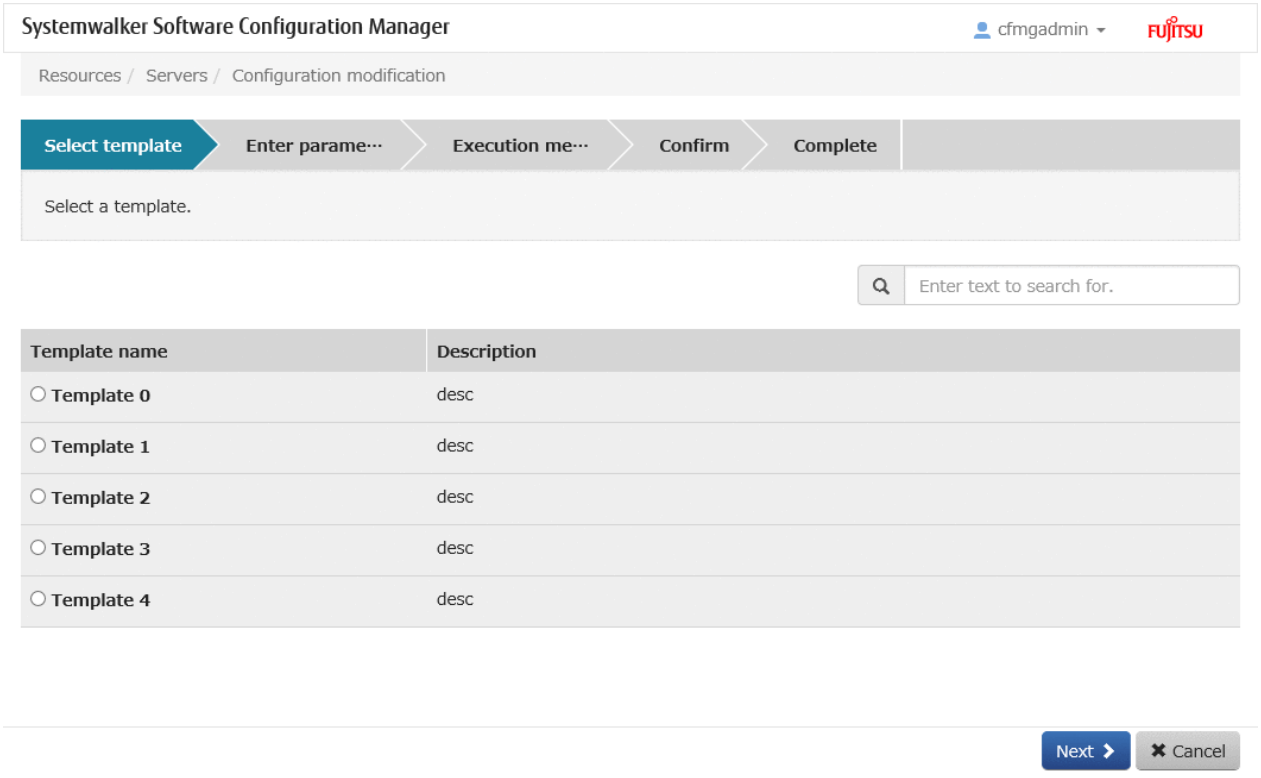
2.10 Configuration Modification Wizard

The wizard executes configuration modification.

Display method

1. Use the checkboxes in the **Servers** window to select servers, and then click **Configuration Modification** button.
2. Perform the following operations in the wizard format:
    a. Selection of templates
    b. Entry of parameters
    c. Entry of execution methods
    d. Confirmation of execution details
    e. Complete

2.10.1 Select template



Operation Method

Select the configuration modification template to execute.

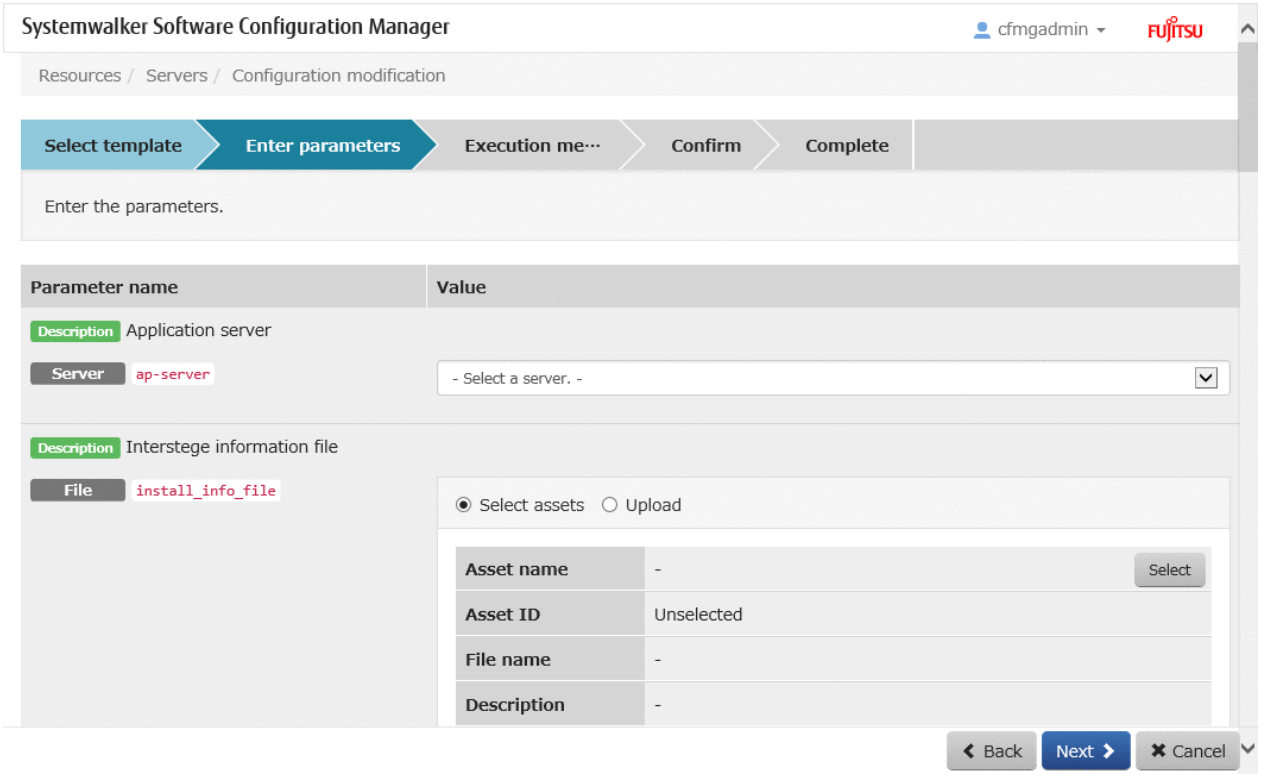
Display item	Description
Template name	Displays the template name.
Description	Displays a description.

Operation Buttons

Operation button	Description
Next	Moves to **Enter parameters**.
Cancel	Closes the **Configuration modification** wizard.

2.10.2 Enter parameters

When **Next** is clicked in the **Select template** window, the **Enter parameters** window is displayed.



Operation Method

Parameter

Parameter information is displayed in the top section of the window.

Display item	Description
Parameter type	Displays the parameter type.
Parameter name	Displays the parameter name.
Description	Displays the description.
Value (Server)	Select the server. Select a server from the servers selected using checkboxes in the **Servers** window.
Value (Number)	Enter a numeric value.
Value (Character string)	Enter a character string.
Value (File)	Specify the file. Select whether to select the file from the assets using the radio buttons, or if uploading the file from the browser. - **Select assets**: Select the file from the assets. When the **Select assets** button is clicked in the **Select assets** window, the asset can be selected. Select an asset in the **Select assets** window,

Display item	Description
	and then select the version of the asset. When selecting "**Newest**", the latest version is automatically selected when executing configuration modification. - **Upload**: Upload the file from the browser. After clicking the **Browse** button, specify the full path of the file that is stored on the local machine where the browser is running.
Value (Truth-value)	Select true or false.
Value (Password)	Enter the password.

Process

Process information is displayed in the bottom section of the window. The following information is displayed in the order processes are executed.

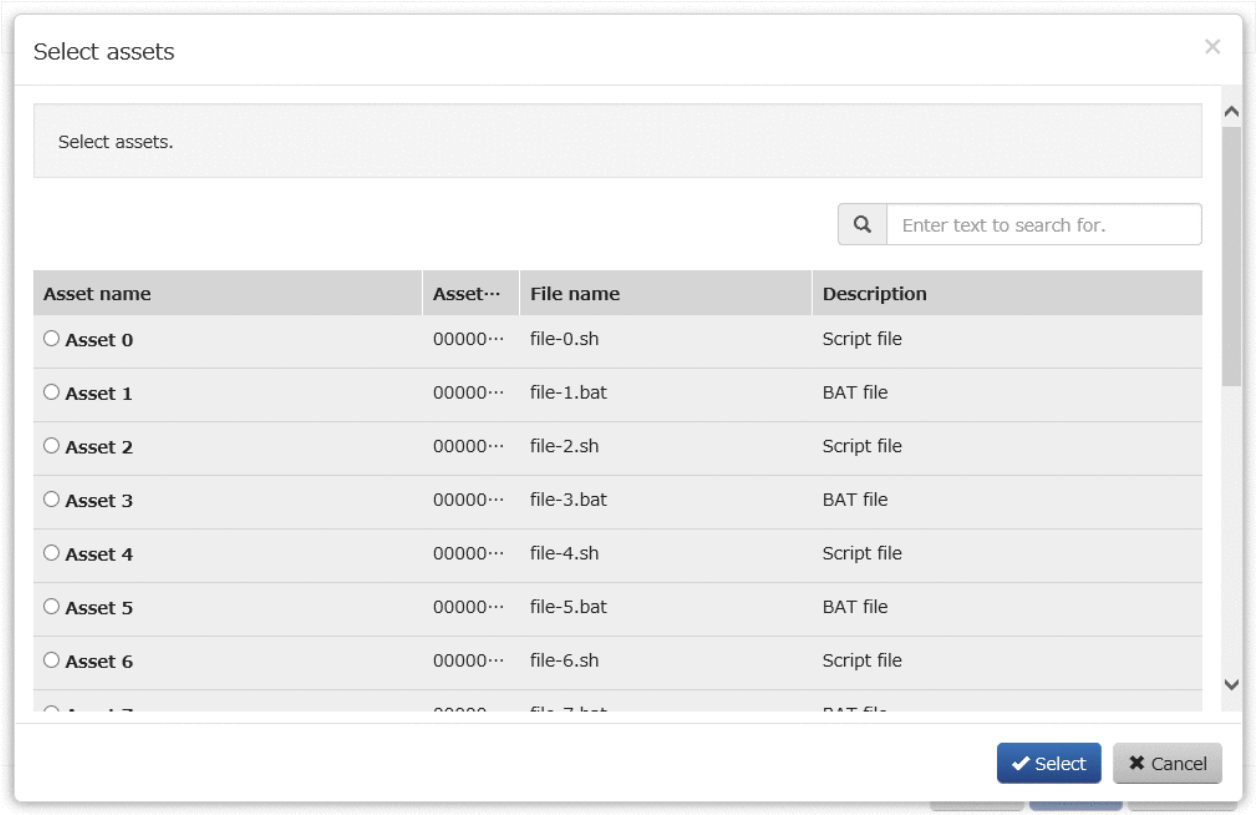
Display information	Description
Process type	Displays the type of the process.
Process name	Displays the name of the process.
Setting information	Displays the setting information configured for the process.

Operation Buttons

Operation button	Description
Select	Displays the **Select assets** window.
Back	Returns to **Select template**.
Next	Moves to **Execution method**.
Cancel	Closes the **Configuration modification** wizard.

2.10.3 Select assets

Click **Select** in the **Enter parameters** window to display the **Select assets** window. When a tenant administrator or a tenant user uses assets, contact the infrastructure administrator in advance, and request registration of the assets.



Operation Method

Filter search

Clicking the button at the top right of the window enables filtering of the assets to display. Displays the asset name, asset ID, file name, and description including the values entered in the right part of the section.

Display Item

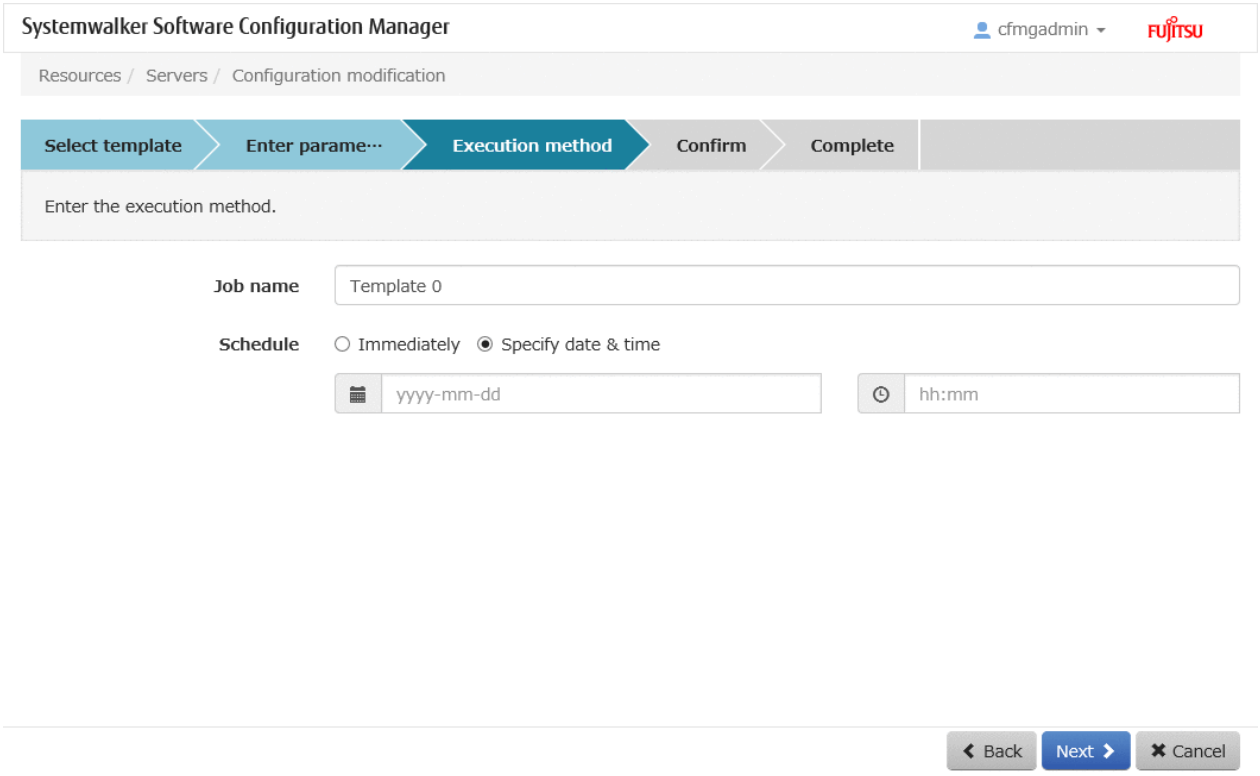
Item	Description
Asset name	Displays the asset name.
Asset ID	Displays the asset ID.
File Name	Displays the name of the file.
Description	Displays a description.

Operation Buttons

Operation button	Description
Select	When selecting the asset using the radio buttons and clicking the **Select** button, the **Enter parameters** window is displayed and the selected asset can be specified for the value.
Cancel	Returns to the **Enter parameters** window.

2.10.4 Execution Method

Click **Next** in the **Enter parameters** window to display the **Execution Method** window.



Operation Method

Execution method input

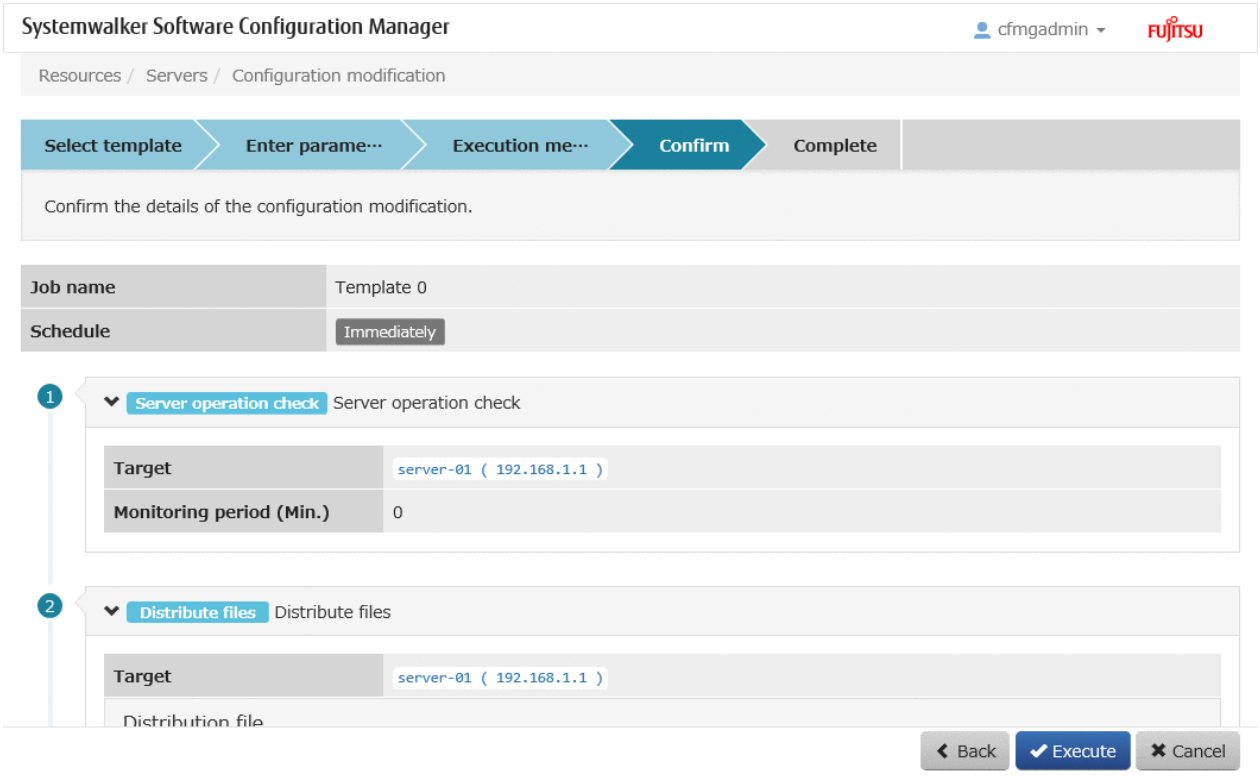
Item	Description
Job name	Enter the name of the job.
Schedule	Specify a schedule. - **Immediately**: Select this option to perform the processing as soon as settings in the wizard are complete. - **Specific date and time**: Specify the date and time when processing is to be executed. Specify a date and time that is later than the current date and time on the admin server.

Operation Buttons

Operation button	Description
Back	Returns to **Enter parameters**.
Next	Moves to **Confirm**.
Cancel	Closes the **Configuration modification** wizard.

2.10.5 Confirm

Click **Next** in the **Execution Method** window to display the **Confirm** window.



Operation Method

Execution Method

This section displays the settings specified in the **Execution Method** window.

Process details

Process details are displayed in the bottom section of the window. The following information is displayed in the order processes are executed.

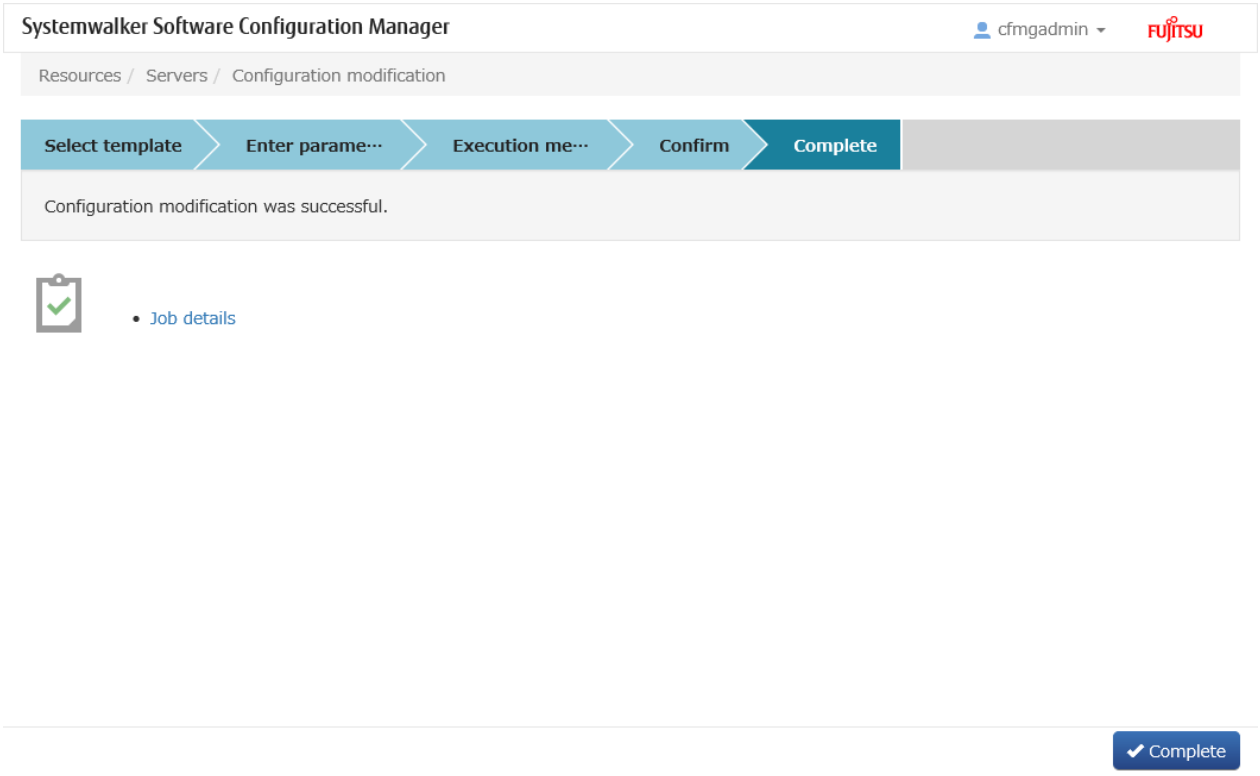
Display information	Description
Process type	Displays the type of the process.
Process name	Displays the name of the process.
Setting information	Settings information about the process is displayed.

Operation Buttons

Operation button	Description
Back	Returns to **Execution Method**.
Execute	Executes configuration modification.
Cancel	Closes the **Configuration modification** wizard.

2.10.6 Complete

Click **Execute** in the **Confirm** window to display the **Complete** window.



Operation method

Display details

Display item	Description
Job details	Moves to the **Job management** window, where the status of the executed configuration modification can be checked. The status of configuration modification can also be checked using the job information management command. Refer to "Job Information Management Command" in the *Reference Guide* for details.

Operation Buttons

Operation button	Description
Complete	Closes the **Configuration modification** wizard.

Chapter 3 Patches

The **Patches** window contains the following tabs:

- **Summary view**

  This tab displays the number of servers with unapplied patches, and the number of new patches for each operating system and patch type.

- **Windows patches**

  This tab displays a list of Windows patches. It can be used to reference detailed information about each individual patch, as well as the application status of each patch. It is also possible to display information that has been filtered by specifying particular conditions.

- **Linux patches**

  This tab displays a list of Linux patches. It can be used to reference detailed information about each individual patch, as well as the application status of each patch. It is also possible to display information that has been filtered by specifying particular conditions.

- **Software patches**

  This tab displays a list of software patches. It can be used to reference detailed information about each individual patch, as well as the application status of each patch. It is also possible to display information that has been filtered by specifying particular conditions.

- **Patch Application wizard**

  This wizard allows the user to apply patches by first selecting the required patches. Users can then select the target servers, and specify the application method.

Information

About Solaris patches

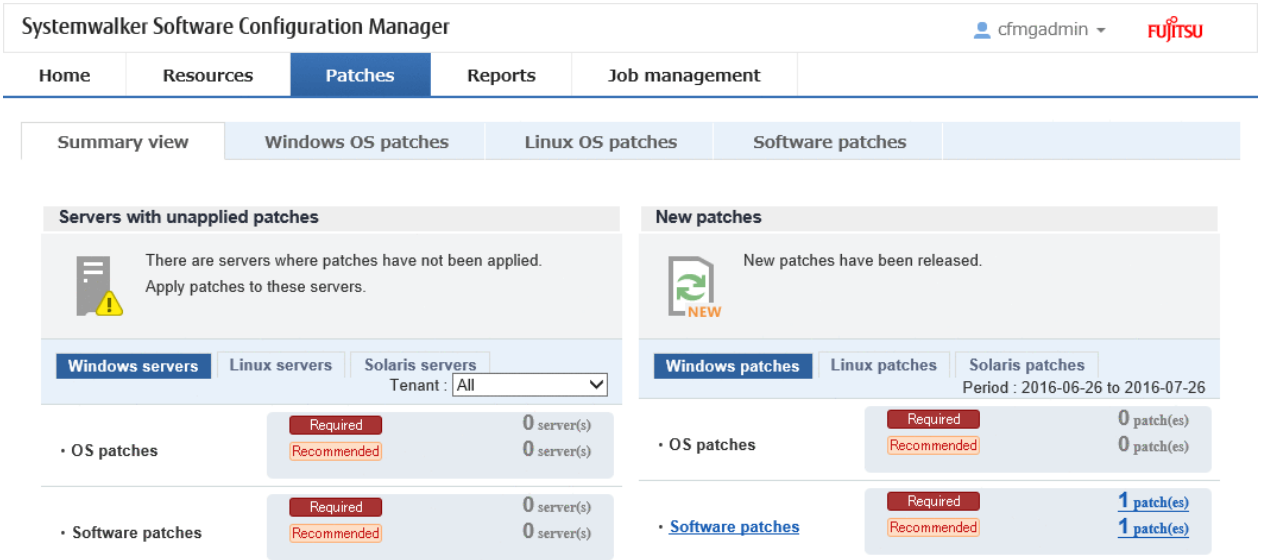
Solaris patch information is not displayed on the **Patches** window.

To confirm the OS patches (SRU information) already applied on a Solaris server, select the Solaris server on the **Resources** >> **Servers** window and then check the patches on the **Server Details** window.

3.1 Summary View

Display method

1. Log in to the management console.
2. Use either of the following methods to display the **Summary** window:
   a. Select **Patches** from the menu in the management console.
   b. Click the **Patches** link in the **Home** window.



Operation method

Total number of servers with unapplied patches

The number of servers indicates the number of servers with unapplied patches.

- **OS patches** and **Software patches** in the **Windows servers** tab
  - Number of servers where required patches have not been applied
  - Number of servers where recommended patches have not been applied
- **OS patches** in the **Linux servers** tab
  - Number of servers with unapplied patches

For Windows patches and software patches, the number of servers with unapplied patches is counted separately for "Required" patches and "Recommended" patches.

For Linux patches, the number of servers with unapplied patches is counted.

If an infrastructure administrator logs in, the total number of applicable servers collected from all managed servers will be displayed. If a tenant administrator or tenant user logs in, the results will be filtered so that only the number of applicable servers collected from the tenancies or servers managed by the tenant administrator or tenant user will be displayed.

If an infrastructure administrator logs in, the results displayed can also be filtered by tenants.

The **List of Servers with Unapplied Patches** window is displayed when the **OS patches** or **Software patches** link or the link for each number (of servers with unapplied patches) is clicked.

Note

Patches with prerequisite patches

For Windows patches, if a patch has a prerequisite patch and neither the patch nor the prerequisite patch have been applied to a business server, the business server may not be counted as a server with unapplied patches, even though it has the same environment (the same operating system) as other business servers.

This is because when the patch is released by WSUS it is managed as an "applicable" patch but when a "check for update programs" operation is performed on the business server the patch will be managed as "not applicable" if the prerequisite patch has not been applied.

Systemwalker Software Configuration Manager does not handle "not applicable" patches as unapplied patches when counting the number of servers with unapplied patches.

Note

Conditions under which servers are counted as servers with unapplied patches

The conditions under which servers are counted as servers with unapplied patches differ with Windows patches, Linux patches, and software patches. These conditions are explained separately below:

- Number of servers with unapplied Windows patches

  The number of servers with unapplied Windows patches is the number of servers where the patches authorized by WSUS have not been applied.

- Number of servers with unapplied Linux patches

  The number of servers with unapplied Linux patches is the number of servers where the patches registered with the yum repository server and have been defined as the management target have not been applied.

- Number of unapplied software patches

  The number of unapplied software patches is the number of patches which were registered using swcfmg_fjmwpatch_update (Fujitsu middleware patch registration command) or swcfmg_patch_def (patch information management command), but which have not been applied. Patches for software other than Fujitsu middleware with no value set for "importance" are not counted in the number of unapplied patches.

Number of new patches

- **OS patches** in the **Windows patches** tab
  - Number of new required patches
  - Number of new recommended patches

  The patches that have been newly released by the operating system vendor during the **Period** displayed are output as the number of new patches. The **Period** is the last one month, counting backwards from the day when the user logged in.

- **Software patches**
  - Number of new required patches
  - Number of new recommended patches

  The patches that have been registered with Systemwalker Software Configuration Manager during the **Period** displayed are output as the number of new patches. The **Period** is the last one month, counting backwards from the day when the user logged in.

- **OS patches** in the **Linux patches** tab
  - Number of new patches

  The RPM packages that have been defined as the management target for Systemwalker Software Configuration Manager and registered with yum during the **Period** displayed are output as the number of new patches. The **Period** is the last one month, counting backwards from the day when the user logged in.

The **List of New Patches** window is displayed when the **OS patches**, **Software patches**, or the link for each number of new patches is clicked.

Note

Conditions under which patches are counted as new patches

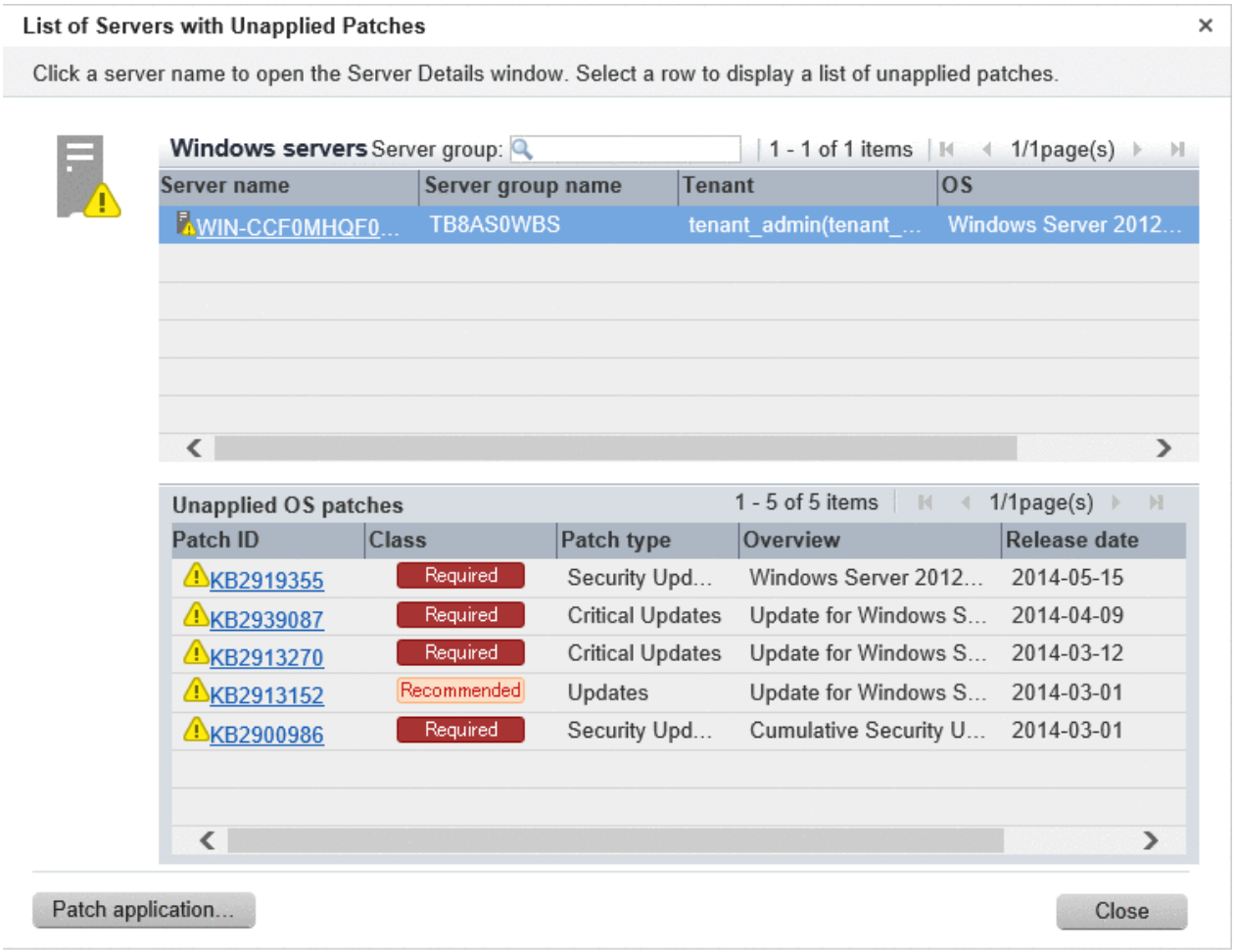
Patches for software other than Fujitsu middleware with no value sets for "importance" or "release date" are not counted as new patches.

3.1.1 List of Servers with Unapplied Patches

Display method

1. Click on the links in the **Servers with unapplied patches** section in the **Summary view** window for **Patches**.

   The **List of Servers with Unapplied Patches** window will be displayed.



Operation method

Server list

A list of the servers with unapplied patches is displayed in the top section of the window.

Item	Description
Server name	Displays the server names. Clicking a server name link displays the **Server Details** window.
Server group name	Displays the server group name.
Tenant	Displays the tenant.
OS	Displays the operating system names.

List of unapplied patches

When a server is selected from the list of servers in the top section of the window, a list of the patches that have not been applied to that server is displayed in the bottom section.

Table 3.1 Windows patches

Item	Description
Patch name	Displays the patch names. Clicking a patch name link displays the **Patch Details** window.
Class	Displays the classification levels of the patches. - **Required**: Patches that are specified as "Required" in the patch management policy settings - **Recommended**: Patches that are specified as "Recommended" in the patch management policy settings
Patch type	Displays the patch types. (This indicates the classification of updates, which represents the WSUS update program type.) - **Security Updates** - **Critical Updates** - **Feature Packs** - **Service Packs** - **Tools** - **Drivers** - **Updates** - **Update Rollups** - **Definition Updates**
Overview	Displays an overview (or title) of each patch.
Release date	Displays the date when the vendor (Microsoft) released the patch.

Table 3.2 Linux patches

Item	Description
Package name	Displays the names of the RPM packages. Clicking a package name link displays the **Patch Details** window.
Version	Displays the versions of the packages.
Release	Displays the release numbers of the packages.
Architecture	Displays the architecture for each package.
Overview	Displays an overview of each package. Displays in English.
Release date	Displays the date when the package information was registered with Systemwalker Software Configuration Manager.

Table 3.3 Software patches

Item	Description
Patch name	Displays the patch names.
Class	Displays the classification levels of the patches. - **Required**: Patches that are specified as "Required" in the operation policy settings

Item	Description
	- **Recommended**: Patches that are specified as "Recommended" in the operation policy settings
Importance	Displays the importance of each patch. - **Security** - **Important** - **Recommended**
Update type	For Fujitsu middleware, the update type of the patch is displayed. - **Urgent**
Product name	Displays the product names.
OS	Displays the operating systems (platforms).
Release date	Displays the date when the patch information was registered with Systemwalker Software Configuration Manager.

Operation buttons

The following operations can be performed from the **List of Servers with Unapplied Patches** window.

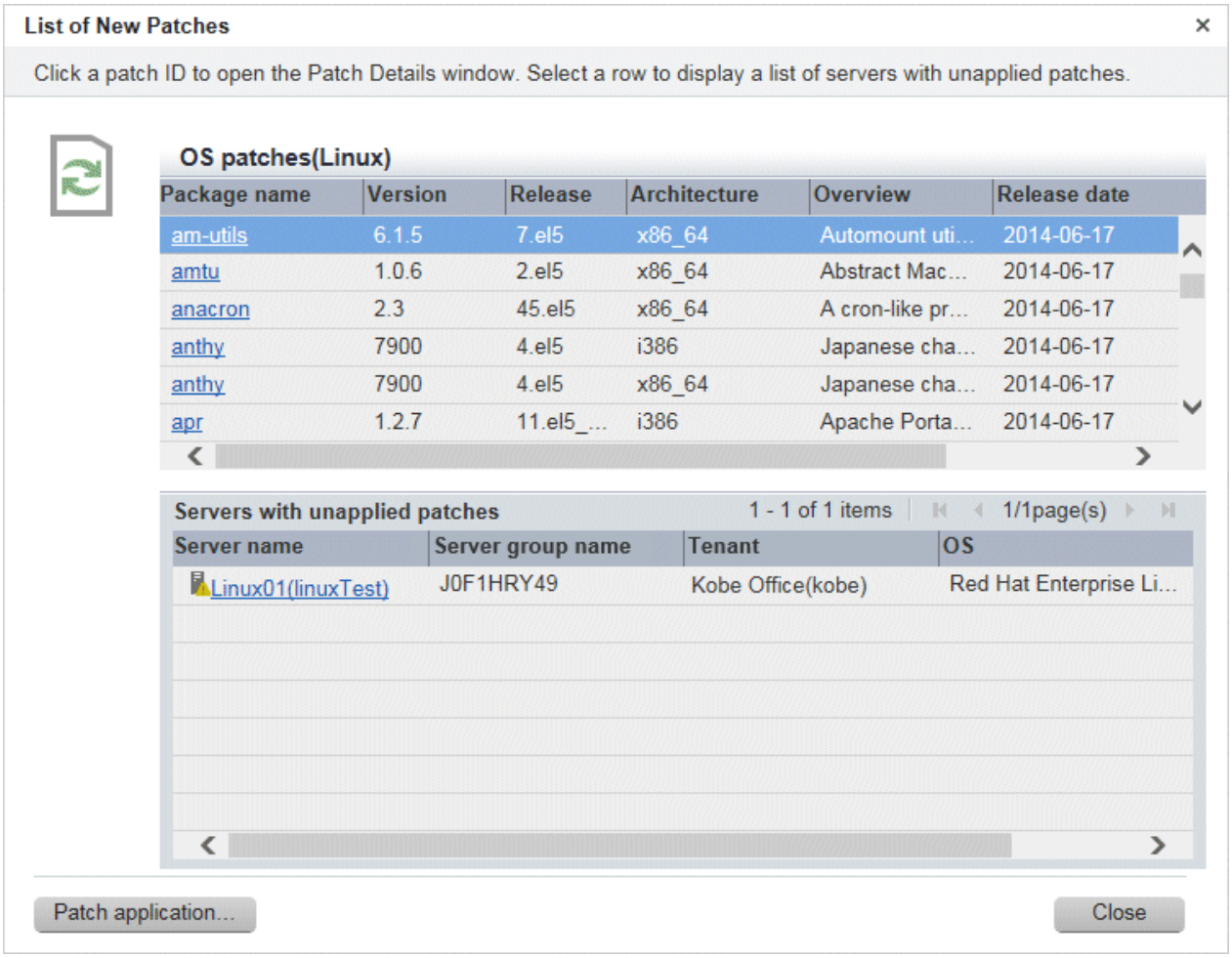
Operation buttons	Description
Patch application	Displays the **Patch Application** wizard, enabling the user to distribute and apply Fujitsu middleware patches to servers. To apply patches for software other than Fujitsu middleware, perform configuration modification.
Close	Closes the window.

3.1.2 List of New Patches

Display method

1. Click on the links in the **Summary view** window for **Patches**.

   The **List of New Patches** window will be displayed.



Operation method

List of new patches

The list of new patches will be displayed in the top section of the window.

Table 3.4 Windows patches

Item	Description
Patch name	Displays the patch names. Clicking a patch name link displays the **Patch Details** window.
Class	Displays the classification levels of the patches. - **Required**: Patches that are specified as "Required" in the patch management policy settings - **Recommended**: Patches that are specified as "Recommended" in the patch management policy settings
Product name	Displays the product name (operating system name) corresponding to each patch.
Patch type	Displays the patch types. (This indicates the classification of updates, which represents the WSUS update program type.) - **Security Updates** - **Critical Updates** - **Feature Packs** - **Service Packs**

Item	Description
	- **Tools** - **Drivers** - **Updates** - **Update Rollups** - **Definition Updates**
Overview	Displays an overview (or title) of each patch.
Release date	Displays the date when the vendor (Microsoft) released the patch.

Table 3.5 Linux patches

Item	Description
Package name	Displays the names of the RPM packages. Clicking a package name link displays the **Patch Details** window.
Version	Displays the versions of the packages.
Release	Displays the release numbers of the packages.
Architecture	Displays the architecture for each package.
Overview	Displays an overview of each package. Displays in English.
Release date	Displays the date when the package information was registered with Systemwalker Software Configuration Manager.

Table 3.6 Software patches

Item	Description
Patch name	Displays the patch names.
Class	Displays the classification levels of the patches. - **Required**: Patches that are specified as "Required" in the operation policy settings - **Recommended**: Patches that are specified as "Recommended" in the operation policy settings
Importance	Displays the importance of each patch. - **Recommended** - **Important** - **Security**
Update type	For Fujitsu middleware, the update type of the patch is displayed. - **Urgent**
Product name	Displays the product names.
OS	Displays the operating systems (platforms).
Release date	Displays the release dates of the patches.

List of servers with unapplied patches

When a patch is selected from the list of new patches in the top section of the window, a list of the servers where that patch has not been applied are displayed in the bottom section.

Item	Description
Server name	Displays the server names. Clicking a server name link displays the **Server Details** window.
Server group name	Displays the server group name.
Tenant	Displays the tenant.
OS	Displays the operating system names.

Operation buttons

The following operations can be performed from the **List of Servers with Unapplied Patches** window.

Operation button	Description
Patch application	Displays the **Patch Application** wizard, enabling the user to configure patch distribution and patch application for a specified patch.
Close	Closes the window.

3.2 Windows and Linux OS Patches, and Software Patches

Display method

1. Use either of the following methods to display the patch list:

    a. Select **Windows OS patches**, **Linux OS patches**, or **Software patches** from the management console.

    b. Click the **Windows OS Patches**, **Linux OS patches**, or **Software patches** link in the **Home** window.

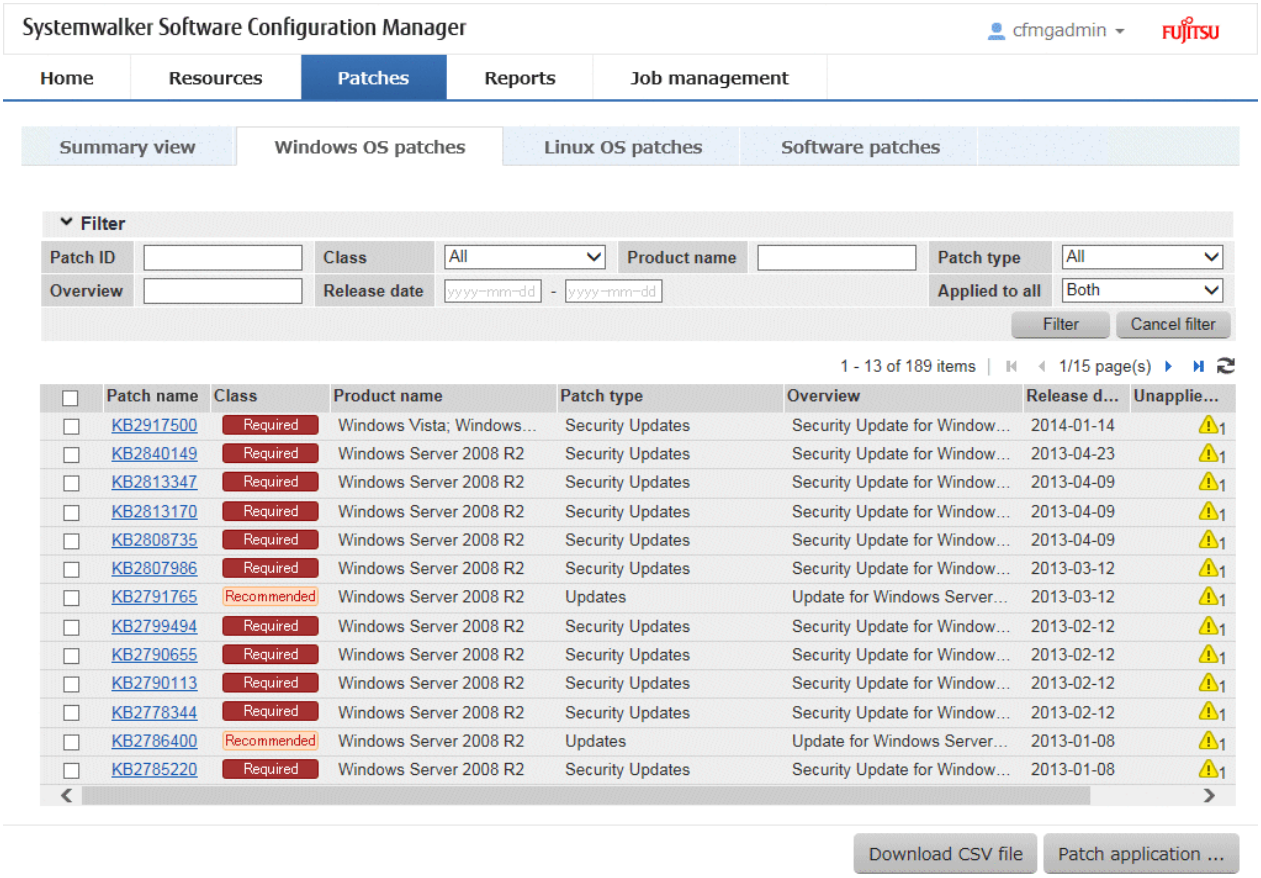
Patch lists for Windows operating systems, Linux operating systems and Fujitsu middleware can be displayed by selecting each tab.

All of the patches obtained from WSUS are displayed in **Windows OS patches** window, except for those patches that the infrastructure administrator has not approved on WSUS.

In the **Linus OS patches** window, the patches that have been registered with the yum repository server and have been defined as the management target are displayed. For software patches, the patches that have been registered with Systemwalker Software Configuration Manager are displayed.

The number of servers to which each patch has not been applied can also be displayed.

Users with all roles can reference information about all patches. However, if a tenant administrator or tenant user logs in, the results displayed for the number of servers with unapplied patches will be filtered by the tenants or the range of servers that the tenant administrator or tenant user manages.



Operation method

Filter search

Specify the conditions for filtering the information in the patch list. The filter conditions shown below can be specified for each patch type. Multiple filter conditions can be specified.

Patch type	Filter conditions
Windows patches	- **Patch name** - **Class** - **Product name** - **Patch type** - **Overview** - **Release date** - **Applied to all**
Linux patches	- **Package name** - **Version** - **Release** - **Architecture** - **Overview** - **Release date** - **Applied to all**

Patch type	Filter conditions
Software patches	- **Patch name** - **Class** - **Importance** - **Update type** - **Product name** - **OS** - **Update title** - **Applied to all** - **Release date**

Display items

The following table shows the items that are displayed in the patch list:

Table 3.7 Windows patches

Display Item	Description
Checkboxes	Specifies the patch to be applied.
Patch name	Displays the patch names. Clicking a patch name link displays the **Patch Details** window.
Class	Displays the classification levels of the patches. - **Required**: Patches that are specified as "Required" in the operation policy settings - **Recommended**: Patches that are specified as "Recommended" in the operation policy settings
Product name	Displays the product name (operating system name) corresponding to each patch.
Patch type	Displays the patch types. (This indicates the classification of updates, which represents the WSUS update program type.) - **Security Updates** - **Critical Updates** - **Feature Packs** - **Service Packs** - **Tools** - **Drivers** - **Updates** - **Update Rollups** - **Definition Updates**
Overview	Displays a title for each patch.
Release date	The date when the vendor (Microsoft) released the patch
Unapplied servers	Displays the number of machines where the patch has not been applied. The number of servers without patches that the infrastructure administrator has not approved on WSUS is not counted. Also, the total number of machines

Display Item	Description
	displayed here is only for the machines within the range that can be looked up by the login user.

Table 3.8 Linux patches

Item	Description
Checkboxes	Specifies the patch to be applied.
Package name	Displays the names of the RPM packages. Clicking a package name link displays the **Patch Details** window.
Version	Displays the versions of the packages.
Release	Displays the release numbers of the packages.
Architecture	Displays the architecture for each package.
Overview	Displays an overview of each package. Displays in English.
Release date	Displays the date when the package information was registered with Systemwalker Software Configuration Manager.
Unapplied servers	Displays the number of machines where the patch has not been applied. The number of servers with unapplied patches is not counted if these patches have been registered with the yum repository server but have not been defined as the Linux patch management target. Also, the total number of machines displayed here is only for the machines within the range that can be looked up by the login user.

Table 3.9 Software patches

Item	Description
Checkboxes	Specifies the patch to be applied.
Patch name	Displays the patch names.
Class	Displays the classification levels of the patches. - **Required**: Patches that are specified as "Required" in the operation policy settings - **Recommended**: Patches that are specified as "Recommended" in the operation policy settings
Importance	Displays the importance of each patch. - **Recommended** - **Important** - **Security**
Update type	For Fujitsu middleware, the update type of the patch is displayed. - **Urgent**
Product name	Displays the product names.
OS	Displays the operating systems (platforms).
Update title	Displays the update titles of the patches.
Release date	Displays the release dates of the patches.
Unapplied servers	The number of machines which were registered using swcfmg_fjmwpatch_update (Fujitsu middleware patch registration command) or swcfmg_patch_def (patch information management command), but to which software patches have not been applied is displayed.

Item	Description
	Also, the total number of machines displayed here is only for the machines within the range that can be looked up by the login user.

Operation buttons

The following operations can be performed from the patch list window.

Operation button	Description
Download CSV file	Output patch list information in CSV format. If the information displayed has been filtered, only the filtered information will be output.
Patch application	Displays the **Patch Application** wizard, enabling the user to configure patch distribution and patch application for a specified Fujitsu middleware patch. To apply patches for software other than Fujitsu middleware, perform configuration modification.

Note

Patches with prerequisite patches

For Windows patches, if a patch has a prerequisite patch and neither the patch nor the prerequisite patch have been applied to a business server, the business server may not be counted as a server with unapplied patches, even though it has the same environment (the same operating system) as other business servers.

This is because when the patch is released by WSUS it is managed as an "applicable" patch but when a "check for update programs" operation is performed on the business server the patch will be managed as "not applicable" if the prerequisite patch has not been applied.

Systemwalker Software Configuration Manager does not handle "not applicable" patches as unapplied patches when counting the number of servers with unapplied patches.

3.2.1 Patch Details

Display method

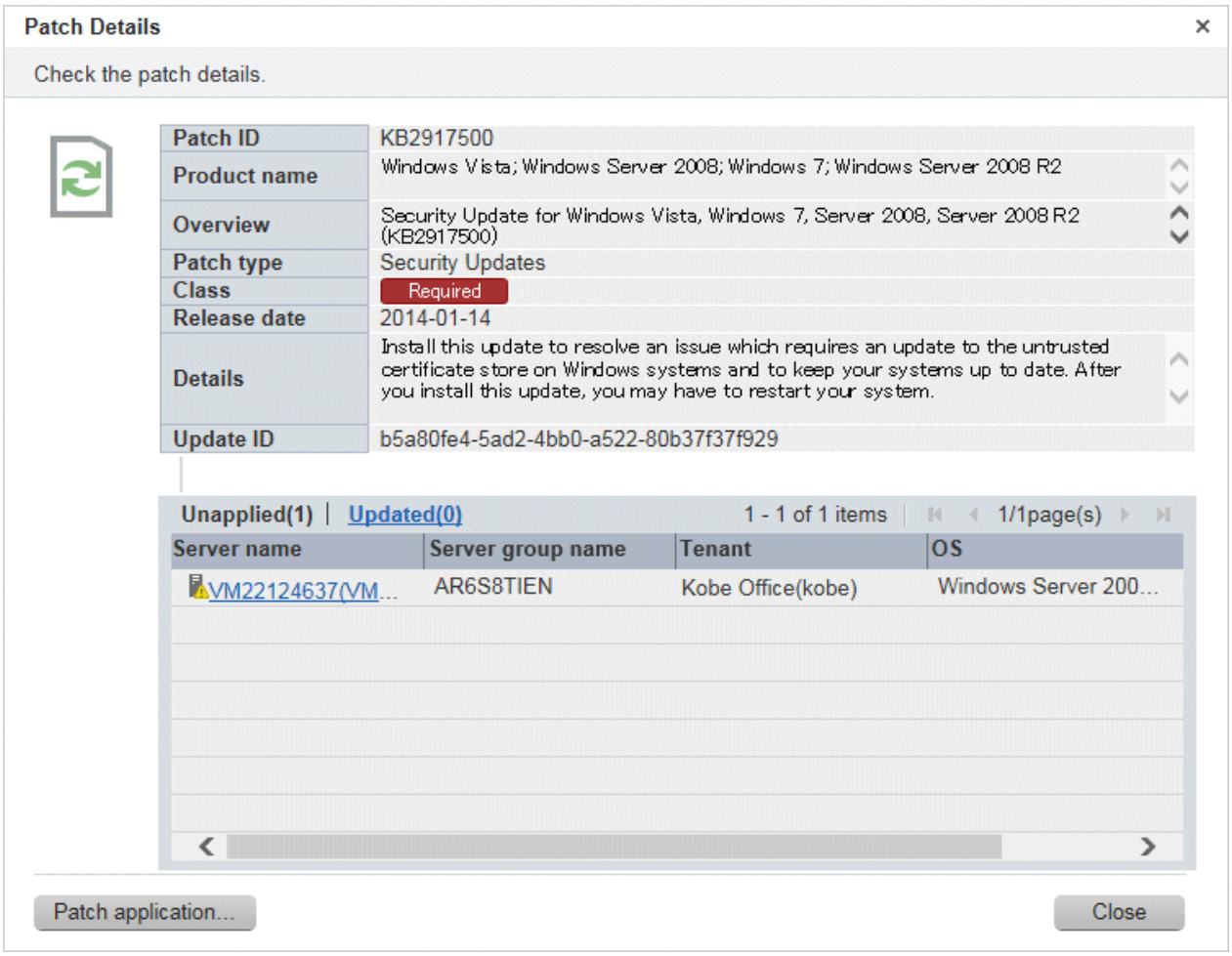
1. Use either of the following methods to display the patch details:

   a. Click the patch name in the **Windows OS patches** window, **Linux OS patches** window, or **Software patches** window.

   b. Click a patch name link in each window.

   The **Patch Details** window will be displayed.

   The **Patch Details** window shows a description of the patch, and the patch application status.



Operation method

Detailed information about the patch

Detailed information about the patch is displayed in the top section of the window.

The following table shows the items that are displayed in the patch list:

Table 3.10 Windows patches

Item	Description
Patch name	Displays the patch name.
Product name	Displays the product name (operating system name) corresponding to the patch.
Overview	Displays the patch overview (or for Windows, the title).
Patch type	Displays the patch type. (This indicates the classification of updates, which represents the WSUS update program type.) - **Security Updates** - **Critical Updates** - **Feature Packs** - **Service Packs** - **Tools** - **Drivers** - **Updates**

Item	Description
	- **Update Rollups** - **Definition Updates**
Class	Displays the classification level of the patch. - **Required**: Patches that are specified as "Required" in the operation policy settings - **Recommended**: Patches that are specified as "Recommended" in the operation policy settings
Release date	Displays the date when the vendor (Microsoft) released the patch.
Details	Displays a detailed description of the patch that is provided by the vendor.
Update ID	Displays the Update ID.

Table 3.11 Linux patches

Item	Description
Package name	Displays the name of the package.
Version	Displays the version of the package.
Release	Displays the release number of the package.
Architecture	Displays the architecture for each package.
Release date	Displays the date when the package information was registered with Systemwalker Software Configuration Manager.
Overview	Displays an overview of the package. Displays in English.
Details	Displays a detailed description of the patch that is provided by the vendor. Displays in English.

Table 3.12 Software patches

Item	Description
Patch name	Displays the patch name.
Class	Displays the classification level of the patch. - **Required**: Patches that are specified as "Required" in the operation policy settings - **Recommended**: Patches that are specified as "Recommended" in the operation policy settings
Importance	Displays the importance of the patch. - **Recommended** - **Important** - **Security**
Update type	For Fujitsu middleware, the update type of the patch is displayed. - **Urgent**
Product name	Displays the product name.
OS	Displays the operating system (platform).
Release date	Displays the release date of the patch.
Update title	Displays the update title of the patch.

Information about patch application

The bottom section of the window displays a list of the servers where the patch has not been applied and a list of the servers where the patch has been applied.

Clicking an **Unapplied** link displays a list of servers with unapplied patches.

Clicking an **Updated** link displays a list of servers with applied patches.

Item	Description
Server name	Displays the server names.
Server group name	Displays the server group name.
Tenant	Displays the tenant.
OS	Displays the operating system names.

Operation buttons

The following operations can be performed from the **List of Servers with Unapplied Patches** window.

Operation button	Description
Patch application	Displays the **Patch Application** wizard, enabling the user to configure patch distribution and patch application for a specified Fujitsu middleware patch. To apply patches for software other than Fujitsu middleware, perform configuration modification.
Close	Closes the window.

3.3 Patch Application Wizard

Patch application is set up by first selecting the patches that are to be applied.

Point

The roles of the people who distribute and apply patches

The explanations in this section assume that the roles of the people who distribute and apply patches can be classified as follows:

Infrastructure administrator

- Infrastructure administrators are responsible for patch management (management for WSUS, yum repository servers and the media library).
- Infrastructure administrators do not distribute or apply patches.
- When an error occurs with the patch distribution/application processing, a message may be output to the event log or syslog. If this happens, infrastructure administrators need to check the content of the message and take the necessary action such as reviewing the environment settings.

Tenant administrator

- Tenant administrators use the management console to distribute and apply patches to their tenant's servers.

Tenant user

- Tenant users distribute and apply patches to those servers that they manage themselves.

Dual-role administrator

- Dual-role administrators have the roles of both infrastructure administrators and tenant administrators. When acting as a tenant administrator, a dual-role administrator can distribute and apply patches to the servers in all tenancies.

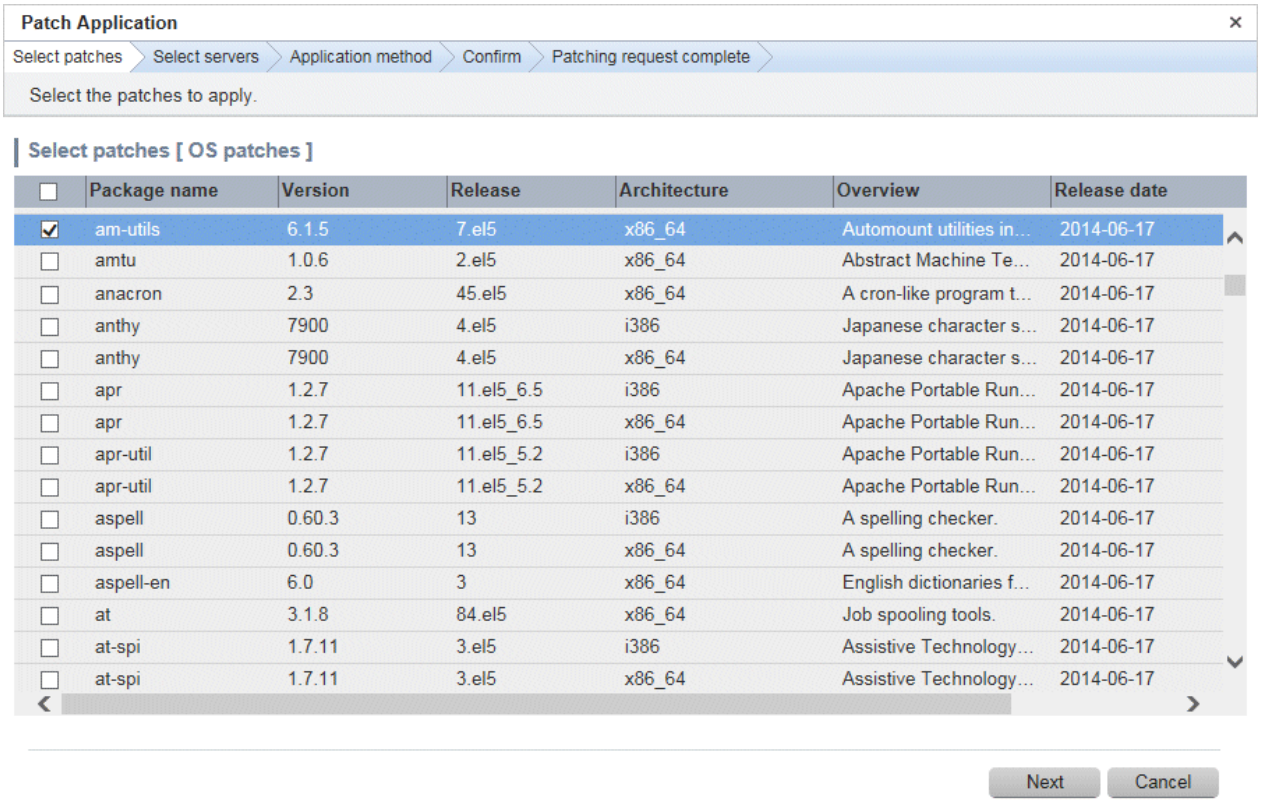
Display method

1. **Windows OS patches** window, **Linux OS patches** window, or **Software patches** window.
   - **Windows OS patches** window, **Linux OS patches** window, or **Software patches** window.
   - **Patch Details** window
   - **New patches** window
   - **List of Servers with Unapplied Patches** window
2. Perform the following patch application setup and confirmation operations in the wizard:
   a. Select the patches to be applied
   b. Select the target servers
   c. Set the application method
   d. Check the settings
   e. Completion

3.3.1 Select Patches

If following operations is performed, the **Select patches** window of the **Patch Application** wizard will be displayed:

- Click the **Patch application** button in the **List of New Patches** window.



Operation method

Selecting patches

Select the patches to be applied.

Table 3.13 Windows patches

Item	Description
Patch name	Displays the patch names.
Class	Displays the classification levels of the patches. - **Required**: Patches that are specified as "Required" in the operation policy settings - **Recommended**: Patches that are specified as "Recommended" in the operation policy settings
Product name	Displays the product name (operating system name) corresponding to each patch.
Patch type	Displays the patch types. (This indicates the classification of updates, which represents the WSUS update program type.) - **Security Updates** - **Critical Updates** - **Feature Packs** - **Service Packs** - **Tools** - **Drivers** - **Updates** - **Update Rollups** - **Definition Updates**
Overview	Displays a title for each patch.
Release date	Displays the date when the patch was released.

Table 3.14 Linux patches

Item	Description
Package name	Displays the names of the RPM packages. Clicking a package name link displays the **Patch Details** window.
Version	Displays the versions of the packages.
Release	Displays the release numbers of the packages.
Architecture	Displays the architecture for each package.
Overview	Displays an overview of each package. Displays in English.
Release date	Displays the date when the package information was registered with Systemwalker Software Configuration Manager.

Table 3.15 Fujitsu middleware patches

Item	Description
Patch name	Displays the patch names.
Class	Displays the classification levels of the patches. - **Required**: Patches that are specified as "Required" in the operation policy settings - **Recommended**: Patches that are specified as "Recommended" in the operation policy settings
Importance	Displays the importance of each patch.

Item	Description
	- **Recommended** - **Important** - **Security**
Update type	Displays the update types of the patches. - **Urgent**
Product name	Displays the product names.
OS	Displays the operating systems (platforms).
Update title	Displays the update titles of the patches.
Release date	Displays the date when the patch information was registered with Systemwalker Software Configuration Manager.

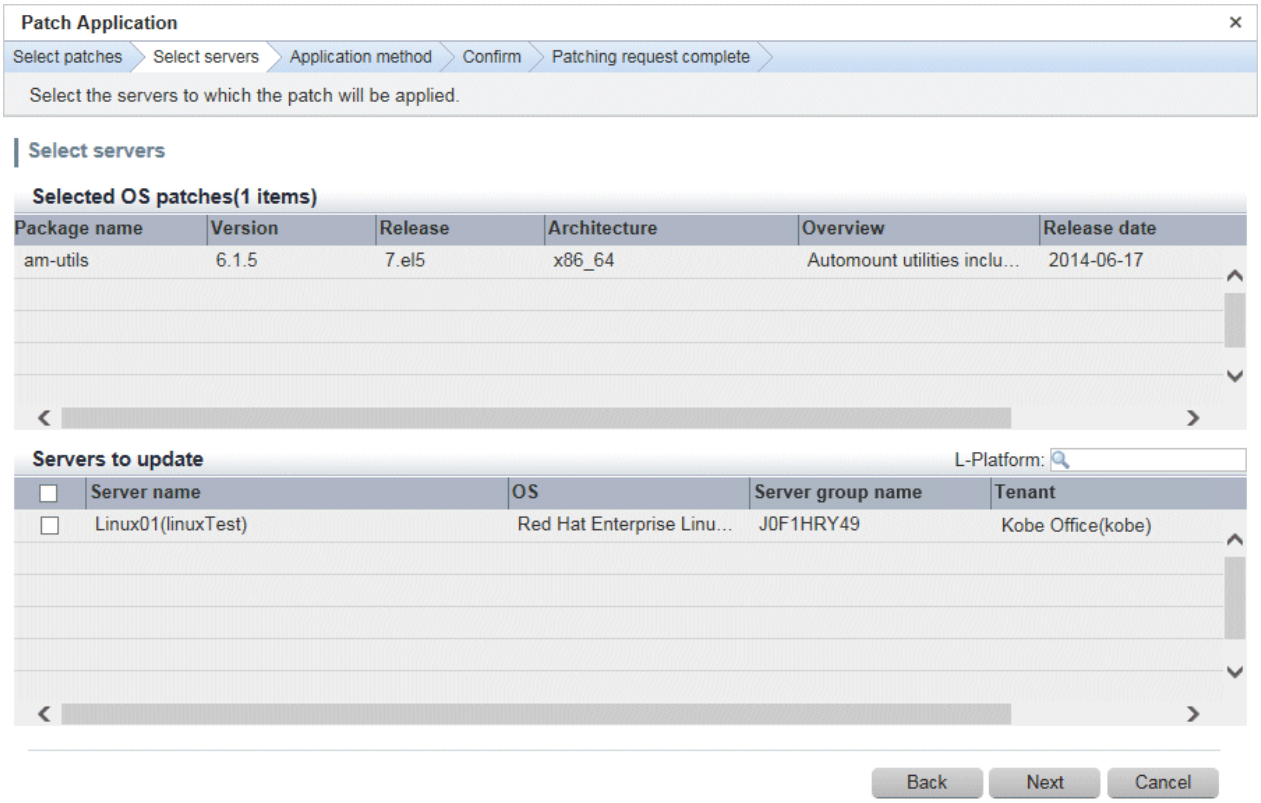
Operation buttons

Operation button	Description
Next	Moves to the **Select servers** window.
Cancel	Closes the **Patch Application** wizard.

3.3.2 Select Servers

The **Select servers** window is displayed when one of the following operations has been performed:

- Clicking the **Next** button in the **Select patches** window
- In the **Windows OS patches** window, **Linux OS patches** window, or **Software patches** window, select the checkbox of a patch and click the **Patch application** button.
- Clicking the **Patch application** button in the **Patch Details** window
- Click the **Patch application** button in the **List of Servers with Unapplied Patches** window.



Operation method

Selected patches

A list of the patches to be applied is displayed.

Table 3.16 Windows patches

Item	Description
Patch name	Displays the patch names.
Class	Displays the classification levels of the patches. - **Required**: Patches that are specified as "Required" in the operation policy settings - **Recommended**: Patches that are specified as "Recommended" in the operation policy settings
Product name	Displays the product name (operating system name) corresponding to each patch.
Patch type	Displays the patch types. (This indicates the classification of updates, which represents the WSUS update program type.) - **Security Updates** - **Critical Updates** - **Feature Packs** - **Service Packs** - **Tools** - **Drivers** - **Updates** - **Update Rollups**

Item	Description
	- **Definition Updates**
Overview	Displays a title of each patch.
Release date	Displays the date when the patch was released.

Table 3.17 Linux patches

Item	Description
Package name	Displays the names of the RPM packages. Clicking a package name link displays the **Patch Details** window.
Version	Displays the versions of the packages.
Release	Displays the release numbers of the packages.
Architecture	Displays the architecture for each package.
Overview	Displays an overview of each package. Displays in English.
Release date	Displays the date when the package information was registered with Systemwalker Software Configuration Manager.

Table 3.18 Fujitsu middleware patches

Item	Description
Patch name	Displays the patch names.
Class	Displays the classification levels of the patches. - **Required**: Patches that are specified as "Required" in the operation policy settings - **Recommended**: Patches that are specified as "Recommended" in the operation policy settings
Importance	Displays the importance of each patch. - **Recommended** - **Important** - **Security**
Update type	Displays the update types of the patches. - **Urgent**
Product name	Displays the product names.
OS	Displays the operating systems (platforms).
Update title	Displays the update titles of the patches.
Release date	Displays the date when the patch information was registered with Systemwalker Software Configuration Manager.

Selecting servers

Select the servers to which the patches are to be applied.

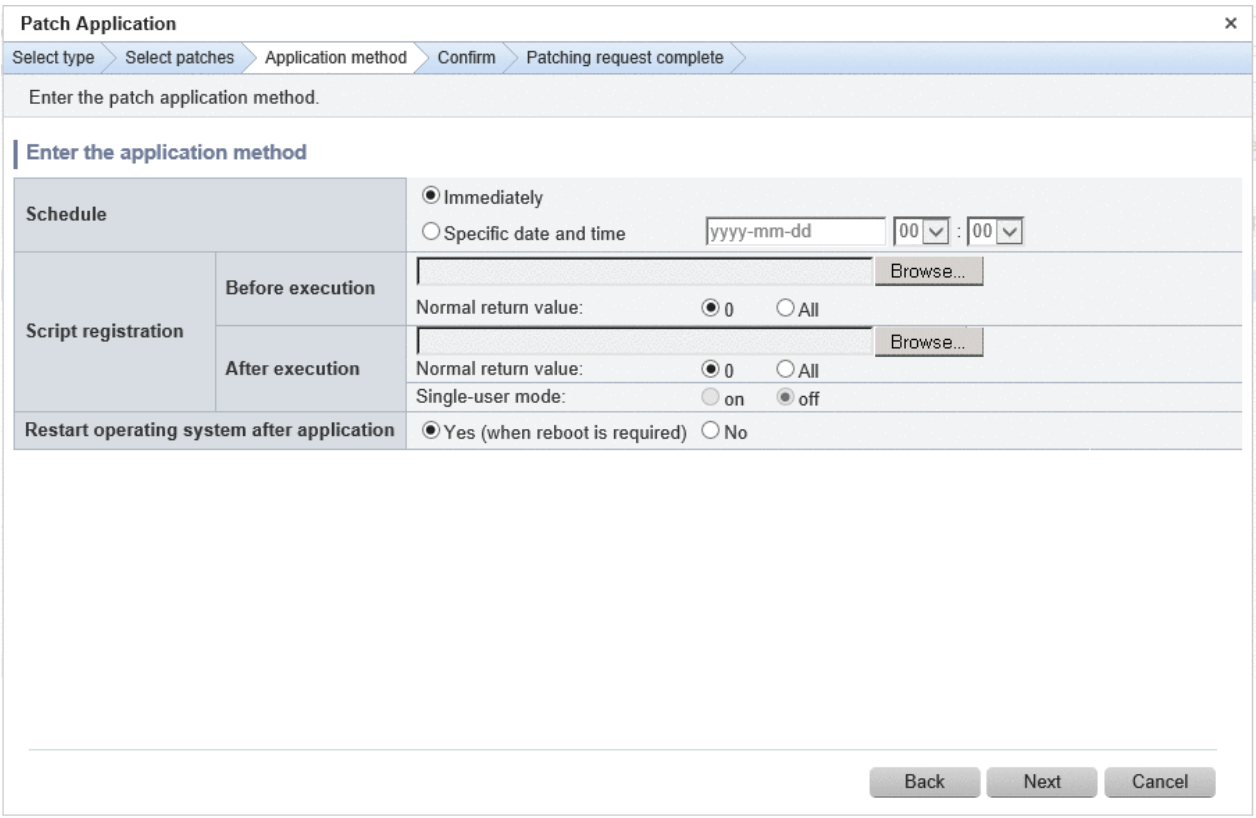
Item	Description
Server name	Displays the server names.
OS	Displays the operating systems.
Server group name	Displays the server group name.
Tenant	Displays the tenant.

Operation buttons

Operation button	Description
Back	Returns to the **Select patches** window.
Next	Moves to the **Select patches** window if servers have been selected using checkboxes.
Cancel	Closes the **Patch Application** wizard.

3.3.3 Application Method

When **Next** is clicked in the **Select servers** window, the **Application method** window is displayed.



Operation method

Setting up the application method

Item	Description
Schedule	Specify a schedule. - **Immediately**: Select this option to perform the processing as soon as settings in the wizard are complete. - **Specific date and time**: Specify the date and time when processing is to be executed. Specify a date and time that is later than the current date and time on the admin server.
Script	Specify the scripts to be executed before and after patch distribution/application, as well as the return values to determine the operations have completed successfully during script execution. Also specify whether to execute a post-

Item	Description
	execution script at single-user execution level when distributing Fujitsu middleware patches. To apply Fujitsu middleware patches, a script specifying the application processing must be created and then registered as a post-execution script. It is recommended to create the scripts registered here so that they output "0" as the return value to indicate normal completion and a value other than "0" as the return value to indicate an error. For the script to be registered, specify the full path to the file that is stored on the local machine where the browser is running. Specify one of the following values for the return value to use to determine that the operation has completed successfully. - 0: The return value "0" is handled as normal termination, whereas values other than "0" are handled as errors. - All: All return values are handled as normal termination. Configure whether to execute the script at single-user execution level by specifying one of the following values: If the execution target is a Windows server, "on" cannot be specified. - on: Switches the execution level to single-user and executes a script. - off: Executes a script without switching the execution level. Refer to "Creating Scripts and Specifying Commands" in the *Operation Guide* for information on the scripts that are registered here. If an error occurs, the user can select the process to take when the corresponding script fails (such as "retry", "continue processing", or "cancel processing") from the **Job management** window or by using the job information management command. Refer to "Chapter 5 Job Management" for details on the **Job management** window. Refer to "Job Information Management Command" in the *Reference Guide* for details on the command.
Restart operating system after application	Select whether to restart the server after the patch is distributed and applied. When executing the post-execution script at single-user execution level, the OS is restarted after the script is executed. Therefore, it is not necessary to select "Yes". - **Yes** The behavior varies depending on the patch type, as follows: - **OS patches** The server will only be restarted for those patches that need to have the server restarted. - **Fujitsu middleware patches** The server will be restarted without fail. - **No** The server will not be restarted.

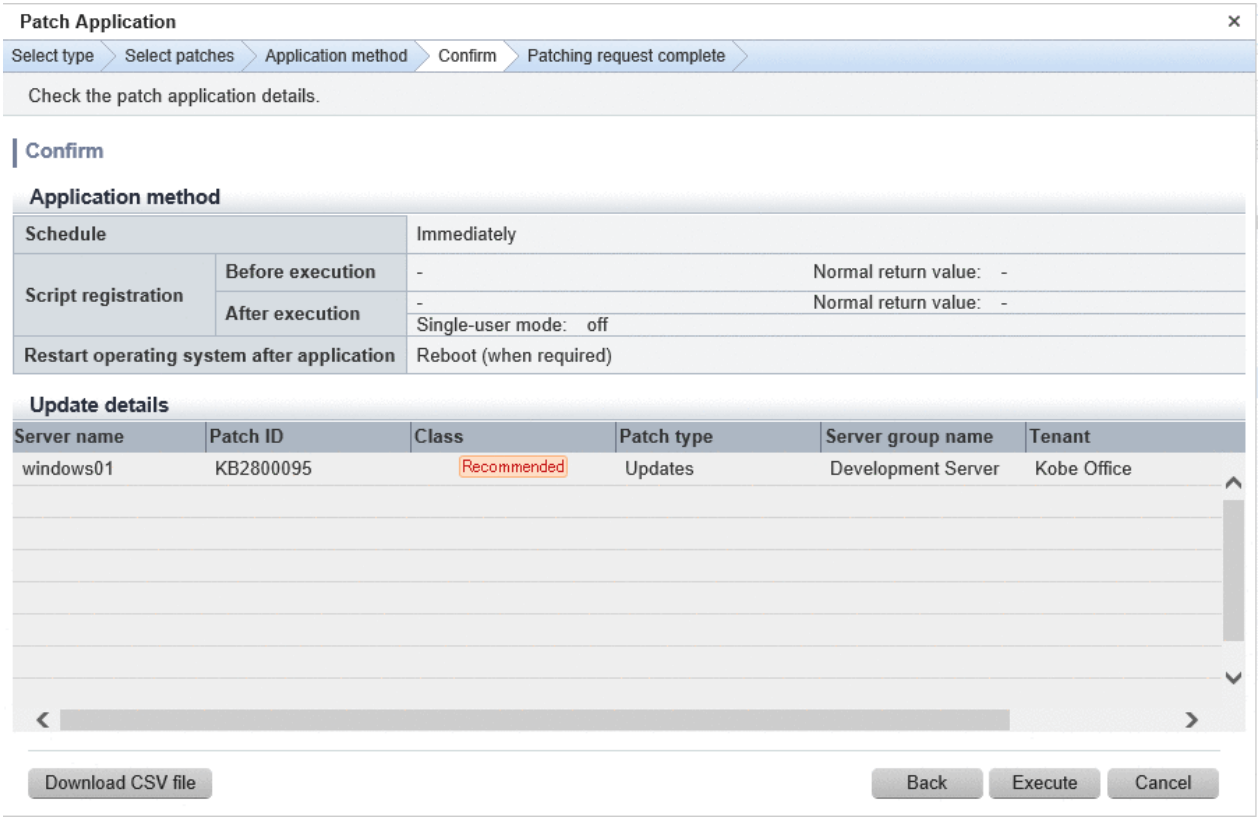
Operation buttons

Operation button	Description
Back	Returns to the **Select servers** window.
Next	Moves to the confirmation window.
Cancel	Closes the **Patch Application** wizard.

3.3.4 Confirm

When **Next** is clicked in the **Application method** window, the **Confirm** window is displayed.

Check the settings that have been entered.



Operation method

Application method

This section displays the settings that have been specified in the **Application method** window.

Update details

Item		Description
Server name		Displays the server names.
For Windows	**Patch name**	Displays the patch names.
	Class	Displays the classification levels ("Required" or "Recommended") of the patches.
	Patch type	Displays the patch types. (This indicates the classification of updates, which represents the WSUS update program type.)
For Linux	**Package name**	Displays the names of the packages.
	Version	Displays the versions of the packages.
	Release	Displays the release numbers of the packages.
For Fujitsu middleware	**Patch name**	Displays the patch names.
	Importance	Displays the importance of each patch ("Recommended", "Important" or "Security").
	Update type	Displays the update types of the patches ("Urgent").
Server group name		Displays the server group name.

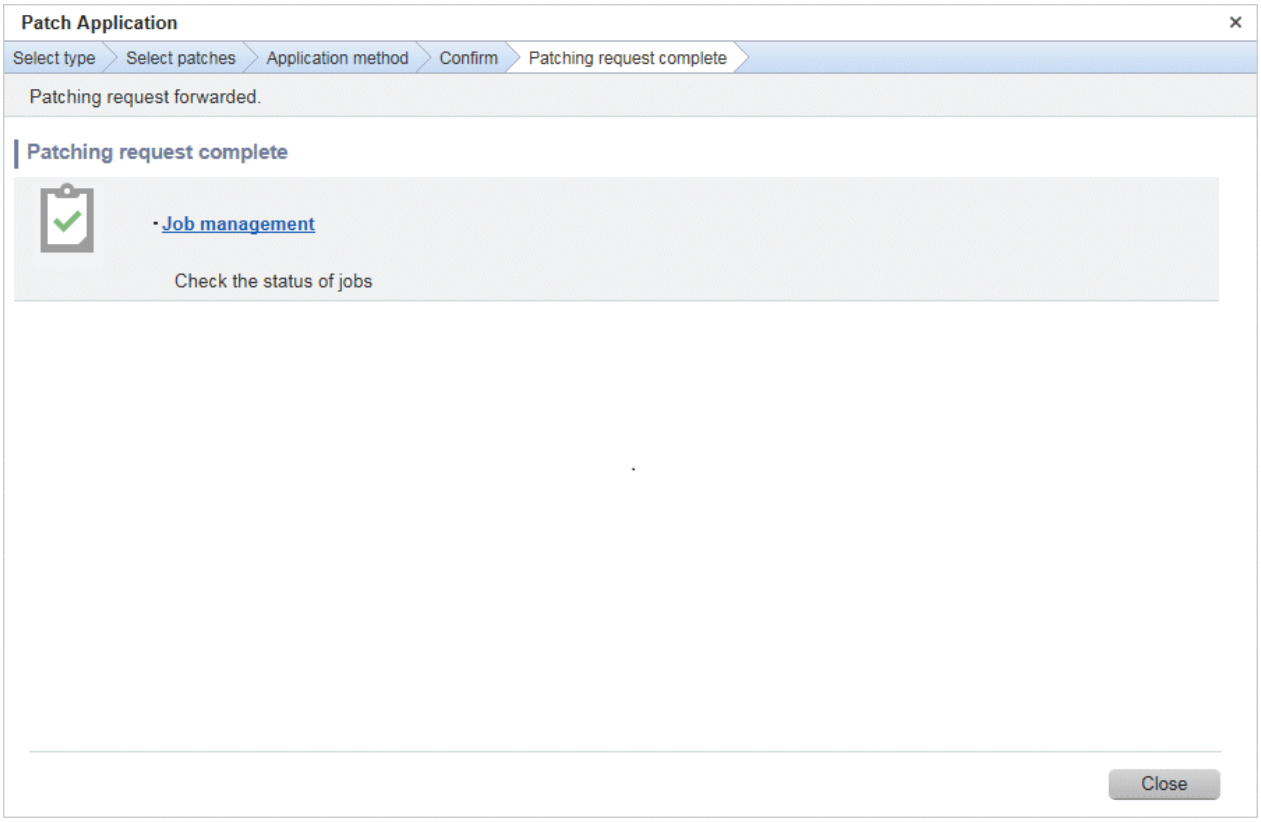
Item	Description
Tenant	Displays the tenant.

Operation buttons

Operation button	Description
Download CSV file	Outputs the information displayed in **Update details** to a CSV file.
Back	Returns to the **Application method** window.
Execute	Executes the patch application as a job. When multiple servers are selected, one job is executed for each server.
Cancel	Closes the **Patch Application** wizard.

3.3.5 Patching Request Complete

When **Next** is clicked in the **Confirm** window, the **Patching request complete** window is displayed.



Operation method

Job Management

Item	Description
Job Management	Displays the **Job management** window where the user can check the status of the patch application operation that was executed. The status of the patch application operation that was executed can also be checked by using the job information management command. Refer to "Job Information Management Command" in the *Reference Guide* for details.

Operation buttons

Operation button	Description
Close	Closes the **Patch Application** wizard.

Chapter 4 Reports

The **Reports** window provides the following windows.

- Policies

  Use this to display policy compliance status and delete policies. It is also possible to display information that has been filtered by specifying particular conditions.

- Views

  Displays views to see the configuration information stored in the CMDB.

- Policy Wizard

  Provides a wizard for creating or editing policies.

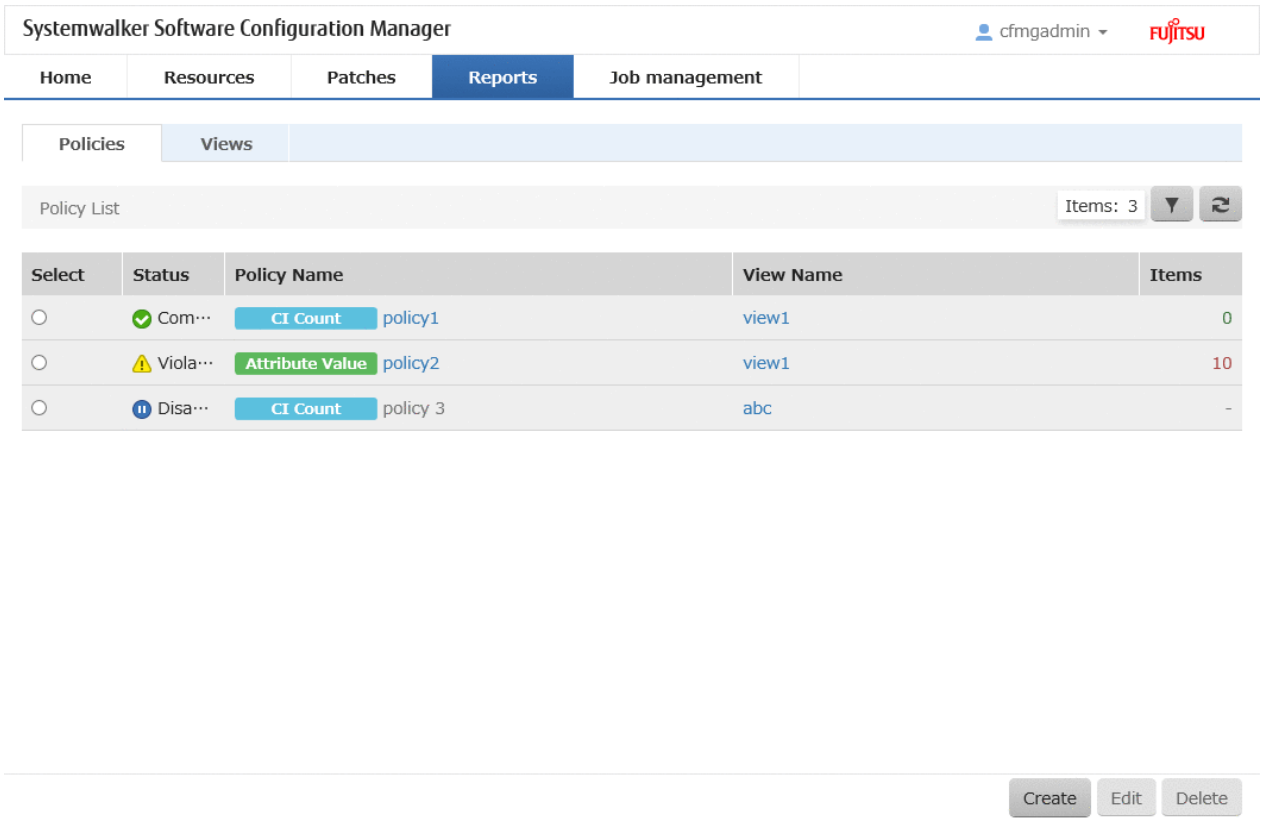
- View Wizard

  Provides a wizard for creating or editing views.

4.1 Policies

Display method

1. Log in to the management console.
2. Use either of the following methods to display the **Policies** window.
   a. Select **Reports** from the menu in the management console.
   b. Click the **Policies** link in the **Home** window.



Operation method

Filter search

Click the button at the top right of the window to specify the conditions for filtering the policies to display.

Information	Description
Filter	The following filter conditions can be specified. Multiple filter conditions can be specified. - Policy name - Status - View name

Display items

The following table shows the items displayed in the **Policies** window.

Information	Description
Select	Use radio buttons to select a policy to edit or delete.
Status	Displays the status of the policy. - Compliant The configuration information is in compliance with the policy. The policy is enabled. - Violation The configuration information is in violation of the policy. The policy is enabled. - Disabled The policy is disabled.
Policy Name	Displays the policy name. When a policy name is clicked, the **Views** window for the view with the specified policy applied is displayed.
View Name	Displays the name of the view to which the policy is applied. When a view name is clicked, the **Views** window for the specified view.
Compliancy	Displays the number of policies. How the number of policies is counted differs depending on the type of policy being displayed. - CI Count When the policy is being complied with, this value is 0. When the policy is being violated, the difference between target CI and threshold is output. - Attribute Value Outputs the attribute values in violation of the policy.

Operation buttons

The following operations can be performed from the **Policies** window:

Operation Button	Description
Create	Displays the **Policy Wizard** for creating policies.
Edit	Displays the **Policy Wizard** for editing content of policies.

Operation Button	Description
Delete	Deletes policies.

Note

Verification timing of policies

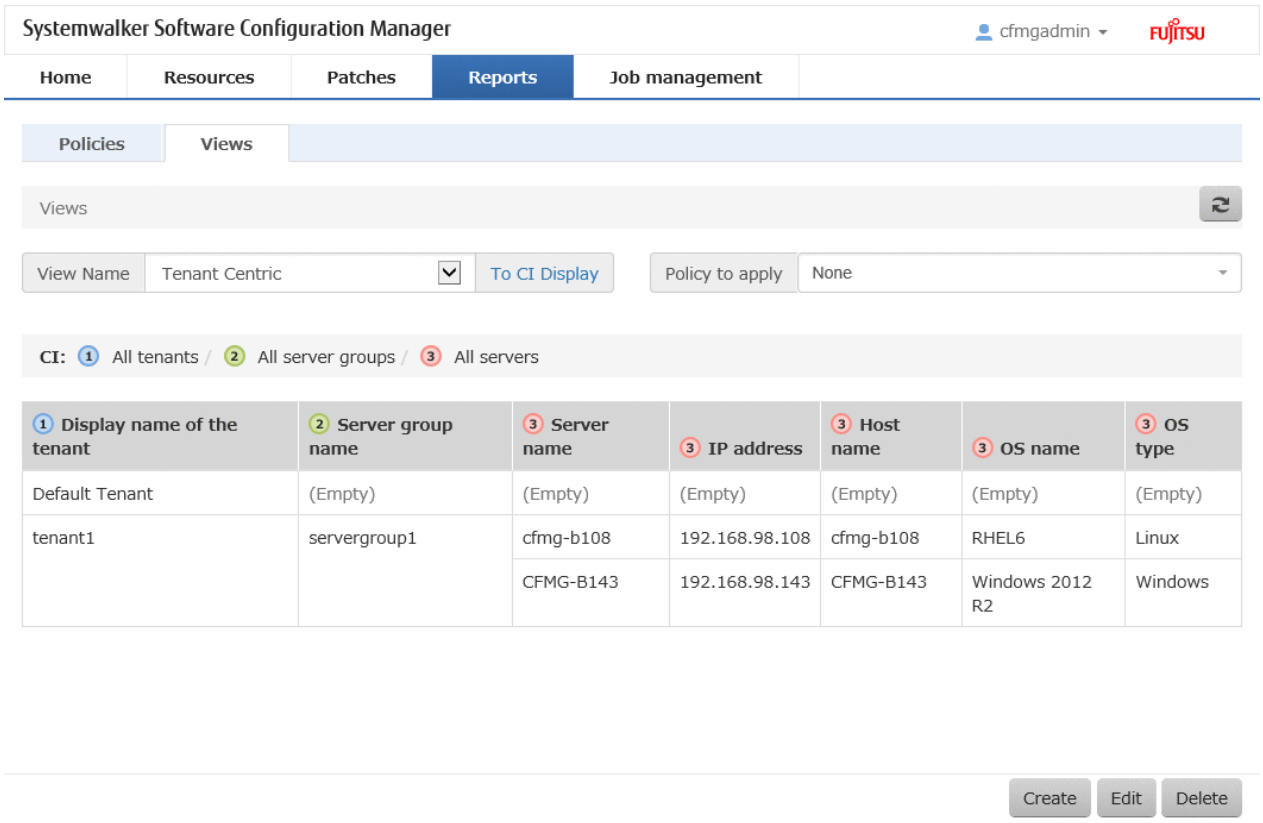
Policy verification is not performed immediately after the information is stored in the CMDB as a result of discovery. Policy verification is performed at the following timings:

- When the information displayed in the view is updated, policy verification is performed. For the timing of update, refer to "4.2 Views".
- When creating or editing a policy, that policy is verified.

4.2 Views

Display method

1. Log in to the management console.
2. Use either of the following methods to display the **Views** window:
   a. Select **Reports** from the menu in the management console, then click the **Views** tab.
   b. Click the **Views** link in the **Home** window.



Operation method

Selecting a view and a policy to apply

In the upper section, select a view to display and policies to apply.

Display Item	Description
View Name	Select a view to display. - CI Display When the **To CI Display** button is clicked, the **CI Display** window is displayed.
Policy to apply	Select a policy to apply to the view.

Display items

In the lower section, the view is displayed.

- Values of the attributes specified for the display method of the view are displayed.
- When a policy for attribute values is applied, the values of the attributes in violation of the policy are displayed in yellow.
- When a policy for number of CI, the values of the CI attributes in violation of the policy are displayed in yellow.

Operation buttons

From the **Views** window, the following operations are possible:

Operation Button	Description
Create	Displays the **View Wizard** for creating views.
Edit	Displays the **View Wizard** for editing content of views.
Delete	Deletes views. Views for which policies exist cannot be deleted.

Note

Update timing of the information displayed in a view

The information stored in the CMDB as a result of discovery is not displayed in a view immediately after the information is stored. Information displayed in a view is updated at the following timings:

- When creating or editing a view, the information of that view is updated.
- Information displayed in all views is updated on a five-minute interval.

Upper limit of the number of CIs displayed in a view

Up to 500 CIs can be displayed in one view. Any additional CIs are not displayed. In this case, perform the following actions:

- Use a command to output the information to a CSV file.
- Configure the details of the basic CI and divide the view. An example of dividing a view is shown below. When a view is divided, it is necessary to define policies individually.
  - When the view has a hierarchy level where CIs for tenants are displayed

    Create a basic CI in which CIs for the individual tenants are displayed and then define a view for each tenant.
  - When the view has a hierarchy level where CIs for servers are displayed

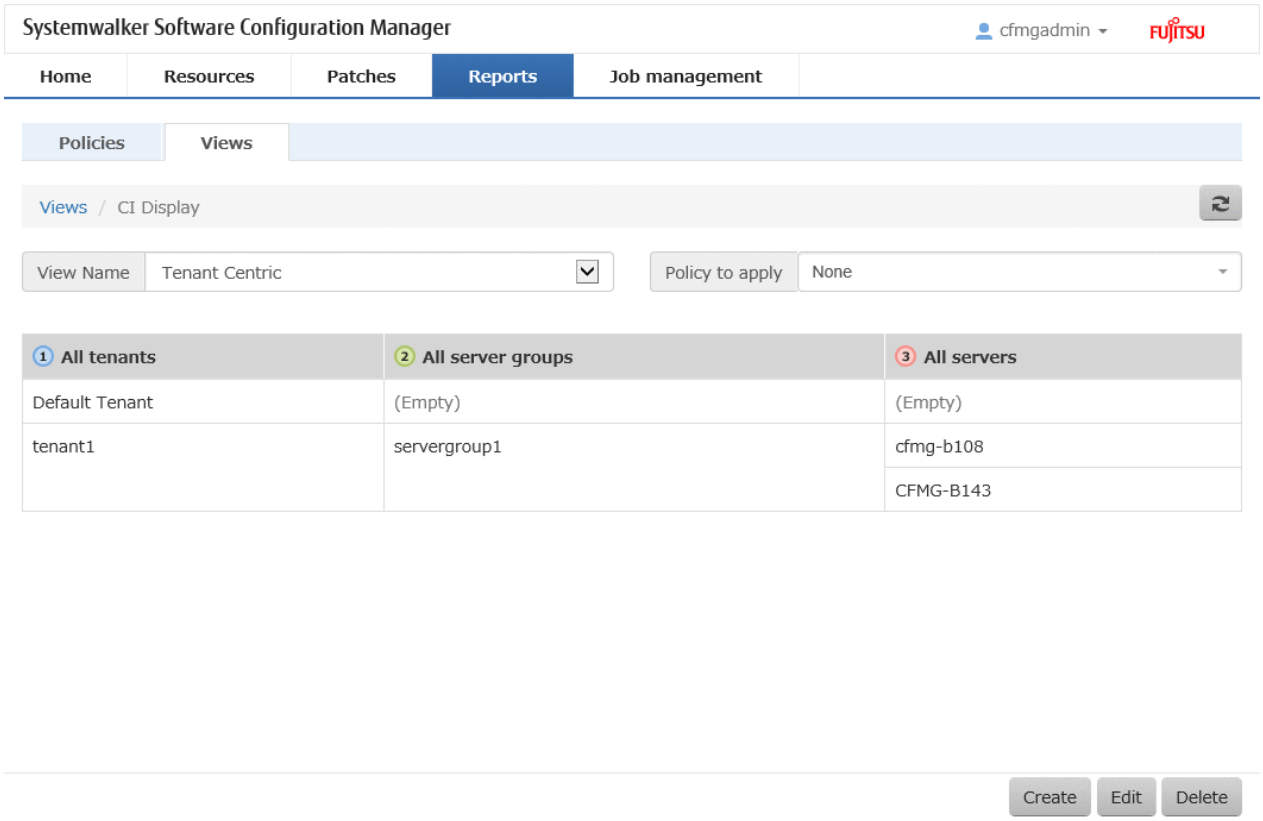
    Create a basic CI in which the servers for each OS type are displayed and then define a view for each OS type.

4.2.1 CI Display

Display method

1. In the **Views** window, click the **To CI Display** button.

2. The CIs for the configuration information displayed in the view are displayed.



Operation method

Selecting a view and a policy to apply

In the upper section, select a view to display and policies to apply.

Display Item	Description
View Name	Select a view to display.
Policy to apply	Select a policy to apply to the view.

Display items

Values of the attributes specified within the scope of the view are displayed.

- CIs are displayed in a tree format.
- When a policy for attribute values is applied, the CIs which violate the policy are displayed in yellow.
- When a policy for the number of CIs is applied, all CIs at the hierarchy levels in violation of the policy are displayed in yellow.

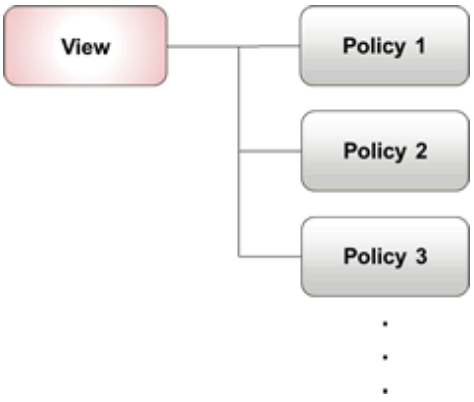
4.3 Policy Wizard

Use the **Policy Wizard** window to create or edit policies.

4.3.1 Configuring Policies

This section explains the configuration of policies.

Policies are configured for hierarchy levels of a view or for the configuration information displayed in a list. Configuring multiple policies for one view is also possible.



4.3.2 Creating Policies

This section explains the definition of policy information. Decide the following information and define targets and rules.

Policy name

Specify the policy name.

Item	Description
Name	The policy name. Specify a character string of up to 85 characters. Names cannot be omitted.

Target

Specify the configuration information to which the policy will apply. Specify the following information:

Item	Description
Views	View to which the policy is to be applied.
Target type	Type of the data to which the policy will apply. Select one of the following: - CI Count Configures a threshold for the number of CIs displayed at a hierarchy level. Use this to detect whether the number of installed software exceeds the number of available licenses. - Attribute Value Configures a threshold for the value of the attribute displayed in the table. Use this to detect if a software version older than the specified version has been installed.
Target data	Data to which the policy will apply. The specification method differs depending on the target type. - CI Count Specify the hierarchy level to which the policy will apply. - Attribute Value Specify the column to which the policy will apply.

Rules

This section explains the definition of rules. Specify a rule that determines whether the configuration information is appropriate. Specify the following information for each target type.

CI Count

Specify the number of CIs. Specify the following information:

Item	Description
Comparison method	Specify the scope within which the number of target CIs is determined as appropriate.
Threshold	When the number of target CIs is within the scope specified by the comparison method and threshold value, the configuration is determined to be in compliance with the policy. When outside of the above scope, the configuration is determined to be in violation of the policy. For the comparison method, select one of the following: - Perfect match When the number of target CIs is equal to the threshold value, the configuration is determined to be in compliance with the policy. - Perfect mismatch When the number of target CIs differs from the threshold value, the configuration is determined to be in compliance with the policy. - Smaller than When the number of target CIs is smaller than the threshold value, the configuration is determined to be in compliance with the policy. - Bigger than When the number of target CIs is larger than the threshold value, the configuration is determined to be in compliance with the policy. - Equal to or less than When the number of target CIs is equal to or smaller than the threshold value, the configuration is determined to be in compliance with the policy. - Equal to or greater than When the number of target CIs is equal to or larger than the threshold value, the configuration is determined to be in compliance with the policy.

Attribute Value

Specify attribute values. Specify the following information:

Item	Description
Comparison method	Specify the scope within which the target attribute value is determined to be appropriate. When the target attribute value is within the scope specified by the comparison method and threshold value, the configuration is determined to be in compliance with the policy. When outside of the above scope, the configuration is determined to be in violation of the policy. For the comparison method, select one of the following: - Perfect match When the target attribute value is equal to the threshold value, the configuration is determined to be in compliance with the policy. - Perfect mismatch When the target attribute value differs from the threshold value, the configuration is determined to be in compliance with the policy.
Threshold	

Item	Description
	- Partial match When the threshold value is included in the target attribute value, the configuration is determined to be in compliance with the policy. - Partial mismatch When the threshold value is not included in the target attribute value, the configuration is determined to be in compliance with the policy. - Smaller than When the number of target CIs is smaller than the threshold value, the configuration is determined to be in compliance with the policy. - Bigger than When the number of target CIs is larger than the threshold value, the configuration is determined to be in compliance with the policy. - Equal to or less than When the number of target CIs is equal to or smaller than the threshold value, the configuration is determined to be in compliance with the policy. - Equal to or greater than When the number of target CIs is equal to or larger than the threshold value, the configuration is determined to be in compliance with the policy. - Regular expression Specify a regular expression pattern as the threshold value. When the target attribute value matches the regular expression patterns, the configuration is determined to be in compliance with the policy.

Numerical comparison between attribute values and threshold values

When **Smaller than**, **Bigger than**, **Equal to or less than**, or **Equal to or greater than** is specified as the comparison method, the attribute value and threshold value are compared as follows.

- When both the attribute value and the threshold value are numeric values, numerical comparison is performed. Numerical comparison ignores commas (",") in numeral values. Numeric values within the following ranges are acceptable:
  - Positive values between 4.94065645841246544E-324 and 1.79769313486231570E+308 (*)
  - Negative values between -1.79769313486231570E+308 and -4.94065645841246544E-324 (*)

    *Note: "E" indicates an exponent.
- When either or both of the attribute value and the threshold value are not numeral values, comparison is performed according to character code points. Unicode code points are compared starting with the leftmost character of the character string.

When no attribute values exist

When no attribute values exist, comparison is performed assuming that the attribute value is an empty string (character count is zero).

Enabled/Disabled

This section explains enabling or disabling policies.

Item	Description
Enabled	Enables the policy. Policy verification is performed on the configuration information.

Item	Description
Disabled	Disables the policy. Policy verification is performed on the configuration information. Use this option to stop a policy temporarily for cases such as when editing views.

4.3.3 Operation

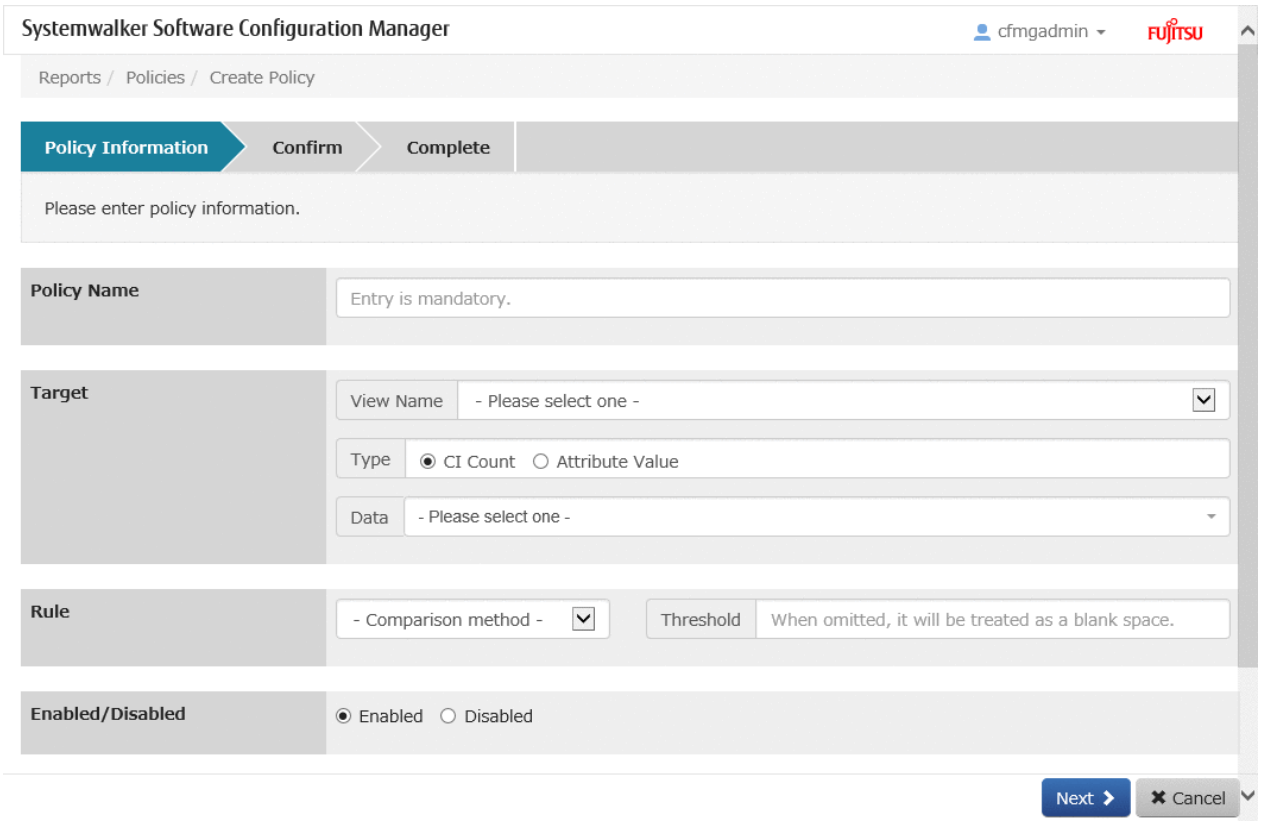
This section explains the operation procedure of the **Policy Wizard** window.

Display method

In the **Policies** window, click the **Create** button or the **Edit** button.

4.3.3.1 Policy Information

Enter the policy information.



Operation method

Define the display method of a view. Configure the following information for each column.

Display Item		Description
Policy Name		Enter the policy name.
Target	View Name	Select a view.
	Type	Select a type.
	Data	Select data.
Rule	Comparison method	Select a comparison method.
	Threshold	Enter the threshold value.

Display Item	Description
Enabled/Disabled	Select whether to enable or disable the policy.

Operation buttons

Operation Button	Description
Next	Moves to the **Confirm** window.
Cancel	Closes the **Policy Wizard**.

4.4 View Wizard

Use the **View Wizard** window to create or edit views.

4.4.1 Configuring Views

A view is a representation of CI attribute values in a table format. By using views, it is possible to confirm the configurations stored in the CMDB.

When creating a view, first specify the scope of CIs to be displayed in the view. Then specify the display method of the attribute values.

- Scope

  Specify the scope of the CIs to be displayed using the tree structure. In the tree structure, each node indicates a CI and each branch indicates a relationship between CIs. The CIs in the specified tree structure are configured as the scope of the CIs to be displayed in the view.

- Display method

  Define the attributes for which values are displayed and the listing order. Select attributes from the attributes of the CIs specified for the scope.

Information

This product provides the following predefined views:

View Name	Description
VM Host Centric	A view that displays relationships between VM hosts and VM guests and their data.
Tenant Centric	A view that displays relationship between server groups and servers and their data.

4.4.2 Creating Views

This section explains the flow of creating a view.

4.4.2.1 Defining View Information

Define the view information. Specify the following information:

Item	Description
Name	The name of the view. Specify a character string of up to 85 characters. Names cannot be omitted.

4.4.2.2 Defining Scopes

This section explains the definition of a scope.

Specify the scope using the tree structure. Specify the following information for each hierarchy level in the tree structure. Information can be defined for level 1 to level 5.

Item	Description
Level number	The number of the level in the hierarchy. Hierarchy levels are numbered in ascending order, starting with 1 for the top level.
CI Name	The name of the CI displayed at the corresponding level. Specify a character string using up to 85 characters as the description of the CI. CI names cannot be omitted.
CI to Display	The CI to be displayed at that level.
Conditions	When filtering the CIs to be displayed, specify the conditions.
Attribute to use as label	The attribute to be used as the CI label. The value of the specified attribute is displayed as the label of each CI in the tree structure.

4.4.2.2.1 CI to Display

Select the CIs to display.

- CIs that can be specified for lower levels are determined by the CIs specified for the upper levels.
- CIs that are specified at two levels higher than the corresponding level cannot be specified again.

CI to Display	CI Type	Description	CIs that Can Be Specified for Lower Levels
All tenants	Tenant	All tenants.	All server groups
All server groups	Server groups	All server groups.	- All tenants - CIs with a server CI type, excluding "All VM hosts"
All servers	Servers	All servers.	- All server groups - All VM hosts - CIs with a software CI type - All patches - Windows patches - Linux patches - Solaris patches
Manually added servers	Servers	Manually added servers.	
Servers of ServerView Resource Orchestrator	Servers	Servers of ServerView Resource Orchestrator.	
OpenStack servers	Servers	OpenStack servers.	
All VM hosts	Servers	VM hosts.	Basic CIs with a server CI type, excluding "All VM hosts"
All software	Software	All software installed on the server.	- CIs with a server CI type, excluding "All VM hosts" - Software parameters - All patches - Manually added patches
Manually added software	Software	Information collection sources installed on the server are manually installed software. This CI contains the following attribute condition: - The ID of the information collection source is "Direct"	
Fujitsu middleware	Software	Fujitsu middleware installed on the server. This CI contains the following attribute condition:	

CI to Display	CI Type	Description	CIs that Can Be Specified for Lower Levels
		- The ID of the information collection source is "UpdateAdvisor"	- Fujitsu middleware patches
All patches	Patches	All patches that are applied to the server.	- CIs with a server CI type, excluding "All VM hosts" - CIs with a software CI type
Windows patches	Patches	Windows patches that are applied to the server. This CI contains the following attribute condition: - The patch type is "OS" - The patch is classified as "101" to "109"	CIs with a server CI type, excluding "All VM hosts"
Linux patches	Patches	Linux patches that are applied to the server. This CI contains the following attribute condition: - The patch type is "OS" - The patch is classified as "200"	
Solaris patches	Patches	Solaris patches that are applied to the server. This CI contains the following attribute condition: - The patch type is "OS" - The patch is classified as "300"	
Manually added patches	Patches	Information collection sources that are applied to the server are manually added patches. This CI contains the following attribute condition: - Patch type is "middleware" - The ID of the information collection source is "Direct"	CIs with a software CI type
Fujitsu middleware patches	Patches	Fujitsu middleware patches that are applied to the server. This CI contains the following attribute condition: - Patch type is "middleware" - The ID of the information collection source is "UpdateAdvisor"	
Software parameters	Software parameters	All software parameters.	CIs with a software CI type

4.4.2.2.2 Conditions

Specify the conditions for filtering the CIs to be displayed. Specify conditions using the following logical expressions. The CIs of the attributes for which the result of the logical expression is true are displayed. Attributes, comparison operators, and values that can be specified for keywords are explained below.

```
Attribute Comparison_Operator Keyword
```

Attribute

Attributes that can be specified differ depending on the CI type of the CI. Refer to "CI Reference" in the *Reference Guide* for details.

Comparison Operator

It is possible to specify the following conditions using combinations of keywords and comparison operators.

Keyword	Comparison Operator	Meaning
Character string	==	True if the attribute value and the character string specified as the keyword are same.
	!==	True if the attribute value and the character string specified as the keyword are not same.
	<, <=, >, >=	Compares Unicode points between the attribute value and the character string. Comparison is performed in order, starting with the leftmost character of the string.
Numeric value	=	True if the numeric value in the attribute value and the numeric value specified as the keyword are the same. The numeric value in the attribute value refers to the number that is found first in the attribute value.
	!=	True if the numeric value in the attribute value and the numeric value specified as the keyword are not the same. The numeric value in the attribute value refers to the number that is found first in the attribute value.
	<, <=, >, >=	Compares the numeric value in the attribute value with the numeric value specified as the keyword. The numeric value in the attribute value refers to the number that is found first in the attribute value.
Patterns	=	True if the attribute value matches the pattern specified as the keyword.
	!=	True if the attribute value does not match the pattern specified as the keyword.

Keyword

- Character string

  Specify a character string.

- Numeric value

  Specify a numeric value.

  - Any commas (",") in the integer part of the numeric value are ignored.
  - When the value starts with "+" or "-", the value is evaluated as a positive or negative value, respectively.

- Patterns

  The following patterns can be specified. Combinations of multiple patterns can be specified. "Beginning matching" and "ending matching" can each be specified one time only.

  - Character string match

    Specify the desired character string. True if the specified character string is contained in the attribute value.

    Example: When the attribute value contains the character string "Interstage Application Server", the condition is found to be true.

Comparison Operator	Keyword
=	Interstage Application Server

  - Beginning matching

    Specify "^" as the first character. True if the pattern after "^" appears first in the attribute value.

    Example: When the attribute value begins with "Interstage Application Server", the condition is found to be true.

Comparison Operator	Keyword
=	^Interstage Application Server

- Ending matching

  Specify "$" as the last character. True if the pattern before "$" appears last in the attribute value.

  Example: When the attribute value ends with "Interstage Application Server", the condition is found to be true.

Comparison Operator	Keyword
=	Interstage Application Server$

- Wildcard characters

  True regardless what character string is specified for the attribute at the locations where the following symbols are specified.

Symbol	Meaning	Repeated Use
.	An arbitrary character	Yes
.?	No (zero) characters or an arbitrary character	Yes
.+	One or more arbitrary characters	No
.*	No (zero) characters or one or more arbitrary characters	No

  Example: When the attribute value contains "A" and "B" and zero or more characters are contained in between the two characters, the condition is found to be true.

Comparison Operator	Keyword
=	A.*B

Note

Escape characters

When specifying the following characters, escape by specifying "\" before the corresponding character.

```
" $ & ' ( ) * + , - . ? [ \ ] ^ { | } ~
```

Point

Multiple keywords

When specifying multiple conditions for one attribute, specify multiple keywords. When specifying the second and subsequent keywords, specify the relation with the preceding keywords using the following symbols:

Symbol	Meaning
|	True if the result of either one of the conditions composed of a keyword and a comparison operator before and after the symbol is true.
&	True if the results of both of the conditions composed of a keyword and a comparison operator before and after the symbol are true.

Example: When the attribute value contains either "Windows" or "Linux", the condition is determined as true.

Comparison Operator	Keyword
=	Windows|Linux

Logical operators

Each condition can be specified for only one attribute. To specify conditions for multiple attributes, it is necessary to specify multiple conditions. When specifying the second and subsequent conditions, specify the relation with the preceding conditions using the following logical operators: When both AND and OR exist, AND takes priority.

Logical Operator	Meaning
AND	True if both conditions are true. False if either one of the conditions is false.
OR	False if both conditions are false. True if either one of the conditions is true.

An example is shown below. When all of Condition_1, Condition_2, and Condition_3 are true or Condition_4 is true, the condition is determined as true.

```
Condition_1 AND Condition_2 AND Condition_3 OR Condition_4
```

4.4.2.3 Defining Display Methods

This section explains the definition of display methods.

Specify the following information for each column. Up to 10 columns can be defined.

Item	Description
Column number	The column number. Columns are numbered in sequence starting with 1 for the leftmost column.
Column name	The column name. Specify a character string describing the information output to the column, using up to 85 characters. Column names cannot be omitted.
Attribute	The attribute for which values are displayed. Select from the attributes of the CIs in the hierarchy level.

4.4.2.4 Advisory Notes when Creating Views

- When the software has multiple parameters, the following attributes have multiple values. In the view, multiple values are displayed for the following attributes.
  - Key
  - Value
  - Type
  - Index
  - Subkey
- In order to link the information displayed in the view with resources, it is recommended to specify the following attributes for **Attribute to use as label** of **Scope** and **Attribute** of **Display Method**.

CI Type	Attribute
Tenant	Tenant display name or tenant ID

CI Type	Attribute
Server groups	Server group name or server group ID
Servers	Server name, server ID, or IP address
Software	Software name or software ID
Patches	Patch name or patch ID

4.4.3 Operation

This section explains the operation procedure of the **View Wizard** window.

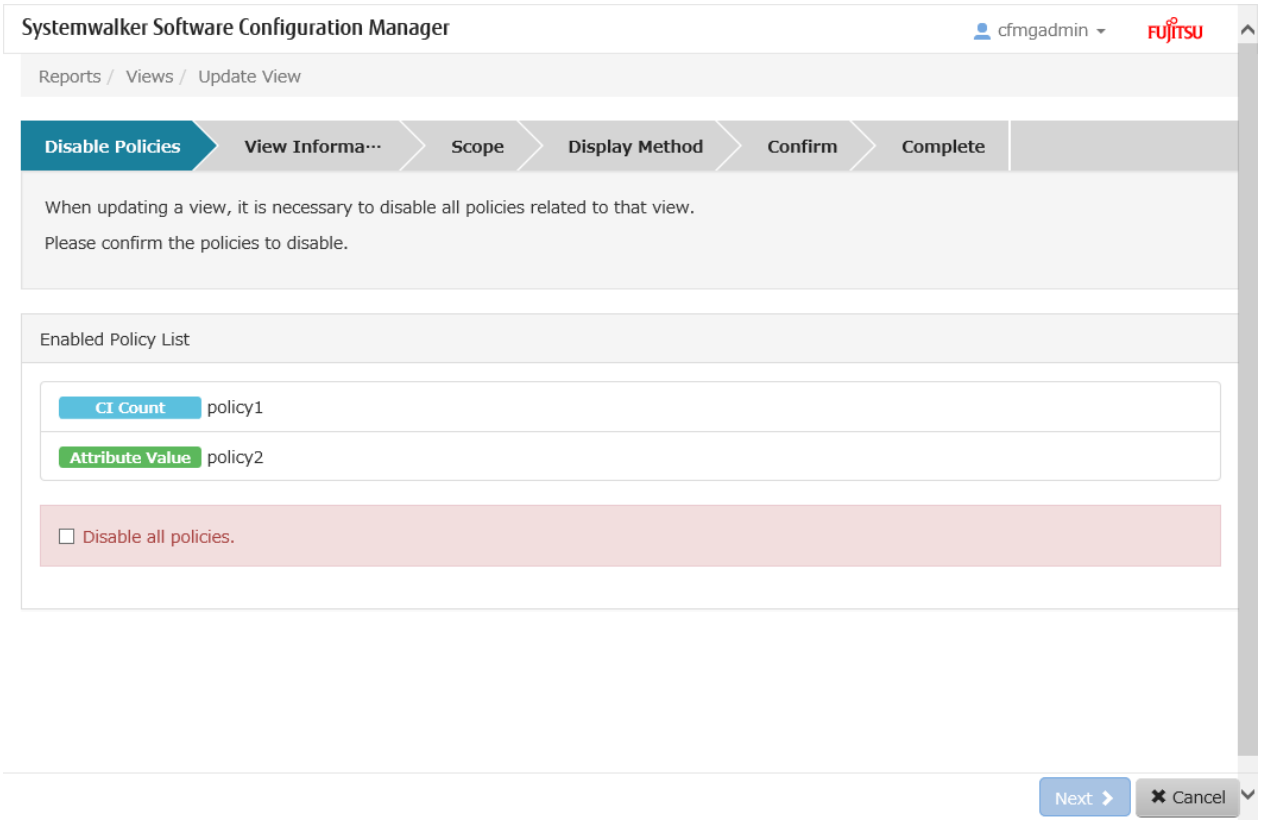
Display method

In the **Views** window, click the **Create** button or the **Edit** button.

4.4.3.1 Disabling Policies

When editing a view, all policies that are configured for that view are disabled. Confirm enabled policies using this window. After editing the view, review the content of the policies that were disabled and enable those policies.

This window is not displayed when creating a new view.



Operation method

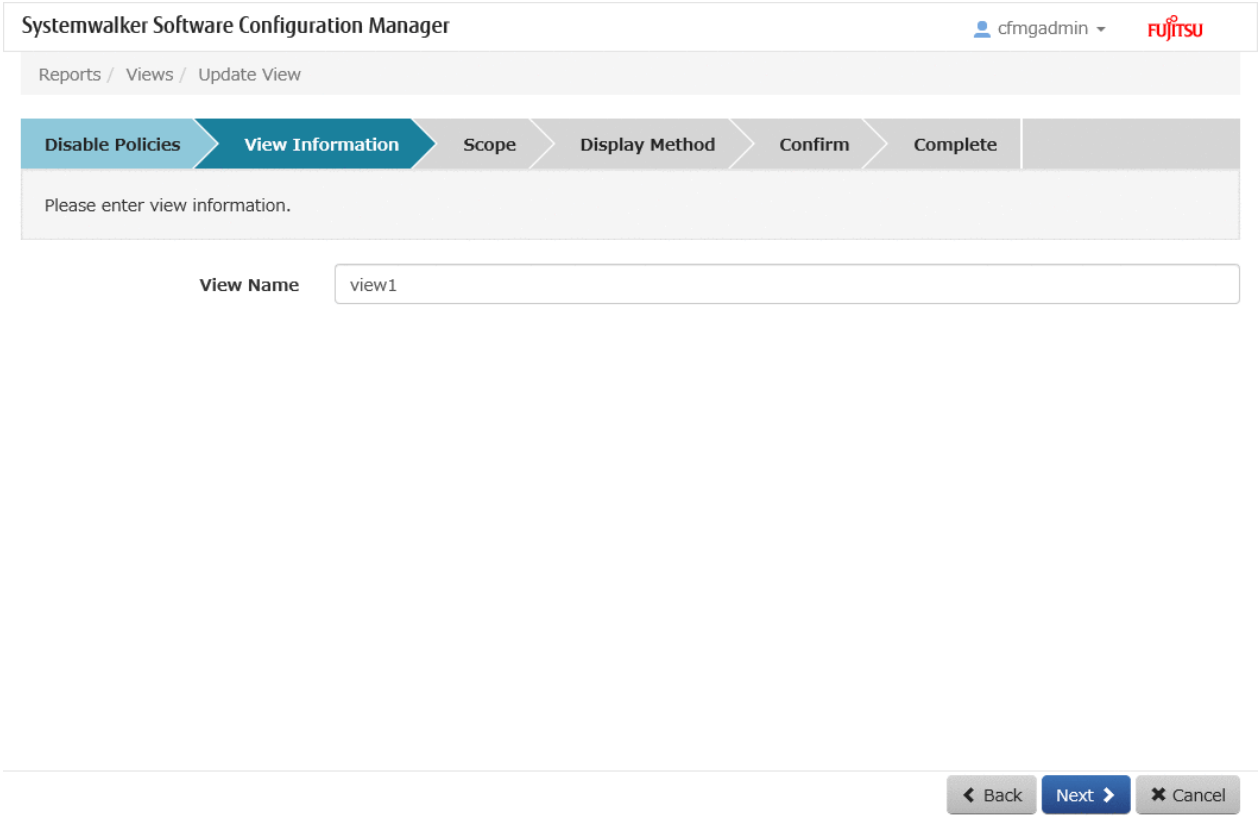
Display Item	Description
Enabled Policy List	Displays enabled policies. - Disable all policies. Confirm the enabled policies that are displayed and then check this checkbox.

Operation buttons

Operation Button	Description
Next	Moves to the **View Information** window.
Cancel	Closes the **View Wizard**.

4.4.3.2 View Information

Enter the view information.



Operation method

View Information

Enter the view information.

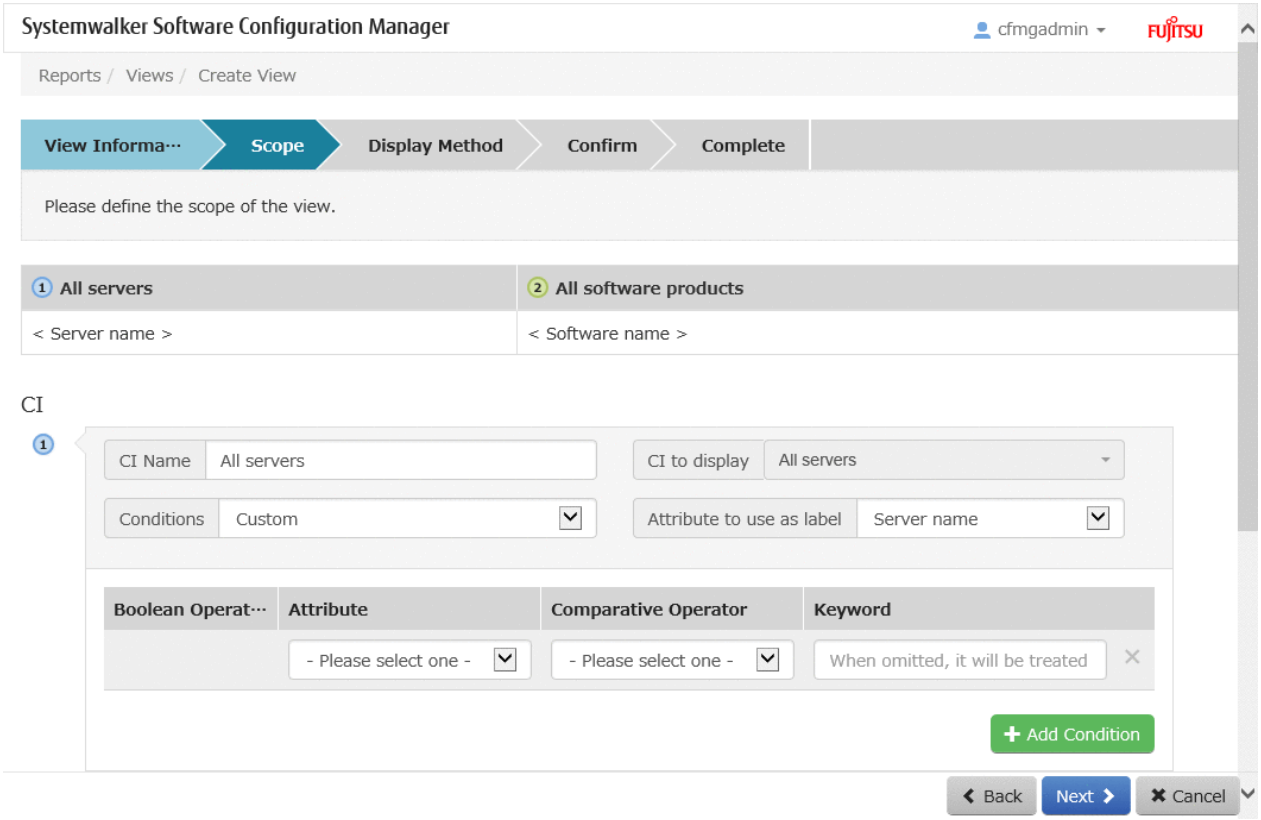
Display Item	Description
View Name	Enter the view name.

Operation buttons

Operation Button	Description
Next	Moves to the **Scope** window.
Cancel	Closes the **View Wizard**.

4.4.3.3 Scope

When **Next** is clicked in the **View Information** window, the **Scope** window is displayed.



Operation method

Scope

Define the scope of the view. Configure the following information for each hierarchy level.

Display Item	Description
CI Name	Enter the CI name.
CI to Display	Select the CIs to display.
Conditions	Specify conditions. Select one of the following: - Do not specify No conditions are specified. - Custom Specify conditions. Specify the logical operators, attributes, and comparison operators displayed below, and enter keywords.
Attribute to use as label	Select an attribute to use as the label.

Conditions

When filtering the CIs to be displayed at the level, specify the conditions. Specify the following information:

Display Item	Description
Boolean Operator	Select a logical operator.
Attribute	Select an attribute.
Comparison operator	Select a comparison operator.

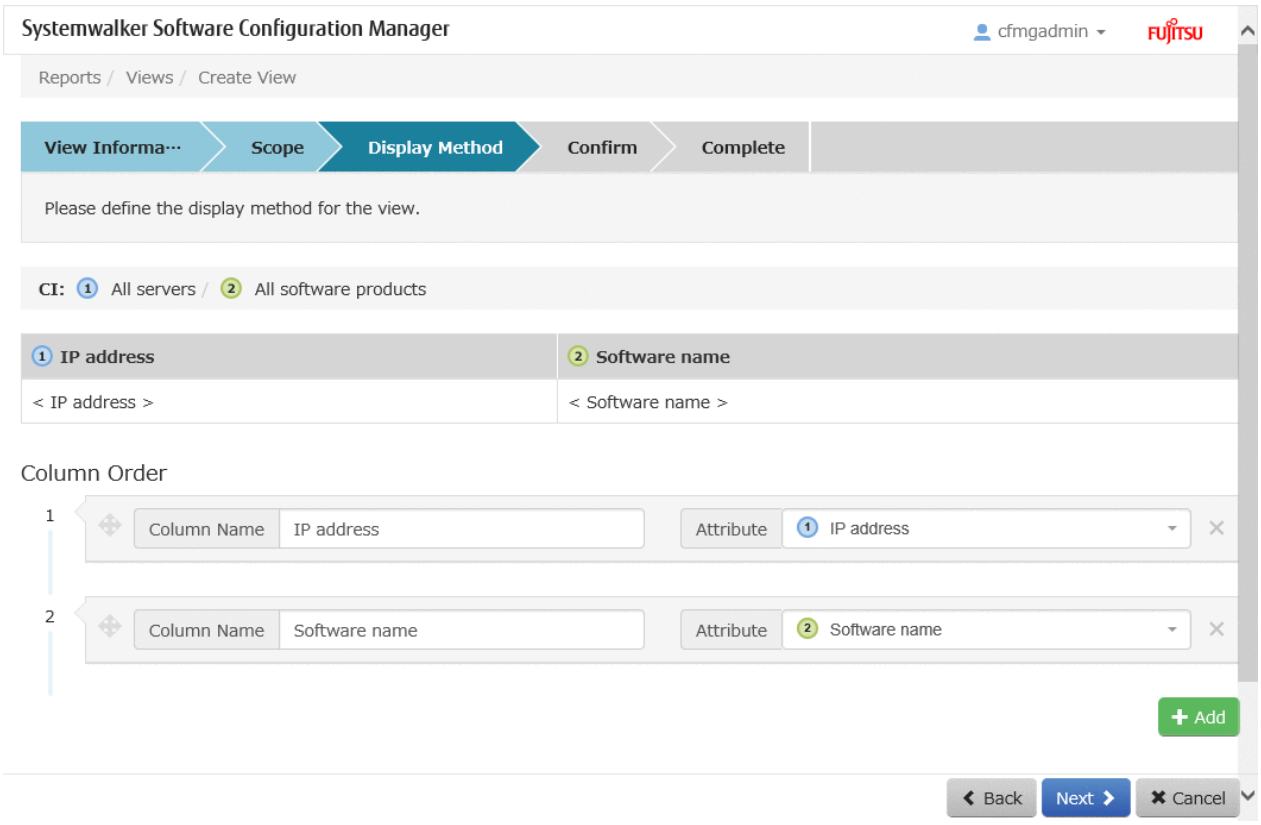
Display Item	Description
Keyword	Enter a keyword.

Operation buttons

Display Item	Description
Add	Add a hierarchy level.
Back	Returns to the **View Information** window.
Next	Moves to the **Display Method** window.
Cancel	Closes the **View Wizard**.

4.4.3.4 Display Method

When **Next** is clicked in the **Scope** window, the **Display Method** window is displayed.



Operation method

Display Method

Define the display method of a view. Configure the following information for each column.

Display Item	Description
Column name	Enter the column name.
Attribute	Select an attribute.

Operation buttons

Display Item	Description
Add	Adds a column.

Display Item	Description
Back	Returns to the **Scope** window.
Next	Moves to the **Confirm** window.
Cancel	Closes the **View Wizard**.

Chapter 5 Job Management

The following operations can be performed from the **Job management** window:

- Job list

  Displays a list of jobs. It is possible to display information that has been filtered by specifying particular conditions.

- Job details

  Displays job details. Job status can be checked. Actions can also be taken.

- Process details

  Displays process details. Process details and results can be checked. Actions can also be taken.

Note

Advisory notes when stopping Systemwalker Software Configuration Manager

When stopping Systemwalker Software Configuration Manager, execute the following command first to confirm that jobs for patch distribution/application, parameter configuration, script execution, or configuration modification are not running. If a job is not running, it will not be displayed in the list.

[Windows]

```
[Systemwalker Software Configuration Manager installation directory]\SWCFMGM\sample
```

[Linux]

```
/opt/FJSVcfmgm/bin/swcfmg_job -list -status running
```

See

Actions when the admin server goes down while a job is operating

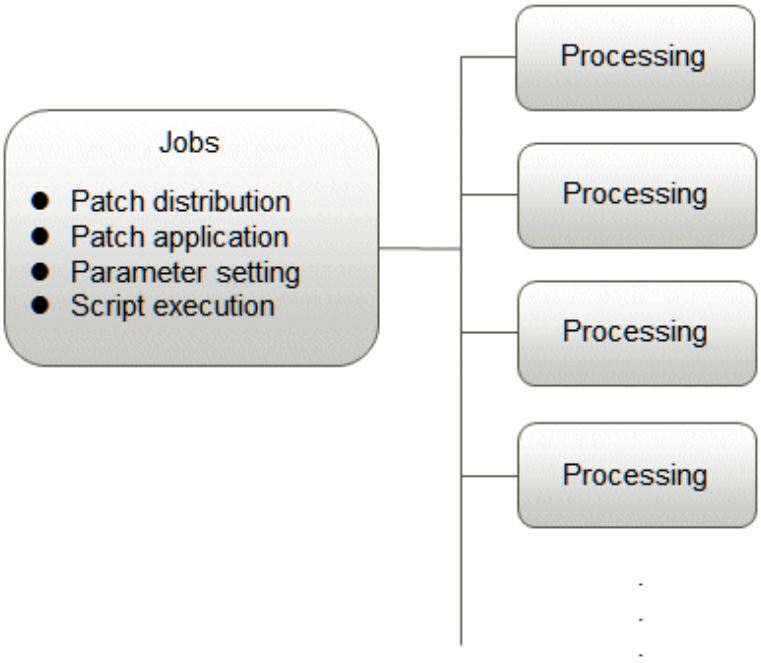
During job operations such as patch distribution/application, parameter settings, script execution, or configuration modification, when the system of the admin server goes down, after recovery of the admin server, it is necessary to stop the job that did not operate correctly.

For details on how to take corrective action when the admin server goes down, refer to the *Troubleshooting Guide*.

5.1 Job configuration

The job configuration is shown below.

Figure 5.1 Job configuration



Items that can be checked by jobs are listed below:

Item	Description	Checked using:
Job ID	An ID that uniquely identifies the job	- **Job list** window - **Job details** window - List display of job information management commands - Detailed display of job information management commands
Job name	The name of the job. For each job name, the following character string is automatically set: When performing configuration modification using the **Configuration Modification** wizard or the configuration modification commands. If patches are applied using the **Patch Application** wizard or the patch application command: Patch application request + "_"+ Job ID + "_" + "server name" If patches are distributed using the **Patch Application** wizard or the patch application command: Patch distribution request + "_"+ Job ID + "_" + "server name" If parameters are configured using the **Parameter Settings** wizard or swcfmg_param_startsetting (Parameter Setting command): Parameter settings request + "_"+ Job ID + "_" + "server name" If scripts are executed using the **Script Execution** wizard or the script execution command: Script execution request + "_"+ Job ID + "_" + "server name"	
Job type	Type of job. The job types are shown below: Patch application: If patches are applied using the **Patch Application** wizard or the patch application command Patch distribution: If patches are distributed using the **Patch Application** wizard or the patch application command Parameter settings: If parameters are configured using the **Parameter Settings** wizard or swcfmg_param_startsetting (Parameter Setting command) Script execution: If scripts are executed using the **Script Execution** wizard or the script execution command	

Item	Description	Checked using:
	- **Configuration Modification**: When performing configuration modification using the **Configuration Modification** wizard or the configuration modification commands.	
Status	Status of the job. The status values are shown below: Running: The job is executing Complete: The job has ended normally Selecting (Abnormal): The job process has ended in an error and is waiting for the user to select an action Complete (Abnormal): An unexpected error has occurred during the job process, and the job has ended in error Waiting: The job is waiting for the scheduled time Canceled: The job has been canceled by request	
Owner	Administrator of the job. The person making the request becomes the administrator.	
Tenant	The tenant managing the job.	
Start datetime	Date and time the job was started.	
End datetime	Date and time the job ended.	
Target	Execution target of the job. For example, the patch application target refers to the server(s) that will have patches applied.	
Process details	Execution content of the job.	- **Process details** window - Detailed display of job information management commands
Process results	Execution results of the job.	

5.1.1 Processes

The following tables show the processes executed by jobs. The processes executed by a job differ depending on the job type.

Patch application

Process name	Process type	Description	Settings information	Value
Acceptance	Acceptance	Always executed.	None	None
Schedule standby	Schedule standby	Executed if **Specific date and time** was specified at **Application method** >> **Schedule**.	Schedule datetime	Value specified in **Specific date and time** at **Application method** >> **Schedule**
Server operation check	Server operation check	Always executed.	Target server(s)	Server(s) specified in the **Servers** window or at **Select servers**
			Monitoring time	A value specified using the application method. When executing the scripts from the

Process name	Process type	Description	Settings information	Value
				management console, 0 minutes is specified.
Pre-execution script	Pre-execution script	Executed if a pre-execution script is registered at **Application method** >> **Script registration**.	Target server(s)	Server(s) specified in the **Servers** window or at **Select servers**
			Script information	Script registered at **Application method** >> **Script registration**
			Normal return value	A value specified using the application method.
Patch application	Patch application	Always executed.	Target server(s)	Server(s) specified in the **Servers** window or at **Select servers**
			Patch information	The patch specified in the **Windows OS Patches** window, **Linux OS patches** window, or **Select patches**
Post-execution script	Post-execution script	Executed if a post-execution script is registered at **Application method** >> **Script registration**.	Target server(s)	Server(s) specified in the **Server list** or at **Select servers**
			Script information	Script registered at **Application method** >> **Script registration**
			Normal return value	A value specified using the application method.
Restart operating system	Restart operating system	Executed if **Yes** was selected at **Application method** >> **Reboot after application**.	Target server(s)	Server(s) specified in the **Servers** window or at **Select servers**

Patch distribution

Process name	Process type	Description	Settings information	Value
Acceptance	Acceptance	Always executed.	None	None
Schedule standby	Schedule standby	Executed if **Specific date and time** was specified at **Application method** >> **Schedule**.	Schedule datetime	Value specified in **Specific date and time** at **Application method** >> **Schedule**
Server operation check	Server operation check	Always executed.	Target server(s)	Server(s) specified in the **Servers** window or at **Select servers**
			Monitoring time	A value specified using the application method. When executing the scripts from the management console, 0 minutes is specified.
Pre-execution script	Pre-execution script	Executed if a pre-execution script is registered at **Application method** >> **Script registration**.	Target server(s)	Server(s) specified in the **Servers** window or at **Select servers**
			Script information	Script registered at **Application method** >> **Script registration**
			Normal return value	A value specified using the application method.

Process name	Process type	Description	Settings information	Value
Patch distribution	Patch distribution	Always executed.	Target server(s)	Server(s) specified in the **Server list** window or at **Select servers**
			Patch information	Patch(es) specified in the **Fujitsu middleware patch list** window or at **Select patches**
Post-execution script	Post-execution script	Executed if a post-execution script is registered at **Application method** >> **Script registration**.	Target server(s)	Server(s) specified in the **Server list** or at **Select servers**
			Script information	Script registered at **Application method** >> **Script registration**
			Normal return value	A value specified using the application method.
Restart operating system	Restart operating system	Executed if **Yes** was selected at **Application method** >> **Reboot after application**.	Target server(s)	Server(s) specified in the **Servers** window or at **Select servers**

Parameter settings

Process name	Process type	Description	Settings information	Value
Acceptance	Acceptance	Always executed.	None	None
Schedule standby	Schedule standby	Executed if **Specific date and time** was specified at **Execution method** >> **Schedule**.	Schedule datetime	Value specified in **Specific date and time** at **Execution method** >> **Schedule**
Server operation check	Server operation check	Always executed.	Target server(s)	Server(s) specified in the **Server list** window or at **Select servers**
			Monitoring time	A value specified using the execution method. When executing the scripts from the management console, 0 minutes is specified.
Pre-execution script	Pre-execution script	Executed if a pre-execution script is registered at **Execution method** >> **Script registration**.	Target server(s)	Server(s) specified in the **Servers** window or at **Select servers**
			Script information	Script registered at **Enter execution method**
			Normal return value	A value specified using the execution method.
Parameter settings	Parameter settings	Always executed.	Target server(s)	Server(s) specified in the **Servers** window or at **Select servers**
			Software information	Software information specified in the **Server Details** window or at **Software selection**
			Parameter settings information	Parameter settings information specified in **Parameter Settings** or at **Edit Parameter Information**

Process name	Process type	Description	Settings information	Value
Post-execution script	Post-execution script	Executed if a post-execution script is registered at **Execution method** >> **Script registration**.	Target server(s)	Server(s) specified in the **Server list** or at **Select servers**
			Script information	Script registered at **Execution method**
			Normal return value	A value specified using the execution method.
Restart operating system	Restart operating system	Executed if **Yes** was selected at **Execution method** >> **Restart after execution**.	Target server(s)	Server(s) specified in the **Servers** window or at **Select servers**

Script execution

Process name	Process type	Description	Settings information	Value
Acceptance	Acceptance	Always executed.	None	None
Schedule standby	Schedule standby	Executed if **Specific date and time** was specified at **Execution method** >> **Schedule**.	Schedule datetime	Value specified in **Specific date and time** at **Execution method** >> **Schedule**
Server operation check	Server operation check	Always executed.	Target server(s)	Server(s) specified in the **Servers** window or at **Select servers**
			Monitoring time	A value specified using the execution method. When executing the scripts from the management console, 0 minutes is specified.
Script execution	Script execution	Always executed.	Target server(s)	Server(s) specified in the **Servers** window or at **Select servers**
			Script information	Script registered at **Enter execution method**
			Normal return value	A value specified using the execution method.
Restart operating system	Restart operating system	Executed if **Yes** was selected at **Execution method** >> **Restart after execution**.	Target server(s)	Server(s) specified in the **Servers** window or at **Select servers**

Configuration Modification

Process name	Process type	Description	Setting information	Value to specify
Reception	Reception	Always executed.	None	None
Scheduled standby	Scheduled standby	When the schedule has been specified in **Execution Method**, the process is executed.	Schedule date	A date specified in the schedule of the **Execution Method**

Process name	Process type	Description	Setting information	Value to specify
For the process the above, the process defined in the configuration modification template is executed.				

5.1.2 Action

When an error or something that requires a decision by the user occurs, a pre-defined response (action) can be performed for the corresponding process and job.

Actions can be performed from the **Job management** window or using the job information management command. For details, refer to "Job Management" in the *Operator's Guide* or "Job Information Management Command" in the *Reference Guide*. Actions that can be executed for each process are shown below.

Process type	Action	Description
Schedule standby	Cancel	Cancels the schedule and the job. Can be performed during execution of this process.
Server operation check	Retry	Reexecutes this process. Can be performed if an error occurs during this process.
	Cancel	Cancels the job. Can be performed if an error occurs during this process.
Script execution	Retry	Reexecutes this process. Can be performed if an error occurs during this process.
	Cancel	Cancels the job. Can be performed if an error occurs during this process.
	Continue	Moves to the next process. Can be performed if an error occurs during this process.
Patch application	Retry	Reexecutes this process. Can be performed if an error occurs during this process.
	Cancel	Cancels the job. Can be performed if an error occurs during this process.
	Continue	Moves to the next process. Can be performed if an error occurs during this process.
Patch distribution	Retry	Reexecutes this process. Can be performed if an error occurs during this process.
	Cancel	Cancels the job. Can be performed if an error occurs during this process.
	Continue	Moves to the next process. Can be performed if an error occurs during this process.
Parameter settings	Retry all	Reexecutes this process. Sets parameters for all software in which settings can be configured. Can be performed if an error occurs during this process.
	Retry	Reexecutes this process. Sets parameters for software in which an error occurred during the parameter setting process, or for software in which parameters have not yet been configured. Can be performed if an error occurs during this process.

Process type	Action	Description
	Cancel	Cancels the job. Can be performed if an error occurs during this process.
	Continue	Moves to the next process. Can be performed if an error occurs during this process.
Restart operating system	Retry	Reexecutes this process. Can be performed if an error occurs during this process.
	Cancel	Cancels the job. Can be performed if an error occurs during this process.
	Continue	Moves to the next process. Can be performed if an error occurs during this process.
Command execution	Retry	Re-executes this process. This can be performed if an error occurs during this process.
	Cancel	Cancels the job. This can be performed if an error occurs during this process.
	Continue	Moves to the next process. This can be performed if an error occurs during this process.
File distribution	Retry	Re-executes this process. This can be performed if an error occurs during this process.
	Cancel	Cancels the job. This can be performed if an error occurs during this process.
	Continue	Moves to the next process. This can be performed if an error occurs during this process.
File collection	Retry	Re-executes this process. This can be performed if an error occurs during this process.
	Cancel	Cancels the job. This can be performed if an error occurs during this process.
	Continue	Moves to the next process. This can be performed if an error occurs during this process.

5.2 Operation

This section explains the operation procedure of the **Job management** window.

5.2.1 Job list

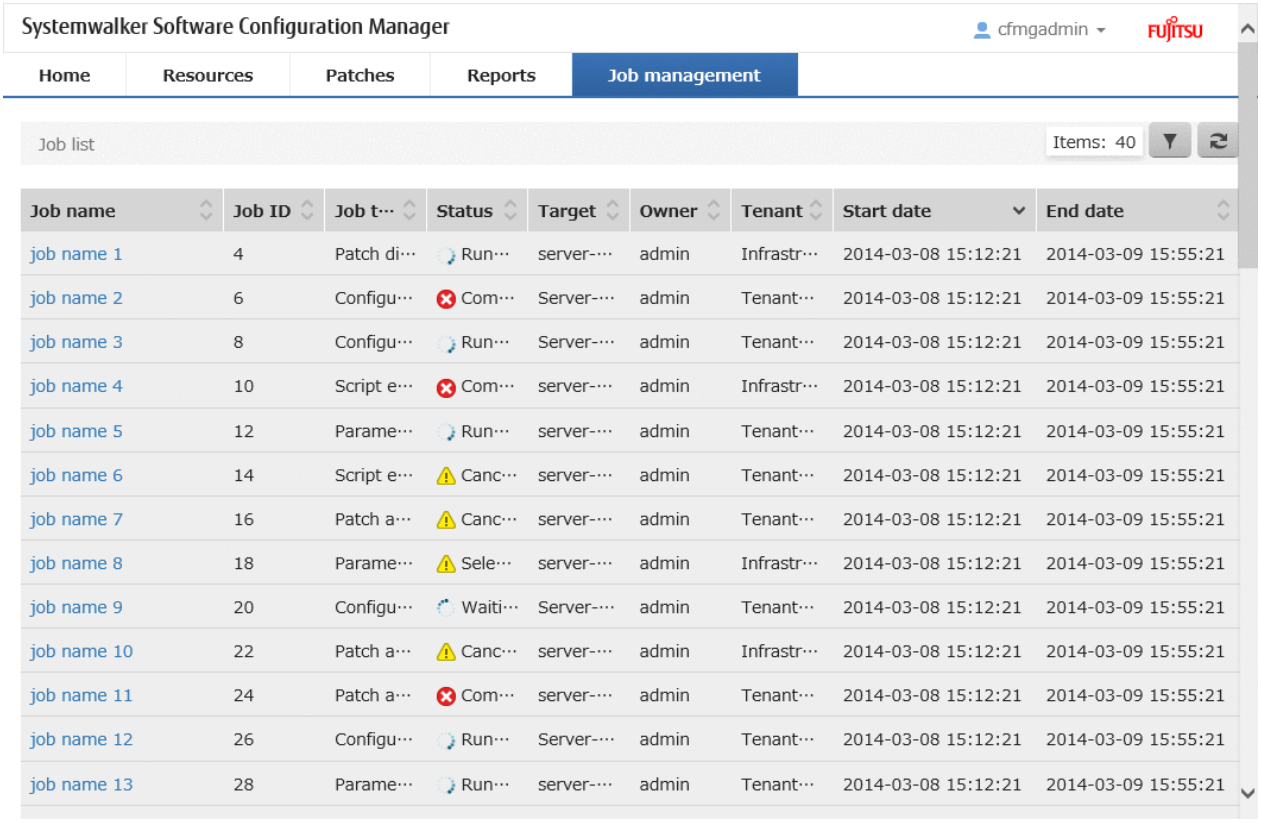
Display method

1. Log in to the management console.

   Use either of the following methods to display the list.

   a. Select **Job management** from the menu in the management console.

   b. Click the **Job management** link in the **Home** window.



Operation method

Filter search

Click the button at the top right of the window to specify the conditions for filtering the information in the server list.

Display Item	Description
Filter	The following filter conditions can be specified. Multiple filter conditions can be specified. - Job name - Job type - Status - Target - Owner - Tenant - Start date - End date

Display item

The following table shows the items that are displayed in the job list:

Display Item	Description
Job name	Displays the name of the job. Clicking a job name displays the **Job details** window.

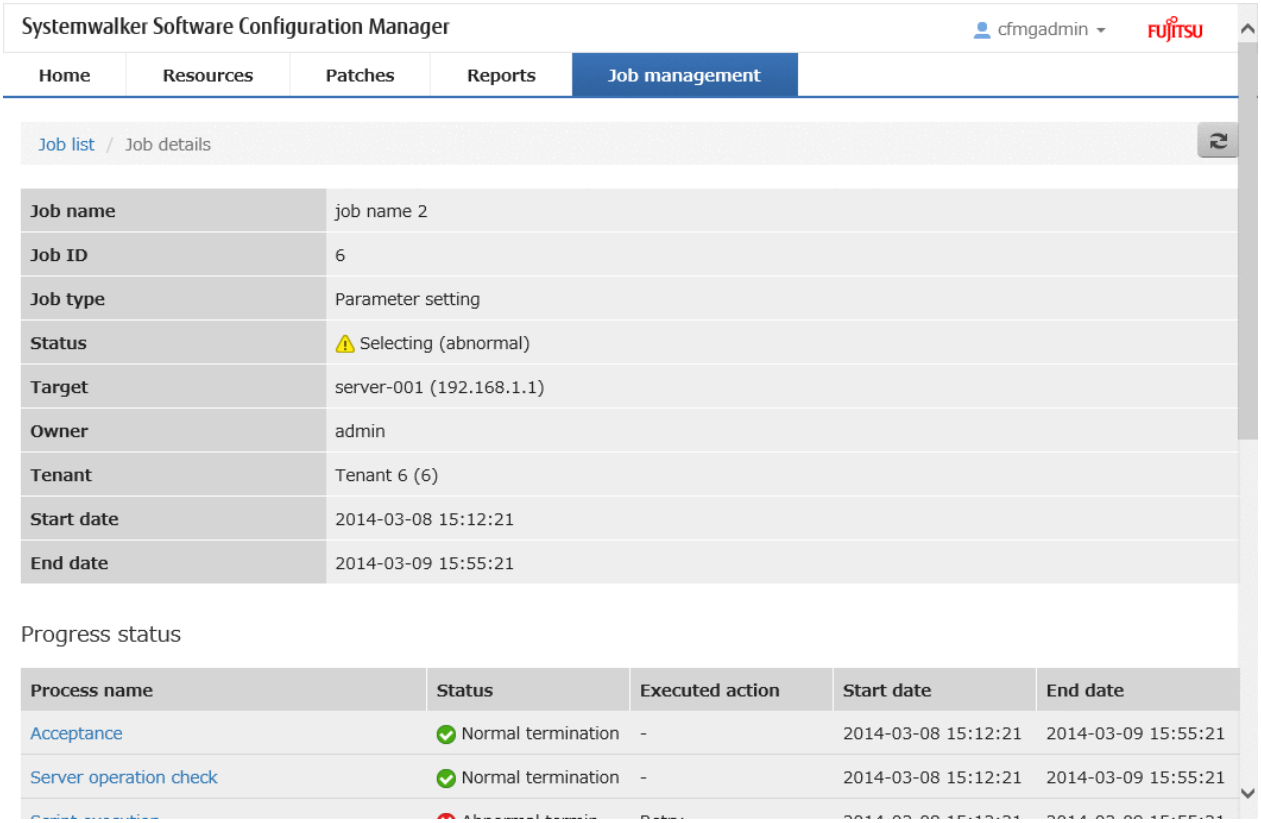
Display Item	Description
Job ID	Displays the job ID.
Job type	Displays the type of the job. - Patch application - Patch distribution - Parameter settings - Script execution - Configuration modification
Status	Displays the status of the job. - Running - Waiting - Selecting (abnormal) - Completed - Completed (abnormal) - Canceled
Target	Displays the target of the job.
Owner	Displays the administrator of the job.
Tenant	Displays the tenant that the job belongs to.
Start date	Displays the date and time the job was started.
End date	Displays the date and time the job ended.

5.2.2 Job details

Display method

1. Click a job name from the **Job list** window.
2. The **Job details** window is displayed.

   The **Job details** window shows the information and the progress of the job. Actions can also be taken.



Operation method

Job details

Job information is displayed in the top section of the window.

Display Item	Description
Job name	Displays the name of the job.
Job ID	Displays the job ID.
Job type	Displays the type of the job. - Patch application - Patch distribution - Parameter settings - Script execution - Configuration modification
Status	Displays the status of the job. - Running - Waiting - Selecting (abnormal) - Completed - Completed (abnormal) - Canceled
Target	Displays the target of the job.

Display Item	Description
Owner	Displays the administrator of the job.
Tenant	Displays the tenant that the job belongs to.
Start date	Displays the date and time the job was started.
End date	Displays the date and time the job ended.

Progress status

Job progress is displayed in the top section of the window. Progress status shows the status of the process executed by the job as history data.

Display Item	Description
Process name	Displays the name of the process. Clicking a process name displays the **Process details** window.
Status	Displays the status of the process. When **Running** is displayed, the process is being executed. When **Canceled** is displayed, the process is not executed because the job was canceled using the **Cancel** action. - Normal termination - Abnormal termination - Unexpected error - Waiting - Running - Canceled
Executed action	The action which was executed. When Selecting is displayed, execution of the action by the user is being waited. - Retry - Retry all - Cancel - Continue - Selecting
Start date	The date and time the process was started.
End date	The date and time the process ended.

Operation buttons

Actions can be executed from the **Job details** window. For the actions that can be executed, refer to "Action" in the *Operator's Guide*.

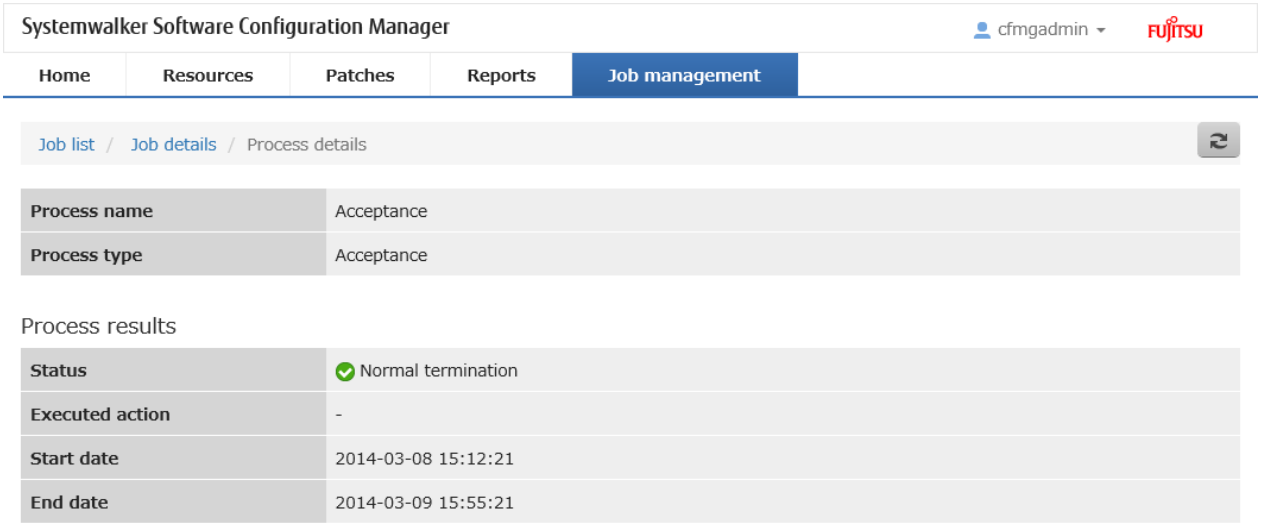
Operation buttons	Description
- Retry - Retry all - Cancel - Continue	Executes an action.

5.2.3 Process Details

Display method

1. Click a job name from the **Job list** window.
2. The **Job details** window is displayed. Click a process name from **Progress status** in the **Job details** window.
3. The **Process details** window will be displayed.

   The **Process details** displays the details and the result of the process. Actions can also be taken.



Operation method

Process details

Detailed information about the process is displayed in the top section of the window.

Display Item	Description
Process name	Displays the name of the process.
Process type	Displays the type of the process.
Setting information	Settings information about the process is displayed. Items displayed for **Settings Information** differ depending on the process type.

The following table shows the items displayed in ***Settings Information***: The acceptance process does not have settings information.

Process type	Display Item	Description
Scheduled standby	Schedule date	The scheduled date and time.
Server operation check	Server name	The server name.
	Server ID	The server ID.

Process type	Display Item	Description
	IP address	The IP address.
	Monitoring time	The monitoring time.
Patch application (Windows patches)	Server name	The server name.
	Server ID	The server ID.
	IP address	The IP address.
	Patch name	The patch name.
	Class	The class level.
	Patch type	The patch type.
	Update program ID	An update program ID.
Patch application (Linux patches)	Server name	The server name.
	Server ID	The server ID.
	IP address	The IP address.
	Package name	The package name.
	Version	The version.
	Release	The release.
Patch distribution	Server name	Server name.
	Server ID	The server ID.
	IP address	The IP address.
	Patch name	The patch name.
	Importance	The importance.
	Update type	The update type.
Parameter setting	Server name	The server name.
	Server ID	The server ID.
	IP address	The IP address.
	Setting order	The setting order.
	Product name	The product name.
	Version	The version.
	Parameter information name	The name of the parameter information.
- Script execution - Script execution of configuration modification (when the scripts are uploaded from the browser)	Server name	The server name.
	Server ID	The server ID.
	IP address	The IP address.
	Script	The script name. Clicking the **Download** button downloads a script.
	Argument	An argument of the scripts.
	Normal return value	A normal return value.
	Single-user mode	Whether single-user mode is being used.
Script execution of configuration modification (when the	Server name	The server name.
	Server ID	The server ID.
	IP address	The IP address.

Process type	Display Item	Description
scripts are selected from the assets)	Script	The script name.
	Argument	An argument of the scripts.
	Normal return value	A normal return value.
	Asset name	An asset name.
	Asset ID	An asset ID.
	Version number	A version.
- Pre-execution script - Post-execution script	Server name	The server name.
	Server ID	The server ID.
	IP address	The IP address.
	Script	The script name. Clicking the Download button downloads a script.
	Normal return value	A normal return value.
	Single-user mode	Whether single-user mode is being used.
OS restart	Server name	The server name.
	Server ID	The server ID.
	IP address	The IP address.
Command execution	Server name	The server name.
	Server ID	The server ID.
	IP address	The IP address.
	Command	A command.
	Argument	An argument of commands.
	Normal return value	A normal return value.
	Single-user mode	Whether single-user mode is being used.
File distribution	Server name	The server name.
	Server ID	The server ID.
	IP address	The IP address.
	Distribution file	A file to distribute.
	Distribution destination	A distribution destination of files.
	Asset name	An asset name.
	Asset ID	An asset ID.
	Version number	A version.
File collection	Server name	The server name.
	Server ID	The server ID.
	IP address	The IP address.
	Collection file	A file to collect.
	Storage location	The storage location of collection files.

Process results

Process results are displayed in the top section of the window.

Display Item	Description
Status	Displays the status of the process. When **Running** is displayed, the process is being executed. When **Canceled** is displayed, the process is not executed because the job was canceled using the **Cancel** action. - Normal termination - Abnormal termination - Unexpected error - Waiting - Running - Canceled
Executor	Displays the user who executed the process If the process was executed using a command, "#COMMAND" is displayed.
Executed action	The action which was executed. When Selecting is displayed, execution of the action by the user is being waited. - Retry - Retry all - Cancel - Continue - Selecting
Start date	Displays the date and time the process was started.
End date	Displays the date and time the process ended.
Message information	Displays message information regarding the process.

The following table shows the items displayed in ***Message information***: Multiple message information may be displayed. For message details, refer to the *Message Guide*.

Display Item	Description
Message ID	Displays the message ID.
Error type	Displays the type of the error.
Message text	Displays the message text.
Parameter information	When the message text contains the following variable items, parameter and index values are displayed. Multiple parameter information may be displayed. [*Parameter*:{*Index*}]

Operation buttons

Actions can be executed from the **Job details** window. For the actions that can be executed, refer to "Action" in the *Operator's Guide*.

Operation button	Description
- Retry - Retry all - Cancel	Executes an action.

Operation button	Description
- Continue	