



Systemwalker Software Configuration Manager

Operator's Guide

Windows/Linux

Preface

Purpose of this Document

This document explains patch management procedures and how to manage software configuration information from the management console in Systemwalker Software Configuration Manager V15.1.0.

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 Configuration Management

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

Chapter 3 Patch Management

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

Chapter 4 Task Management

This chapter explains how to manage tasks 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) 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	Windows
Microsoft(R) Windows Server(R) 2003 R2, Standard Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition	Windows Server 2003 R2	
Red Hat(R) Enterprise Linux(R) (for x86)	RHEL (x86)	RHEL
Red Hat(R) Enterprise Linux(R) (for Intel64)	RHEL (Intel64)	

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Chapter 1 Management Console

Systemwalker Software Configuration Manager provides a management console as a GUI for managing the software configuration and patch application status information for business servers and for applying patches to business servers.

1.1 Overview of the Management Console

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

- Software configuration information management

Software configuration information management involves collecting and managing software configuration information for business servers (such as server names, tenant names, host names and IP addresses).

If a problem occurs with a server, patches that have been applied since the server was last running correctly can be checked by comparing the current configuration baseline with the configuration baseline at the time when the server was running correctly.

The configuration items in the CMDB can also be looked up, updated, deleted and registered.

- Patch management

Patch management involves managing the following patch information:

- Windows patches
- Linux patches
- Fujitsu middleware patches

Patch management also collects and manages the application status of patches from repository servers and business servers, and distributes or applies unapplied patches to business servers.

- Task management

Task management involves managing tasks for distributing and applying patches.

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 SSL 3.0 and TLS 1.0.

1.2 Flow of Operations

Systemwalker Software Configuration Manager uses the following kind of flow to manage patches and software configurations for servers.

Download patches

This step involves downloading patches for the operating system and Fujitsu middleware from the vendor's website 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.

Patches for Fujitsu middleware are downloaded and registered with Systemwalker Software Configuration Manager by the infrastructure administrator.

2. Distribute and apply patches

This step involves distributing and applying patches to business 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 patches for Fujitsu middleware and apply these patches by registering scripts.

3. Perform discovery

This step involves periodically and automatically collecting the patch application status and software configuration information for business servers from linkage servers, business servers and ServerView Resource Orchestrator, and then storing this information in the configuration management database (CMDB).

4. Monitor patch application and manage software configuration information

This step involves checking the patch application status information that is discovered from linkage servers and business servers.

Infrastructure administrators and dual-role administrators can check the patch application status and software configuration information for all the servers in the data center by logging in to the management console for Systemwalker Software Configuration Manager.

Tenant administrators can check information for all the servers relating to their tenants, whereas tenant users can check information for the servers that they manage themselves.

Fujitsu Internet UpdateSite Tenant administrator Infrastructure administrator Dual-role administrator Download patches . Download patches Tenant user 4. Monitor patch application and manage software configuration information Linkage server Internet terminal Systemwalker Software Configuration Manager Repository server Media library CMDB Configuration information (observed records) Patch information Server A Windows 2008 ω 2. Distribute and apply patches Windows 2008 KB1111111 Perform Security: Urgent KB111111 Security: Urgent KB2222222 Security: Urgent KB3333333 Patch: Critical discover KB3333333 Patch: Critical Business servers ServerView Resource Orchestrator Set up parameters : Patch flow : Information/processing flow

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 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 patches for Fujitsu middleware and register them with Systemwalker Software Configuration Manager.
- Infrastructure administrators can use the management console to look up patch application status and software configuration information for all the 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 apply patches to their tenant's servers.

Tenant user

- Tenant users use the management console to apply patches to the servers that they manage.
- Tenant users can use the management console to look up patch application status and software configuration information for the servers that they manage.

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	Remarks
Home	Home	Function list	Y	Y	Y	Y	A list of functions is displayed.
		Notifications	Y	Y	Y	Y	Notifications from the system are displayed.
Configuration management	Server list	Server list	Y	Y	Y	Y	Clicking the links for server names displays the server details.
		Patch application wizard button	-	Y (*1)	Y (*1)	Y	The Patch Application Wizard is displayed.
	Server Details	List of installed software programs	Y	Y	Y	Y	Clicking the links for product names displays the software details.

Function	Window	Information displayed/button	Infrastructure administrator	Dual-role administrator	Tenant administrator	Tenant user	Remarks
		List of unapplied OS patches	Y	Y	Y	Y	A list of unapplied OS patches is displayed.
		List of applied OS patches	Y	Y	Y	Y	A list of applied OS patches is displayed.
		List of unapplied Fujitsu middleware patches	Y	Y	Y	Y	A list of unapplied middleware patches is displayed.
		List of applied Fujitsu middleware patches	Y	Y	Y	Y	A list of applied middleware patches is displayed.
		Patch application wizard button	-	Y (*1)	Y (*1)	Y	The Patch Application Wizard is displayed.
		Compare configuration baselines button	Y	Y	Y	Y	The Configuration Baseline List window is displayed.
	Software list		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 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 Ba Results	aseline Comparison	Y	Y	Y	Y	The configuration baseline comparison results are displayed.

Function	Window	Information displayed/button	Infrastructure administrator	Dual-role administrator	Tenant administrator	Tenant user	Remarks
	Patch Applicatio	n Wizard	-	Y (*1)	Y (*1)	Y	The Patch Application Wizard to select the target servers first is displayed.
	Maintenance	View CI	Y	Y	-	-	The configuration information registered in the CMDB can be viewed.
		Register CI	Y (*1)	Y (*1)	-	-	New configuration information can be registered in the CMDB.
		Update/delete CI	Y (*1)	Y (*1)	-	-	The configuration information registered in the CMDB can be updated or deleted.
		Import CI	Y (*1)	Y (*1)	-	-	Configuration information can be imported in the CMDB.
Patch management	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

Function	Window	Information displayed/button	Infrastructure administrator	Dual-role administrator	Tenant administrator	Tenant user	Remarks
							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 ID links, whereas server details are displayed from the Server name links.
		Patch application wizard button	-	Y (*1)	Y (*1)	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 ID links, whereas server details are displayed from the Server name links.
		Patch application wizard button	-	Y (*1)	Y (*1)	Y	The Patch Application Wizard is displayed.
	Patch list	Windows patch list	Y	Y	Y	Y	Patch details are displayed from the Patch ID links.
		Linux patch list	Y	Y	Y	Y	Patch details are displayed from the Patch ID links.
		Fujitsu middleware patch list	Y	Y	Y	Y	Patch details are displayed from the Patch ID links.
		Download CSV file button	Y	Y	Y	Y	A list of patches is output in CSV format.
		Patch application wizard button	-	Y (*1)	Y (*1)	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.

Function	Window	Information displayed/button	Infrastructure administrator	Dual-role administrator	Tenant administrator	Tenant user	Remarks
		List of servers with unapplied patches	Y	Y	Y	Y	The servers where the selected patch has not been applied are displayed.
		List of servers with applied patches	Y	Y	Y	Y	The servers where the selected patch has been applied are displayed.
		Patch application wizard button	-	Y (*1)	Y (*1)	Y	The Patch Application Wizard is displayed.
	Patch application	wizard	-	Y (*1)	Y (*1)	Y	The Patch Application Wizard to select the required patches first is displayed.
Task management	Task list	My tasks	Y	Y	Y	Y	A list is displayed for the tasks that the login user can currently operate for a patch application request.
		My Completed Tasks	Y	Y	Y	Y	A list is displayed for the tasks for which the patch application request has completed.

Y: Can be used.

1.4 Login Users

The users that log in to this product must be registered with ServerView Resource Orchestrator beforehand.

The following table shows the correspondences between the roles for ServerView Resource Orchestrator and the roles for Systemwalker Software Configuration Manager:

^{-:} Cannot be used.

^{*1:} 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.

ServerView Reso	urce Orchestrator	Systemwalker Software Configuration Manager			
Role category	Role name	Role name	Patch distribution/ application operation	Operations in the Configuration management >> Maintenance window	
Infrastructure Administrative Role	Infrastructure administrator	Infrastructure administrator	-	A	
	Infrastructure operator		-	S (*1)	
	Infrastructure monitor		-	S (*1)	
Tenant Management	Tenant administrator	Tenant administrator	A	-	
Roles	Tenant operator		-	-	
	Tenant monitor		-	-	
Tenant Use Roles	Tenant user	Tenant user	A	-	
Multiple Roles	Administrator	Dual-role	A	A	
	Operator	administrator	-	S (*1)	

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.

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:

Starting the management console from a URL

```
https://<Admin server FQDN>:3501/managerview/index.html
```

If the port number for the "rcxctext2" service has been changed from 3501 to another port number when ServerView Resource Orchestrator was installed, specify the new port number.

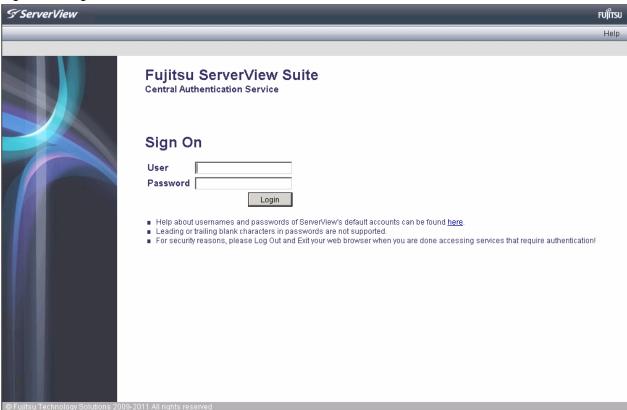
Starting the management console from the Start menu on the admin server

```
Start >> All programs >> Systemwalker Software Configuration Manager >> management console
```

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

^{*1:} Only the View CI menu can be operated.

Figure 1.2 Login window



For the user name and password, log in using a ServerView Resource Orchestrator account.

1.5.2 Logout

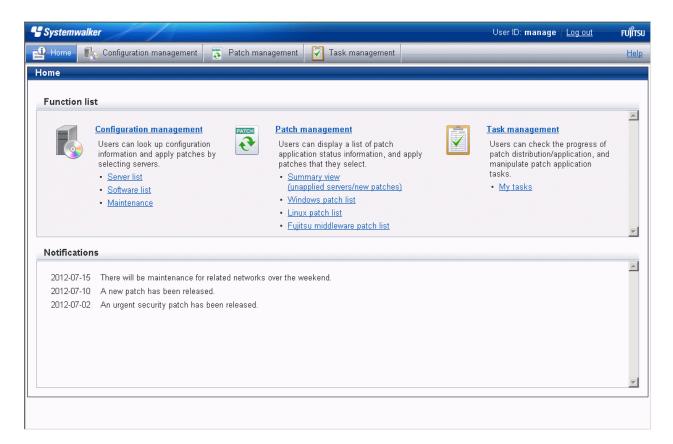
- 1. When **Log out** is selected from the top right of the window, a confirmation message will be displayed.
- 2. Click the **OK** button to log out.

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.

Configuration management

- Server list

Clicking this link displays a server list window.

- Software list

Clicking this link displays a software list window.

- Maintenance

Clicking this link displays a window for looking up, registering, updating, deleting and importing configuration items.

Patch management

- 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 patch list

Clicking this link displays a Windows patch list window.

- Linux patch list

Clicking this link displays a Linux patch list window.

- Fujitsu middleware patch list

Clicking this link displays a Fujitsu middleware patch list window.

Task management

- My tasks

Clicking this link displays a task list window.

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 Configuration Management

The **Configuration management** window provides the following functions:

- Server list

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.

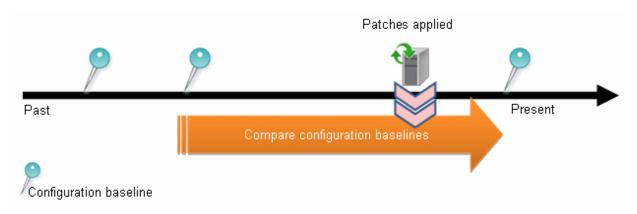
- Software list

The Fujitsu middleware products 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.

- 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.

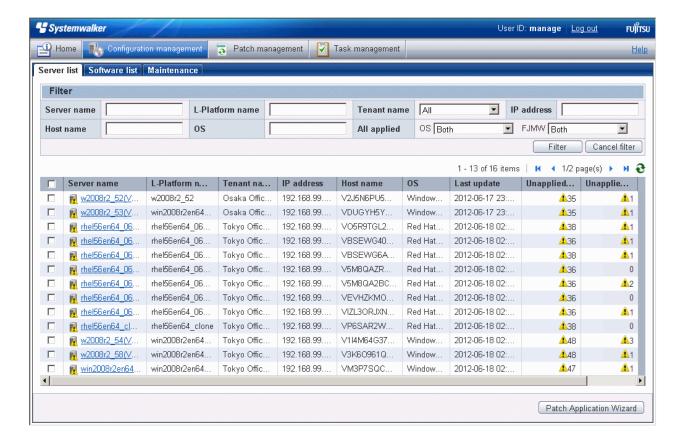
- Maintenance

The Maintenance window can be used to look up, update, delete, register and import the configuration items stored in the CMDB.

2.1 Server list

Display method

- 1. Log in to the management console.
- 2. Use either of the following methods to display the server list:
 - a. Select Configuration management from the menu in the management console.
 - b. Click the **Server list** link in the **Home** window.





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

Infrastructure administrator

Infrastructure administrators can look up information about all servers.

Dual-role administrator

Dual-role administrators can look up information about all servers.

Tenant administrator

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

Tenant user

Tenant users can look up information about the servers that they manage.



Solaris servers are not managed by Systemwalker Software Configuration Manager. Even if Solaris servers have been deployed using ServerView Resource Orchestrator, they will not be displayed in the **Server list** window.



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 Fujitsu middleware 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 servers with unapplied Fujitsu middleware patches

The number of servers with unapplied Fujitsu middleware patches is the number of servers where the Fujitsu middleware patches distributed by Systemwalker Software Configuration Manager have not been applied.

Servers with unapplied Fujitsu middleware patches are not counted as servers with unapplied patches unless these patches have been distributed by Systemwalker Software Configuration Manager.

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
	- L-Platform name
	- Tenant name
	- IP address
	- Host name
	- os
	- All applied
	- FJMW

Display items

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

Display item	Description
Checkbox	Selecting a checkbox selects the corresponding server as a target server for patch application.
Server name	This column displays the server names.
	Clicking a server name link displays the Server Details window.
L-Platform name	This column displays the L-Platform names.
Tenant name	This column displays the tenant names.
IP address	This column displays the IP addresses.
Host name	This column displays the host names.
os	This column displays the operating system names.
Last update	This item displays the date and time when the patch application status was registered with WSUS.

Display item	Description
	This item is not displayed for Linux patches.
Unapplied (OS)	This column displays the number of OS patches that have not been applied.
Unapplied (MW)	This column displays the number of Fujitsu middleware patches that have not been applied.



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	-
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 **Server list** window:

Operation button	Description
Patch application wizard	By using the checkboxes to select the target servers and clicking the Patch application wizard button, a Patch Application Wizard for applying patches is displayed, which can then be used to specify the required patches and method for patch distribution and application.

2.1.1 Server Details

Display method

- 1. Use either of the following methods to display the server details:
 - a. Click a server name link in the **Server list** 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 patches for the operating system and Fujitsu middleware.



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	This item displays the server name.
L-Platform name	This item displays the L-Platform name.
Tenant name	This item displays the tenant name.
IP address	This item displays the IP address.
Host name	This item displays the host name.
os	This item displays the operating system name.
Contact person	This item 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 the software (Fujitsu middleware) products that have been installed.

Item	Description
Product name	This column displays the product names of the software products that have been installed.
Version	This column displays the versions of the software products.

Item	Description
os	This column displays the operating systems (platforms).
Vendor	This column displays the vendors of the software products.

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 ID	This column displays the patch IDs.
Class	This column 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	This column 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	This column displays the product name (operating system name) corresponding to each patch.
Overview	This column displays an overview (or title) of each patch.
Release date	This column displays the date when each patch was released.

Table 2.2 Linux patches

Item	Description
Package name	This column displays the names of the RPM packages.
	Clicking a package name link displays the Patch Details window.
Version	This column displays the versions of the packages.
Release	This column displays the release numbers of the packages.
Architecture	This column displays the architecture for each package.
Overview	This column displays an overview of each package.

Item	Description
Release date	This column displays the date when the package information was registered with Systemwalker Software Configuration Manager.

Information about Fujitsu middleware patch application

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

Item	Description
Patch ID	This column displays the patch IDs.
Class	This column 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	This column displays the importance of each patch.
	- Recommended
	- Important
	- Security
Update type	This column displays the update types of the patches.
	- Urgent
Product name	This column displays the product names.
os	This column displays the operating systems (platforms).
Update title	This column displays an overview (title) of each patch.
Release date	This column displays the date when the patch information was registered with Systemwalker Software Configuration Manager.

Operation buttons

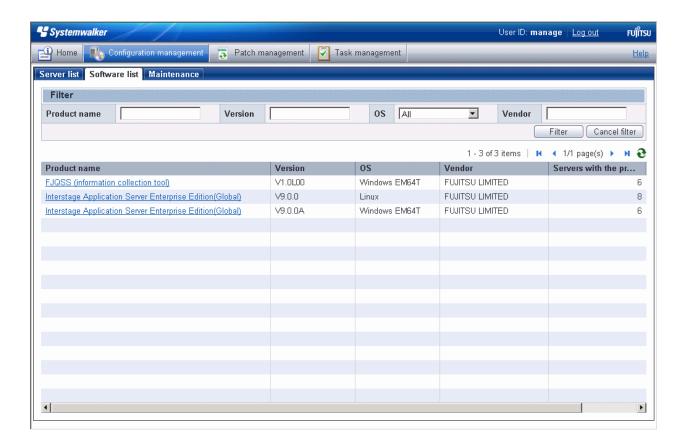
The following operations can be performed from the **Server Details** window:

Operation button	Description
Compare configuration baselines	This button is used to compare configuration baselines. Refer to "2.3 Compare configuration baselines" for details.
Patch application wizard	This button opens the Patch Application Wizard , which allows the user to specify settings for the distribution and application of unapplied patches to the selected servers.
Close	This button closes the window.

2.2 Software list

Display method

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





A list of the software (Fujitsu middleware) products installed on the servers within the range managed by the login user will be displayed.

Infrastructure administrator

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

Dual-role administrator

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

Tenant administrator

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

Tenant user

Tenant users can look up 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

Display item	Description
	- Vendor

Display items

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

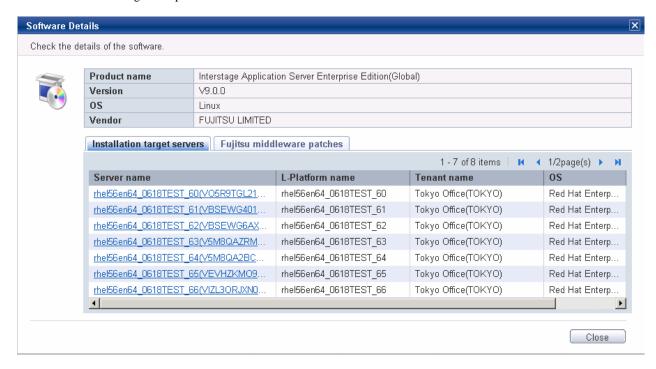
Display item	Description
Product name	This column displays the product names of the software products that have been installed.
Version	This column displays the versions of the software products.
os	This column displays the operating systems (platforms).
Vendor	This column displays the vendors of the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

2.2.1 Software Details Window

Display method

- 1. Click a product name link in the **Software list** 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	This item displays the product name of the software that has been installed.

Item	Description
Version	This item displays the version of the software.
os	This item displays the operating system (platform).
Vendor	This item 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	This column displays the server names.
L-Platform name	This column displays the L-Platform names.
Tenant name	This column displays the tenant names.
os	This column displays the operating systems.

Fujitsu middleware patches

When the **Fujitsu middleware patches** tab in the bottom section of the window is selected, a list of Fujitsu middleware patches is displayed.

Item	Description
Patch ID	This column displays the patch IDs.
Class	This column 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	This column displays the importance of each patch.
	- Recommended
	- Important
	- Security
Update type	This column displays the update types of the patches.
	- Urgent
Update title	This column displays an overview (title) of each patch.
Unapplied servers	This column displays the number of servers where the patch has not been applied.

2.3 Compare configuration baselines

Display method

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

The Configuration Baseline List window will be displayed.



Operation method

Display items

Item	Description
Configuration baseline name	This column displays the configuration baseline names.
	Current configuration information is displayed at the top of the list.
Date and time created	This column 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:

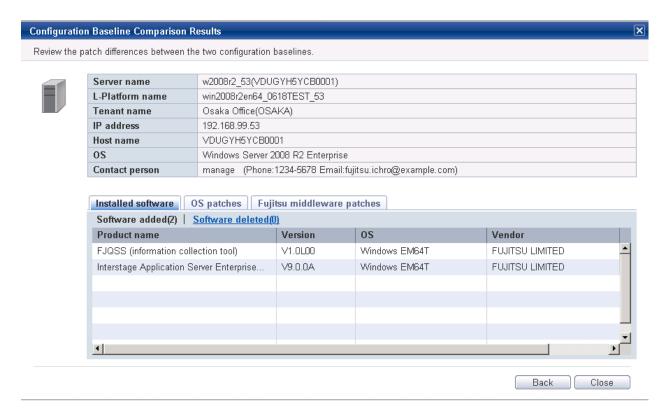
Operation button	Description
Compare	This button is used to compare the two selected configuration baselines.
Cancel	This button is used to return to the Server Details window.

2.3.1 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 the **Compare** button.

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	This item displays the server name.
L-Platform name	This item displays the L-Platform name.
Tenant name	This item displays the tenant name.
IP address	This item displays the IP address.
Host name	This item displays the host name.
os	This item displays the operating system (platform).
Contact person	This item 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	This column displays the product names of the software products that have been installed.
Version	This column displays the versions of the software products.
os	This column displays the operating systems (platforms).
Vendor	This column 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 2.3 Windows patches

Item	Description
Patch ID	This column displays the patch IDs.
	Clicking a patch ID link displays the Patch Details window.
Class	This column 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	This column 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	This column displays the product name (operating system name) corresponding to each patch.
Release date	This column displays the date when each patch was released.
Overview	This column 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 2.4 Linux patches

Item	Description
Package name	This column displays the names of the RPM packages.
	Clicking a package name link displays the Patch Details window.
Version	This column displays the versions of the packages.
Release	This column displays the release numbers of the packages.
Architecture	This column displays the architecture for each package.
Overview	This column displays an overview of each package.
Release date	This column 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)".

Information about the differences in Fujitsu middleware patches

When the **Fujitsu middleware 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 ID	This column displays the patch IDs.
Class	This column 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	This column displays the importance of each patch.
	- Recommended
	- Important
	- Security
Update type	This column displays the update types of the patches.
	- Urgent
Product name	This column displays the product names.
os	This column displays the operating systems (platforms).
Release date	This column 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	This button is used to return to the Configuration Baseline List window.
Close	This button is used to return to the Server Details window.

2.4 Patch Application Wizard

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



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 that they belong to.

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 the **Patch application wizard** button in one of the following windows:
 - Server list 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

Distribution destination for Fujitsu middleware patches

Fujitsu middleware patches are distributed to the following directory:

- Business server

[Windows]

<Systemwalker Software Configuration Manager installation directory>\SWCFMGB\var\distribute

A subdirectory will be created in the above directory with the name "<*Process ID>* yyyy-MM-dd_HH-mm-ss", and patches will be stored in this subdirectory.

[Linux]

/var/opt/FJSVcfmgb/distribute

A subdirectory will be created in the above directory with the name "<*Process ID>* yyyy-MM-dd_HH-mm-ss", and patches will be stored in this subdirectory.

Changing the distribution destination directory

To change the distribution destination directory, edit the following value:

- Business server

[Windows]

The path to the distribution destination directory is defined in the "SWCFMGA_DISTRIBUTE" system environment variable. To change the distribution destination directory, edit the path.

[Linux]

/etc/opt/FJSVcfmgb/config/distribute.properties

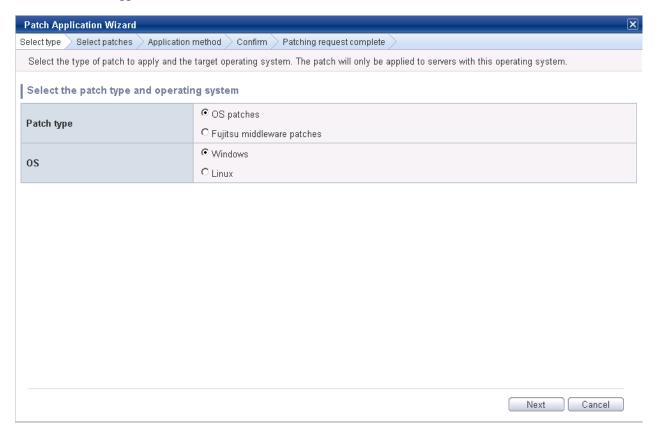
The path to the distribution destination directory is defined in the "distribute_dir" item in the above file. To change the distribution destination directory, edit the path.

Example: distribute_dir=/var/opt/FJSVcfmgb/distribute

2.4.1 Select type

If either of the following operations is performed, the Select type window of the Apply Patches wizard will be displayed:

- Use the checkboxes in the Server list window to select servers, and then click the Patch application wizard button.
- Click the Patch application wizard 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

Item	Description
os	Select either of the following as the operating system to which the patch is 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

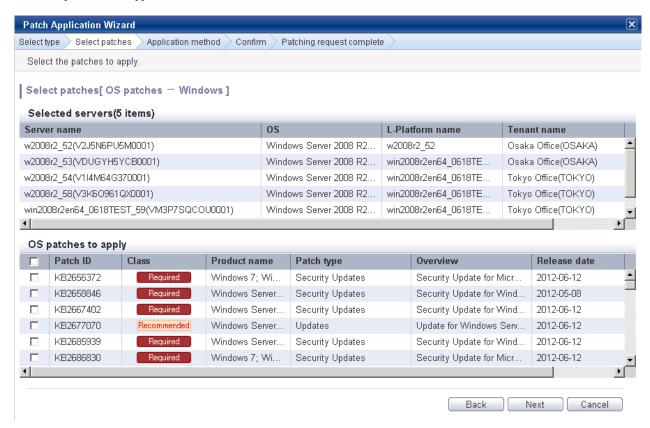
Operation button	Description
Next	This button is used to move to the Select servers window.
Cancel	This button closes the Patch Application Wizard.

2.4.2 Select patches

When the Next button 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	This column displays the server names.

Item	Description
os	This column displays the operating system names.
L-Platform name	This column displays the L-Platform names.
Tenant name	This column displays the tenant names.

Selecting patches

Select the patches to be applied.

Table 2.5 Windows patches

Item	Description
Patch ID	This column displays the patch IDs.
Class	This column 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	This column displays the product name (operating system name) corresponding to each patch.
Patch type	This column 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	This column displays an overview (or title) of each patch.
Release date	This column displays the date when each patch was released.

Table 2.6 Linux patches

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

Table 2.7 Fujitsu middleware patches

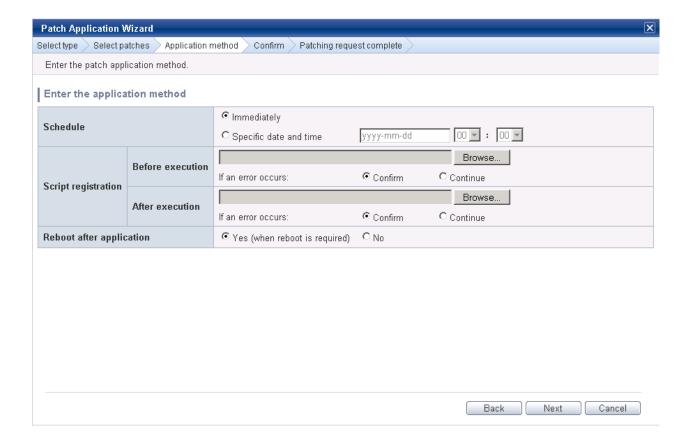
Item	Description
Patch ID	This column displays the patch IDs.
Class	This column displays the classification levels of the patches.
	- Required : Patches that are specified as "Required" in the operation policy settings
	- Recommended : Patches that are specified as "Recommended" in the operation policy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

Operation buttons

Operation button	Description
Back	This button is used to return to the Select servers window.
Next	This button is used to move to the Application method window if a patch has been selected using a checkbox.
Cancel	This button closes the Apply Patches wizard.

2.4.3 Application method

When the Next button 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 registration	Specify the scripts to be executed before and after patch distribution/application, as well as the behavior of patch application processing if an error occurs during script execution.
	Create the scripts registered here so that they output "0" as a return value to indicate normal completion and a value other than "0" as a 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.
	- Confirm: If an error occurs, the user can select the appropriate script processing (such as "retry", "continue processing", or "cancel processing") from the Task management window.
	- Continue: Processing will continue even if an error occurs.
	 Refer to "4.2.6.1 Pre-execution and Post-execution Scripts" for information on the scripts that are registered here.
Reboot after application	Select whether to restart the server after the patch is distributed and applied.

Item	Description	
	- 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.	

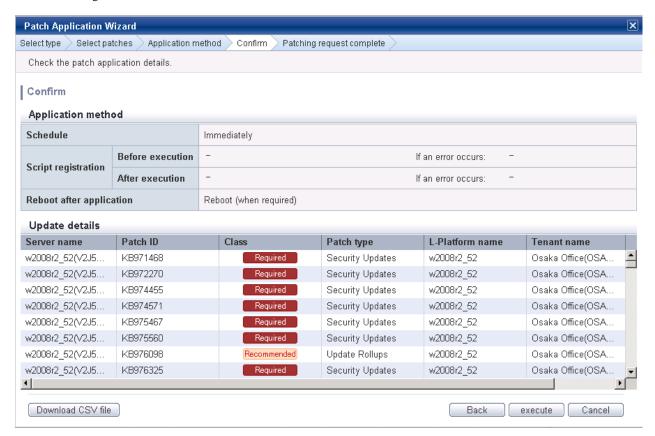
Operation buttons

Operation button	Description	
Back	This button is used to return to the Select patches window.	
Next	This button is used to move to the confirmation window.	
Cancel	This button closes the Apply Patches wizard.	

2.4.4 Confirm

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

Check the settings that have been entered.



Application method

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

Update details

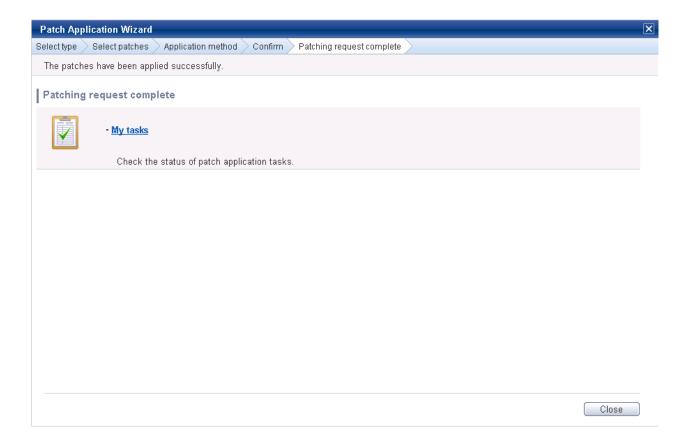
Item		Description	
Server name		This column displays the server names.	
For Windows	Patch ID	This column displays the patch IDs.	
	Class	This column displays the classification levels ("Required" or "Recommended") of the patches.	
	Patch type	This column displays the patch types. (This indicates the classification of updates, which represents the WSUS update program type.)	
For Linux	Package name	This column displays the names of the packages.	
	Version	This column displays the versions of the packages.	
Release		This column displays the release numbers of the packages.	
For Fujitsu	Patch ID	This column displays the patch IDs.	
middleware Importance		This column displays the importance of each patch ("Recommended", "Important" or "Security").	
Update type		This column displays the update type of each patch ("Urgent").	
L-Platform nai	ne	This column displays the L-Platform names.	
Tenant name		This column displays the tenant names.	

Operation buttons

Operation button	Description	
Download CSV file	This button outputs the information displayed in Update details to a CSV file.	
Back	This button is used to return to the Application method window.	
Execute	This button is used to execute the patch application.	
Cancel	This button closes the Apply Patches wizard.	

2.4.5 Patching request complete

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



My tasks

Item	Description	
My tasks	This item (link) allows the user to move to the task list window, where the status of the patch application operation that has been executed can be checked.	

Operation buttons

Operation button	Description
Close	This button closes the Apply Patches wizard.

2.5 Maintenance

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

- View CI

This window displays the relationships between configuration items using a tree, as well as the details of configuration items. It is also used to search for configuration items based on the specified conditions.

- Register CI

This window is used to register new configuration items in the CMDB.

- Update/delete CI

This window is used to update or delete configuration items that have already been registered in the CMDB.

- Import CI

This window is used to register configuration items in the CMDB via a file.

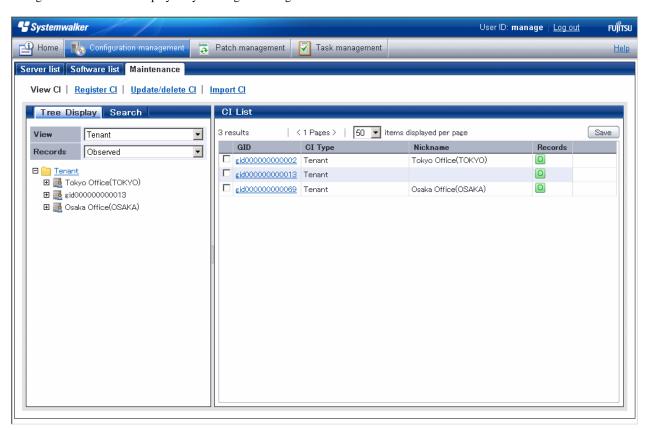
2.5.1 View CI

2.5.1.1 Displaying a Tree of Configuration Items

Display method

- 1. Click the **Maintenance** tab in the **Configuration management** window.
 - The View CI window will be displayed.
- 2. Click the **Tree Display** tab.

Summary information about configuration items is displayed in the **CI List** in the **View CI** window. Also, detailed information about a configuration item can be displayed by clicking the configuration item in the list.



Operation method

Item		Description
Tree Display tab (Displays the	View	This pull-down list box is used to select the tree model for the CIs to be displayed.
relationships between configuration items using a tree.)	Records	This pull-down list box is used to select the record type for the configuration items to be manipulated. There are three record types: Expected, Observed, and Catalog .
List display (Left pane)	Tree display	This section displays folders representing the types of configuration items and trees of configuration items. The configuration items associated with a particular configuration item (where there is a link) can be traced using the tree.
CI List (Displays a list of the configuration items in	GID	This column displays the GIDs of the configuration items. A "GID" is a unique ID for configuration management items. The list can be sorted by GIDs by clicking the GID column header.

Item		Description
the folder selected in the tree. This list is		Clicking a GID link opens a window displaying detailed information about the corresponding configuration item.
displayed when the following item is selected in the View	CI Type	This column displays the types of the configuration items. The list can be sorted by CI types by clicking the CI Type column header.
pull-down list box. Tenant)	Nickname	This column displays the nicknames of the configuration items. The list can be sorted by nicknames by clicking the Nickname column header.
	Records	This column displays the records held by the configuration items. It displays "O" (observed record), "E" (expected record), or "C" (catalog).
	items displayed per page	This column is used to specify the number of configuration items to be displayed in the list. If there are more configuration items than the specified number, those items not displayed can be displayed by clicking the > link.
		To go back, click the < link.
	Save button	This button is used to save the configuration items selected using checkboxes to a file.
CI List (Displays a list of the	VM Host	This column displays the VM hosts. The list can be sorted by VM hosts by clicking the VM Host column header.
configuration items in the folder selected in the tree. This list is displayed when the following item is selected in the View pull-down list box: VM Host)	IP address	This column displays the IP addresses. The list can be sorted by IP addresses by clicking the IP address column header.
	Number of VMs	This column displays the number of VMs. The list can be sorted by the number of VMs by clicking the Number of VMs column header.
	VM Type	This column displays the VM types. The list can be sorted by VM types by clicking the VM Type column header.
	items displayed per page	This column is used to specify the number of configuration items to be displayed in the list. If there are more configuration items than the specified number, those items not displayed can be displayed by clicking the > link.
		To go back, click the < link.
	Save button	This button is used to save the configuration items selected using checkboxes to an XML file.
		- Save selected search results: Saves only the configuration items selected by checkboxes to an XML file.
		- Save all search results: Saves all of the configuration items displayed in the CI list to an XML file.

The method for displaying a list of configuration items from the tree is as follows:

- 1. Click the **Tree Display** tab in the configuration management window.
- 2. Select the desired configuration item tree model from the **View** pull-down list box.

Select the tree model for the CIs to be displayed. Configuration items associated with the selected configuration item in terms of the selected perspective will be displayed in tree format.

The configuration item tree models that can be displayed are as follows:

- Tenant

Displays the tenant and the L-Platforms and L-Servers currently used by the tenant.

- VM Host

Displays a list of VM hosts.

- 3. Select the type of record to be displayed from the **Records** pull-down list box.
- 4. Click the + buttons in the tree to display the configuration item and the other configuration items associated with the target configuration item.
- 5. Select a folder to display a list of configuration items in the CI List.

2.5.1.2 Searching Configuration Items

Display method

- 1. Click the **Maintenance** tab in the **Configuration management** window.
 - The View CI window will be displayed.
- 2. Click the **Search** tab.

Operation method

Item		Description
Search tab (Used to specify the	CI Type	This pull-down list box is used to select the type of configuration item to be searched for.
search conditions for the configuration item search)	Records	This pull-down list box is used to select the record type for the configuration items to be searched. There are three record types: Expected, Observed, and Catalog .
	All Clear button	This button is used to initialize the settings for the type of configuration item to be searched for and the filter conditions.
	Search button	This button is used to perform searches based on the specified type of configuration item to be searched for and the specified filter conditions.
	The Add button for attribute-based conditions	This button is used to set the conditions for filtering results based on the attribute values of configuration items. If multiple attribute values have been specified, searches can be performed by linking the conditions with a logical AND or a logical OR.
	The Add button for conditions based on related configuration items	Specify the conditions for filtering results based on the configuration items associated with the target configuration item. If multiple attribute values have been specified, searches can be performed by linking the conditions with a logical AND or a logical OR.
CI List (Displays a list of configuration items as	GID	This column displays the GIDs of the configuration items. A "GID" is a unique ID for configuration management items. The list can be sorted by GIDs by clicking the GID column header.
the search results.)		Clicking a GID link opens a window displaying detailed information about the corresponding configuration item.
	CI Type	This column displays the types of the configuration items. The list can be sorted by CI types by clicking the CI Type column header.
	Nickname	This column displays the nicknames of the configuration items. The list can be sorted by nicknames by clicking the Nickname column header.
	Records	This column displays the records held by the configuration items. It displays "O" (observed record), "E" (expected record), or "C" (catalog).
	items displayed per page	This column is used to specify the number of configuration items to be displayed in the list. If there are more configuration items than the specified number, those items not displayed can be displayed by clicking the > link.

Item		Description
		To go back, click the < link.
	Save button	This button is used to save the configuration items selected using checkboxes to an XML file.
		- Save selected search results: Saves only the configuration items selected by checkboxes to an XML file.
		- Save all search results: Saves all of the configuration items displayed in the CI list to an XML file.

2.5.1.3 Displaying Details

Display method

- 1. Click the **Maintenance** tab in the **Configuration management** window.
 - The View CI window will be displayed.
- 2. Click the **Tree Display** tab or the **Search** tab.
- 3. The detailed display window is displayed when the link for a GID in the CI List of either the Tree Display window or the Search window is clicked.

Operation method

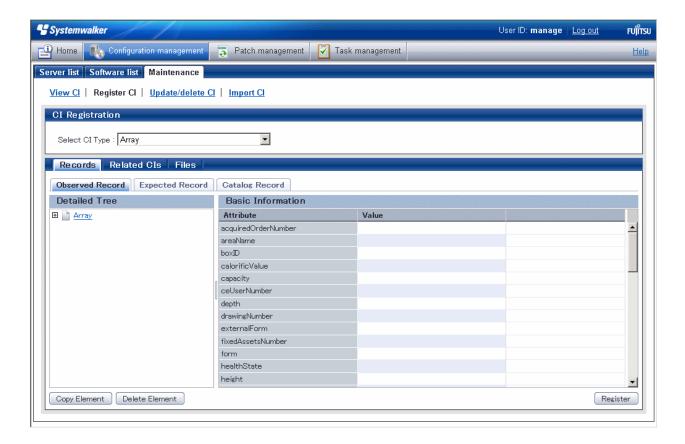
Item			Description
Selected	GID		This column displays the GID of the selected configuration item.
Information	CI Type		This column displays the CI type of the selected configuration item.
	Nickname		This column displays the nickname of the selected configuration item.
	Records		This column displays the record type of the selected configuration item. There are three record types: Expected , Observed , and Catalog .
Records tab (Displays information about	Detailed Tree		This is a tree of the elements that make up the configuration item. When an element is selected, the attribute values for the element are displayed in the Basic Information section.
expected, observed or catalog records)	Basic Information	Attribute	This column displays the names of the attributes. The list can be sorted by attribute names by clicking the Attribute column header.
		Value	This column displays the values of the attributes. The list can be sorted by attribute values by clicking the Value column header.
Related CIs tab (Displays a list of the			This column displays the GIDs of the configuration items. The list can be sorted by GIDs by clicking the GID column header.
configuration items that are related to the configuration item for which the details are being displayed.)	СІ Туре		This column displays the types of the configuration items. The list can be sorted by CI types by clicking the CI Type column header.
	Nickname		This column displays the nicknames of the configuration items. The list can be sorted by nicknames by clicking the Nickname column header.
Records			This column displays the records held by the configuration items. It displays "O" (observed record), "E" (expected record), or "C" (catalog).

Item		Description
	Direction	This column displays the direction of the relation for the configuration items related to the selected configuration item. The list can be sorted by the direction of the relation by clicking the Direction column header.
Files tab (Displays a list of the	File Name	This column displays the names of the files. The list can be sorted by file names by clicking the File Name column header.
files held by the configuration item	Nickname	This column displays the nicknames of the files. The list can be sorted by nicknames by clicking the Nickname column header.
for which the details are being displayed.)	Annotation	This column displays the comments for the files. The list can be sorted by annotations by clicking the Annotation column header.
	File Size	This column displays the size of each file. The list can be sorted by file size by clicking the File Size column header.
	Last Updated	This column displays the date and time when the file was last updated. The list can be sorted by last update date/time by clicking the Last Updated column header.
	File ID	This column displays the IDs of the files. The list can be sorted by file IDs by clicking the File ID column header.
	Version	This column displays the version names of the files. The list can be sorted by version names by clicking the Version column header.
	Hash value	This column displays the hash values for the files. The list can be sorted by hash values by clicking the Hash value column header.
Close button		This button closes the window.

2.5.2 Registering Configuration Items

Display method

- $1. \ \ Click \ the \ {\color{red} {\bf Maintenance}} \ tab \ in \ the \ {\color{red} {\bf Configuration}} \ {\color{red} {\bf management}} \ window.$
- 2. Select the **Register CI** link.



Item			Description
Register CI	Select CI Type	e	This pull-down list box is used to select the CI type of the configuration items to be registered.
Records tab (Displays expected, observed and catalog	Detailed Tree		This is a tree of the elements that make up the configuration item. When an element is selected, the attribute values for the element are displayed in the Basic Information section.
information)	Basic Information	Attribute	This column displays the names of the attributes. The list can be sorted by attribute names by clicking the Attribute column header.
			Values must be entered for the following attributes of each CI type:
			- ID
			- Nickname (if this attribute exists)
			The value of the "ID" attribute must be unique within each CI type. If a configuration item has been registered by specifying an existing value for the "ID" attribute, the existing configuration item will be updated by overwriting it.
			For the following CI types, in addition to the above attributes, values must be entered for the attributes below.
			- L-Server: "IP address" attribute
			- Installed software: "Product name" attribute
			- Installed batch: "Software name" attribute

	Item		Description
		Value	This column displays the values of the attributes. The value of an attribute can be edited by selecting the Value column corresponding to the attribute and then either clicking the column or pressing the Enter key. The list can be sorted by attribute values by clicking the Value column header.
	Copy Element button		This button is used to create a duplicate of the element selected in the Detailed Tree .
	Delete Element	t button	This button is used to delete the element selected in the Detailed Tree .
Related CIs tab (Displays a list of the	GID		This column displays the GIDs of the configuration items. The list can be sorted by GIDs by clicking the GID column header.
configuration items that are related to the configuration item	CI Type		This column displays the types of the configuration items. The list can be sorted by CI types by clicking the CI Type column header.
for which the details are being displayed.)	Nickname		This column displays the nicknames of the configuration items. The list can be sorted by nicknames by clicking the Nickname column header.
	Records		This column displays the records held by the configuration items. It displays "O" (observed record), "E" (expected record), or "C" (catalog).
	Direction Add button		This column displays the direction of the relation for the configuration items related to the selected configuration item. The list can be sorted by the direction of the relation by clicking the Direction column header.
			This button is used to associate the configuration item being edited with another configuration item.
	Remove button		This button is used to delete the relationship with the configuration item selected in the list of related configuration items.
Files tab (Displays a list of the	File Name		This column displays the names of the files. The list can be sorted by file names by clicking the File Name column header.
files held by the configuration item	Nickname		This column displays the nicknames of the files. The list can be sorted by nicknames by clicking the Nickname column header.
for which the details are being displayed.)	Annotation		This column displays the annotations for the files. The list can be sorted by annotations by clicking the Annotation column header.
	File Size		This column displays the size of each file. The list can be sorted by file size by clicking the File Size column header.
	Last Updated		This column displays the date and time when the file was last updated. The list can be sorted by last update date/time by clicking the Last Updated column header.
	File ID		This column displays the IDs of the files. The list can be sorted by file IDs by clicking the File ID column header.
	Version		This column displays the version names of the files. The list can be sorted by version names by clicking the Version column header.

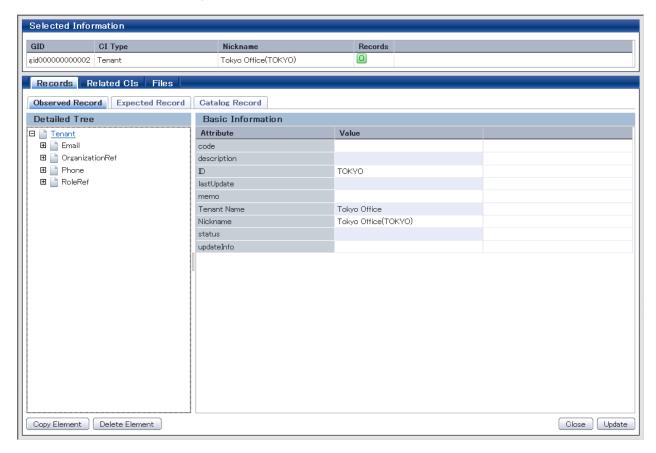
Item	Description
Hash value	This column displays the hash values for the files. The list can be sorted by hash values by clicking the Hash value column header.
Add button	This button is used to add a file to the configuration item.
Remove button	This button is used to delete a file that has been registered with the configuration item.
Register button	This button is used to register the settings with the CMDB.

2.5.3 Update/delete CI

2.5.3.1 Updating Configuration Items

Display method

- 1. Click the **Maintenance** tab in the **Configuration management** window.
- 2. Select the Update/delete CI link.
- 3. Click the GID link for the configuration item to be edited in the CI List.



Operation method

Item		Description
Selected	GID	This column displays the GID of the selected configuration item.
Information	CI Type	This column displays the CI type of the selected configuration item.

Item			Description
	Nickname Records		This column displays the nickname of the selected configuration item.
			This column displays the record type of the selected configuration item. There are three record types: Expected , Observed , and Catalog .
Records tab (Displays expected, observed and catalog	Detailed Tree		This is a tree of the elements that make up the configuration item. When an element is selected, the attribute values for the element are displayed in the Basic Information section.
information)	Basic Information	Attribute	This column displays the names of the attributes. The list can be sorted by attribute names by clicking the Attribute column header.
		Value	This column displays the values of the attributes. The value of an attribute can be edited by selecting the Value column corresponding to the attribute and then either clicking the column or pressing the Enter key. The list can be sorted by attribute values by clicking the Value column header.
Related CIs tab (Displays a list of the			This column displays the GIDs of the configuration items. The list can be sorted by GIDs by clicking the GID column header.
configuration items that are related to the configuration item	СІ Туре		This column displays the types of the configuration items. The list can be sorted by CI types by clicking the CI Type column header.
for which the details are being displayed.)	Nickname		This column displays the nicknames of the configuration items. The list can be sorted by nicknames by clicking the Nickname column header.
	Records		This column displays the records held by the configuration items. It displays "O" (observed record), "E" (expected record), or "C" (catalog).
Files tab (Displays a list of the	File Name		This column displays the names of the files. The list can be sorted by file names by clicking the File Name column header.
files held by the configuration item	Nickname		This column displays the nicknames of the files. The list can be sorted by nicknames by clicking the Nickname column header.
for which the details are being displayed.)	Annotation		This column displays the comments for the files. The list can be sorted by comments by clicking the Annotation column header.
	File Size		This column displays the size of each file. The list can be sorted by file size by clicking the File Size column header.
	Last Updated		This column displays the date and time when the file was last updated. The list can be sorted by last update date/time by clicking the Last Updated column header.
	File ID		This column displays the IDs of the files. The list can be sorted by file IDs by clicking the File ID column header.
	Version		This column displays the version names of the files. The list can be sorted by version names by clicking the Version column header.
	Hash value		This column displays the hash values for the files. The list can be sorted by hash values by clicking the Hash value column header.
Close button			This button closes the window.



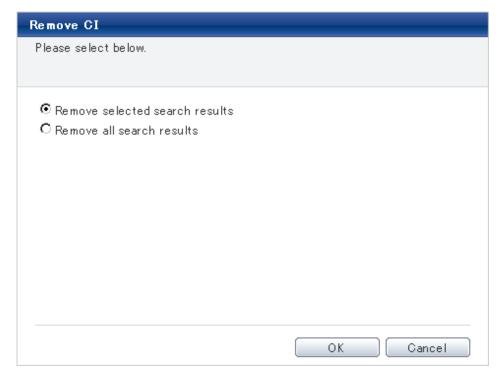
The value for the "ID" attribute

Do not change the value for the "ID" attribute. If the value for the "ID" attribute is changed and then an update operation is performed, a new configuration item will be registered with the new value, and the target configuration item will not be updated.

2.5.3.2 Deleting Configuration Items

Display method

- 1. Click the Maintenance tab in the Configuration management window.
- 2. Select the Update/delete CI link.
- 3. Use the checkboxes to select the configuration items to be deleted from the **CI List**, and then click the **Remove** button. The following window will be displayed.

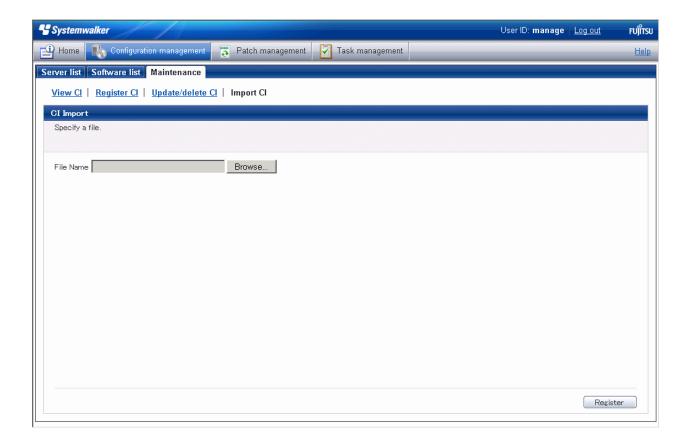


- 4. Select either of the following values:
 - Remove selected search results: Deletes only the configuration items selected using checkboxes.
 - Remove all search results: Deletes all of the configuration items displayed in the CI list.
- 5. Click the **OK** button.

2.5.4 Importing Configuration Items

Display method

- 1. Click the **Maintenance** tab in the **Configuration management** window.
- 2. Select the **Import CI** link.



Item		Description
Import CI	Browse button	This field is used to specify an XML file where configuration items have been marked up.
Register button		This button is used to register the content of the specified file with the CMDB.

Chapter 3 Patch Management

The Patch management 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 patch list

This tab displays a list of Windows patches. It can be used to look up 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 patch list

This tab displays a list of Linux patches. It can be used to look up 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.

- Fujitsu middleware patch list

This tab displays a list of Fujitsu middleware patches. It can be used to look up 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.

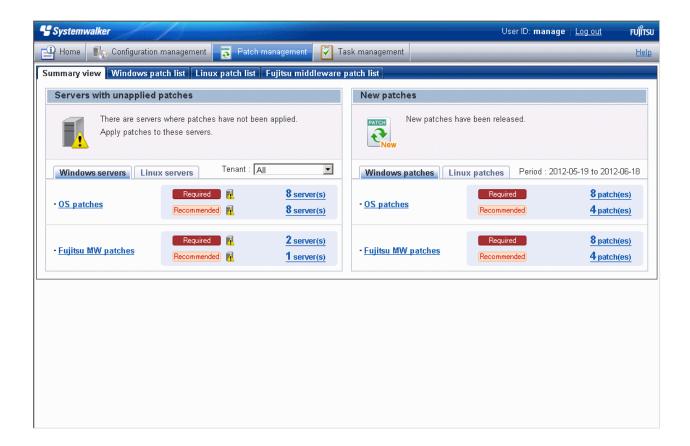
- Patch Application Wizard

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.

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:
 - $a. \ \ Select\ \textbf{Patch\ management}\ from\ the\ menu\ in\ the\ management\ console.$
 - b. Click the Patch management link in the Home window.



Total number of servers with unapplied patches

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

- OS patches and Fujitsu middleware 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 Fujitsu middleware 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 **Fujitsu middleware patches** link or the link for each number (of servers with unapplied patches) is clicked.



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.



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 Fujitsu middleware 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 servers with unapplied Fujitsu middleware patches

The number of servers with unapplied Fujitsu middleware patches is the number of servers where the Fujitsu middleware patches distributed by Systemwalker Software Configuration Manager have not been applied.

Servers with unapplied Fujitsu middleware patches are not counted as servers with unapplied patches unless these patches have been distributed by Systemwalker Software Configuration Manager.

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.

- Fujitsu middleware 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

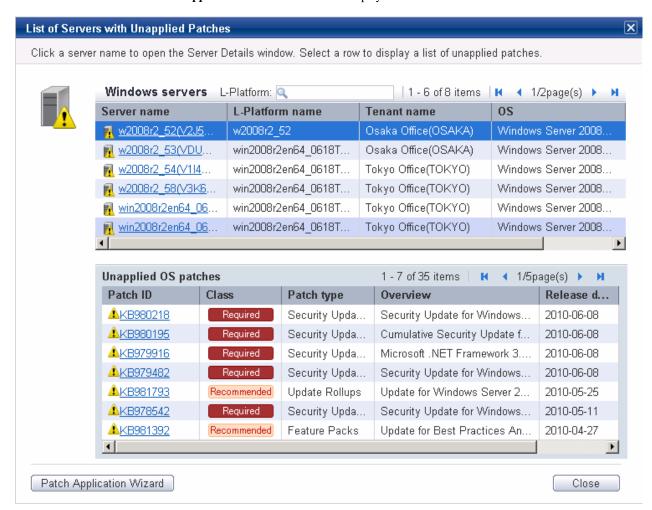
The RPM packages that have been defined as the management target for Systemwalker Software Configuration Manager and registered with yum during the **Period** displayed are output as the number of new patches. The **Period** is the last one month, counting backwards from the day when the user logged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

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

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 **Patch management**. 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	This column displays the server names.	
	Clicking a server name link displays the Server Details window.	
L-Platform name	This column displays the L-Platform names.	
Tenant name	This column displays the tenant names.	
os	This column 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 ID	This column displays the patch IDs.	
	Clicking a patch ID link displays the Patch Details window.	
Class	This column 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	This column 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	This column displays an overview (or title) of each patch.	
Release date	This column displays the date when the vendor (Microsoft) released the patch.	

Table 3.2 Linux patches

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

Table 3.3 Fujitsu middleware patches

Item	Description
Patch ID	This column displays the patch IDs.
Class	This column 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	This column displays the importance of each patch.

Item	Description
	- Security
	- Important
	- Recommended
Update type	This column displays the update types of the patches.
	- Urgent
Product name	This column displays the product names.
os	This column displays the operating systems (platforms).
Release date	This column 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.

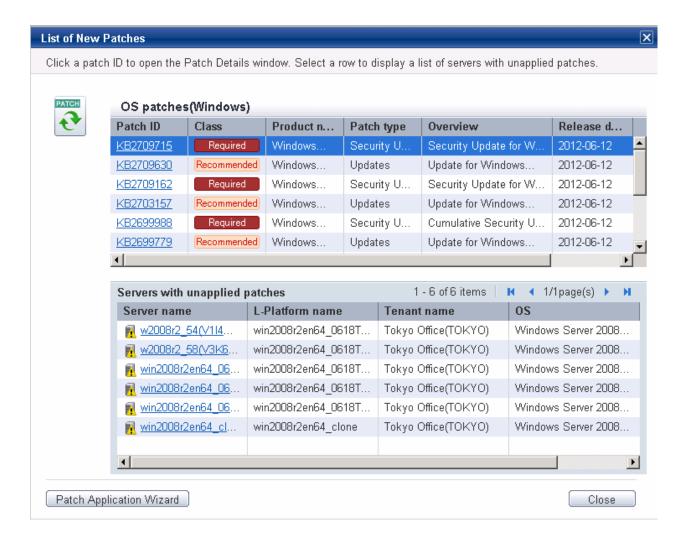
Operation buttons	Description
Patch application wizard	This button opens the Patch Application Wizard , which allows the user to distribute and apply patches by first selecting the target servers.
Close	This button closes the window.

3.1.2 List of New Patches

Display method

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

The List of New Patches window will be displayed.



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 ID	This column displays the patch IDs.
	Clicking a patch ID link displays the Patch Details window.
Class	This column 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	This column displays the product name (operating system name) corresponding to each patch.
Patch type	This column displays the patch types. (This indicates the classification of updates, which represents the WSUS update program type.)
	- Security Updates
	- Critical Updates
	- Feature Packs

Item	Description
	- Service Packs
	- Tools
	- Drivers
	- Updates
	- Update Rollups
	- Definition Updates
Overview	This column displays an overview (or title) of each patch.
Release date	This column displays the date when the vendor (Microsoft) released the patch.

Table 3.5 Linux patches

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

Table 3.6 Fujitsu middleware patches

Item	Description
Patch ID	This column displays the patch IDs.
Class	This column 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	This column displays the importance of each patch.
	- Recommended
	- Important
	- Security
Update type	This column displays the update types of the patches.
	- Urgent
Product name	This column displays the product names.
os	This column displays the operating systems (platforms).
Release date	This column 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	This column displays the server names.
	Clicking a server name link displays the Server Details window.
L-Platform name	This column displays the L-Platform names.
Tenant name	This column displays the tenant names.
os	This column 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 wizard	This button opens the Patch Application Wizard , which allows the user to distribute and apply patches by first selecting patches.
Close	This button closes the window.

3.2 Patch management

3.2.1 Patch List

Display method

- 1. Use either of the following methods to display the patch list:
 - a. Select Patch management from the menu in the management console.
 - b. Click the Patch management link in the Home window.

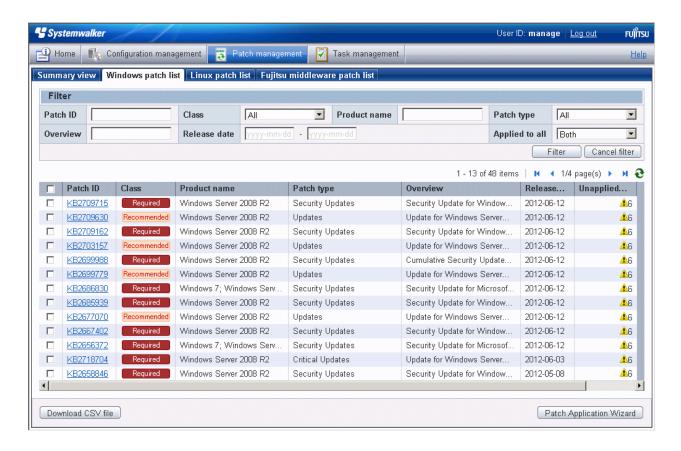
Patch lists for Windows operating systems, Linux operating systems and Fujitsu middleware can be displayed by selecting each tab.

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

For Linux patches, the patches that have been registered with the yum repository server and have been defined as the management target are displayed. For Fujitsu middleware 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 look up 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.



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 patch list	- Patch ID
	- Class
	- Product name
	- Patch type
	- Overview
	- Release date
	- Applied to all
Linux patch list	- Package name
	- Version
	- Release
	- Architecture
	- Overview
	- Release date
	- Applied to all
Fujitsu middleware patch list	- Patch ID
	- Class

Patch type	Filter conditions
	- 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 patch list

Display item	Description
Checkboxes	Selecting a checkbox specifies the patch to be applied.
Patch ID	This column displays the patch IDs.
	Clicking a patch ID link displays the Patch Details window.
Class	This column 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	This column displays the product name (operating system name) corresponding to each patch.
Patch type	This column 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	This column displays a title for each patch.
Release date	The date when the vendor (Microsoft) released the patch
Unapplied servers	This column 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
Checkboxes	Selecting a checkbox specifies the patch to be applied.
	displayed here is only for the machines within the range that can be looked up by the login user.

Table 3.8 Linux patch list

Item	Description
Checkboxes	Selecting a checkbox specifies the patch to be applied.
Package name	This column displays the names of the RPM packages.
	Clicking a package name link displays the Patch Details window.
Version	This column displays the versions of the packages.
Release	This column displays the release numbers of the packages.
Architecture	This column displays the architecture for each package.
Overview	This column displays an overview of each package.
Release date	This column displays the date when the package information was registered with Systemwalker Software Configuration Manager.
Unapplied servers	This column 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 Fujitsu middleware patch list

Item	Description
Checkboxes	Selecting a checkbox specifies the patch to be applied.
Patch ID	This column displays the patch IDs.
Class	This column 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	This column displays the importance of each patch.
	- Recommended
	- Important
	- Security
Update type	This column displays the update types of the patches.
	- Urgent
Product name	This column displays the product names.
os	This column displays the operating systems (platforms).
Update title	This column displays the update titles of the patches.
Release date	This column displays the release dates of the patches.

Item	Description
Unapplied servers	This column displays the number of machines where the patches distributed by Systemwalker Software Configuration Manager have not been applied. Servers are not counted as the servers with unapplied patches unless the patches have been distributed by Systemwalker Software Configuration Manager. 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	This button is used to output patch list information in CSV format. If the information displayed has been filtered, only the filtered information will be output.
Patch application wizard	This button opens the Patch Application Wizard , which allows the user to distribute and apply patches by first selecting patches.



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.

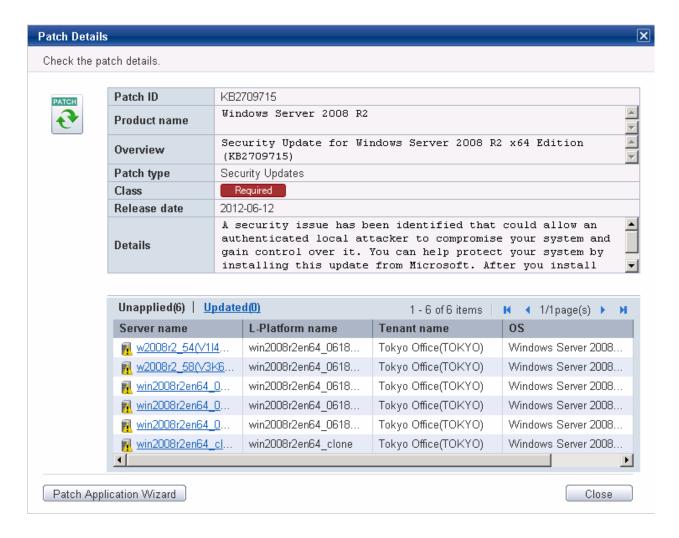
3.2.1.1 Patch Details

Display method

- 1. Use either of the following methods to display the patch details:
 - a. Click a patch ID link in the patch list window.
 - b. Click a patch ID 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.



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 ID	This item displays the patch ID.
Product name	This item displays the product name (operating system name) corresponding to the patch.
Overview	This item displays the patch overview (or for Windows, the title).
Patch type	This item 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

Item	Description
	- Updates
	- Update Rollups
	- Definition Updates
Class	This item 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	This item displays the date when the vendor (Microsoft) released the patch.
Details	This item displays a detailed description of the patch that is provided by the vendor.

Table 3.11 Linux patches

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

Table 3.12 Fujitsu middleware patches

Item	Description
Patch ID	This item displays the patch ID.
Class	This item 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	This item displays the importance of the patch.
	- Recommended
	- Important
	- Security
Update type	This item displays the update types of the patch.
	- Urgent
Product name	This item displays the product name.
os	This item displays the operating system (platform).
Release date	This item displays the release date of the patch.
Update title	This item 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	This column displays the server names.
L-Platform name	This column displays the L-Platform names.
Tenant name	This column displays the tenant names.
os	This column 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 wizard	This button opens the Patch Application Wizard , which allows the user to distribute and apply patches by first selecting patches.
Close	This button closes the window.

3.3 Patch Application Wizard

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



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. Click the **Patch application wizard** button in one of the following windows:
 - Patch list 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

Distribution destination for Fujitsu middleware patches

Fujitsu middleware patches are distributed to the following directory:

- Business server

[Windows]

< Systemwalker Software Configuration Manager installation directory>\SWCFMGB\var\distribute

A subdirectory will be created in the above directory with the name "<*Process ID>* yyyy-MM-dd_HH-mm-ss", and patches will be stored in this subdirectory.

[Linux]

/var/opt/FJSVcfmgb/distribute

A subdirectory will be created in the above directory with the name "<*Process ID>* yyyy-MM-dd_HH-mm-ss", and patches will be stored in this subdirectory.

Changing the distribution destination directory

To change the distribution destination directory, edit the following value:

- Business server

[Windows]

The path to the distribution destination directory is defined in the "SWCFMGA_DISTRIBUTE" system environment variable. To change the distribution destination directory, edit the path.

[Linux]

/etc/opt/FJSVcfmgb/config/distribute.properties

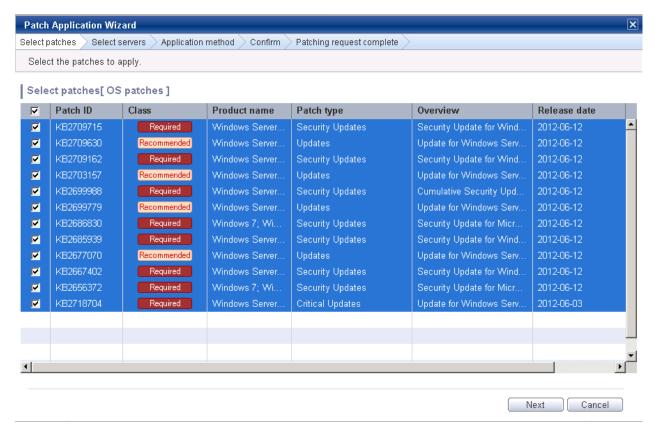
The path to the distribution destination directory is defined in the "distribute_dir" item in the above file. To change the distribution destination directory, edit the path.

Example: distribute_dir=/var/opt/FJSVcfmgb/distribute

3.3.1 Select patches

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

- Click the Patch application wizard button in the List of New Patches window.
- Click the Patch application wizard button in the List of Servers with Unapplied Patches window.



Selecting patches

Select the patches to be applied.

Table 3.13 Windows patches

Item	Description
Patch ID	This column displays the patch IDs.
Class	This column 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	This column displays the product name (operating system name) corresponding to each patch.
Patch type	This column 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

Item	Description
	- Drivers
	- Updates
	- Update Rollups
	- Definition Updates
Overview	This column displays a title for each patch.
Release date	This column displays the date when the patch was released.

Table 3.14 Linux patches

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

Table 3.15 Fujitsu middleware patches

Item	Description
Patch ID	This column displays the patch IDs.
Class	This column 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	This column displays the importance of each patch.
	- Recommended
	- Important
	- Security
Update type	This column displays the update types of the patches.
	- Urgent
Product name	This column displays the product names.
os	This column displays the operating systems (platforms).
Update title	This column displays the update titles of the patches.
Release date	This column displays the date when the patch information was registered with Systemwalker Software Configuration Manager.

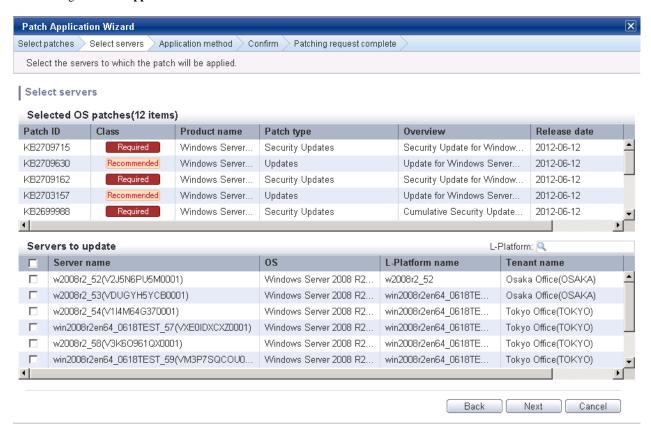
Operation buttons

Operation button	Description
Next	This button is used to move to the Select servers window.
Cancel	This button 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
- Using the checkboxes in the patch list window to select patches, and then clicking the Patch application wizard button
- Clicking the Patch application wizard button in the Patch Details window



Operation method

Selected patches

A list of the patches to be applied is displayed.

Table 3.16 Windows patches

Item	Description
Patch ID	This column displays the patch IDs.
Class	This column 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	This column displays the product name (operating system name) corresponding to each patch.
Patch type	This column displays the patch types. (This indicates the classification of updates, which represents the WSUS update program type.)
	- Security Updates
	- Critical Updates

Item	Description
	- Feature Packs
	- Service Packs
	- Tools
	- Drivers
	- Updates
	- Update Rollups
	- Definition Updates
Overview	This column displays a title of each patch.
Release date	This column displays the date when the patch was released.

Table 3.17 Linux patches

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

Table 3.18 Fujitsu middleware patches

Item	Description
Patch ID	This column displays the patch IDs.
Class	This column 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	This column displays the importance of each patch.
	- Recommended
	- Important
	- Security
Update type	This column displays the update types of the patches.
	- Urgent
Product name	This column displays the product names.
os	This column displays the operating systems (platforms).
Update title	This column displays the update titles of the patches.
Release date	This column 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.

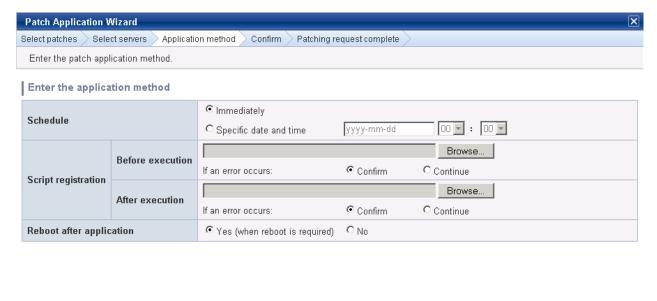
Item	Description
Server name	This column displays the server names.
os	This column displays the operating systems.
L-Platform name	This column displays the L-Platform names.
Tenant name	This column displays the tenant names.

Operation buttons

Operation button	Description
Back	This button is used to return to the Select patches window.
Next	This button is used to move to the Select patches window if servers have been selected using checkboxes.
Cancel	This button closes the Patch Application Wizard.

3.3.3 Application method

When the Next button 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.

Back

Next

Cancel

Item	Description
	- 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 registration	Specify the scripts to be executed before and after patch distribution/application, as well as the behavior of patch application processing if an error occurs during script execution.
	Create the scripts registered here so that they output "0" as a return value to indicate normal completion and a value other than "0" as a 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.
	- Confirm: If an error occurs, the user can select the appropriate script processing (such as "retry", "continue processing", or "cancel processing") from the Task management window.
	- Continue: Processing will continue even if an error occurs.
	 Refer to "4.2.6.1 Pre-execution and Post-execution Scripts" for information on the scripts that are registered here.
Reboot after application	Select whether to restart the server after the patch is distributed and applied.
	- 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.

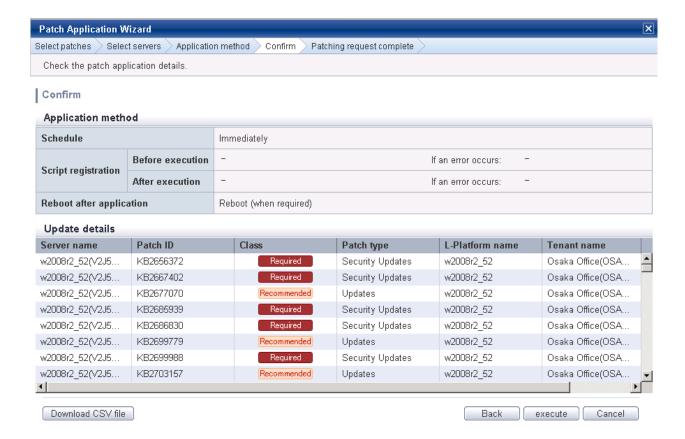
Operation buttons

Operation button	Description
Back	This button is used to return to the Select servers window.
Next	This button is used to move to the confirmation window.
Cancel	This button closes the Patch Application Wizard.

3.3.4 Confirm

When the Next button 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

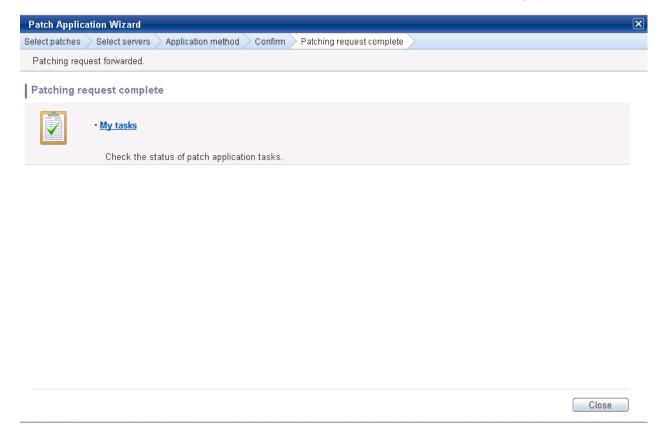
It	tem	Description
Server name		This column displays the server names.
For Windows	Patch ID	This column displays the patch IDs.
	Class	This column displays the classification levels ("Required" or "Recommended") of the patches.
	Patch type	This column displays the patch types. (This indicates the classification of updates, which represents the WSUS update program type.)
For Linux	Package name	This column displays the names of the packages.
	Version	This column displays the versions of the packages.
	Release	This column displays the release numbers of the packages.
For Fujitsu	Patch ID	This column displays the patch IDs.
middleware	Importance	This column displays the importance of each patch ("Recommended", "Important" or "Security").
	Update type	This column displays the update types of the patches ("Urgent").
L-Platform na	nme	This column displays the L-Platform names.
Tenant name		This column displays the tenant names.

Operation buttons

Operation button	Description
Download CSV file	This button outputs the information displayed in Update details to a CSV file.
Back	This button is used to return to the Application method window.
Execute	This button is used to execute the patch application.
Cancel	This button closes the Patch Application Wizard.

3.3.5 Patching request complete

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



Operation method

Task list

Item	Description
My tasks	This item (link) allows the user to move to the task list window, where the status of the patch application operation that has been executed can be checked.

Operation buttons

Operation button	Description
Close	This button closes the Patch Application Wizard.

Chapter 4 Task Management

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

- Progress check
- "My tasks" operations



If the Internet Explorer Enhanced Security Configuration (IE ESC) has been enabled, the [x] icon in pop-up windows will not work properly.

Refer to the following website for information on how to disable the Internet Explorer Enhanced Security Configuration.

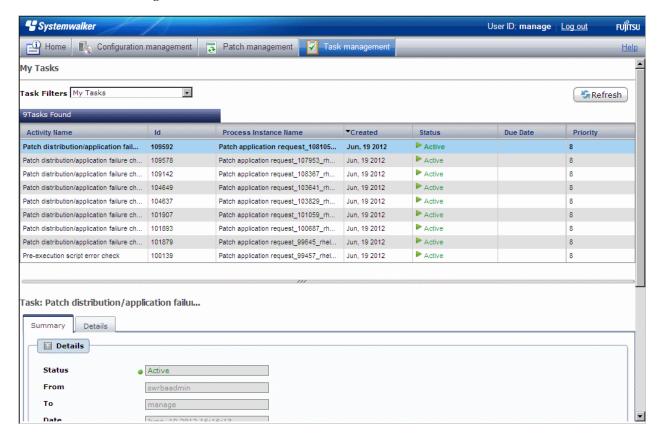
http://www.microsoft.com

4.1 Progress Check

This operation involves checking the progress of patch distribution/application.

Operation method

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



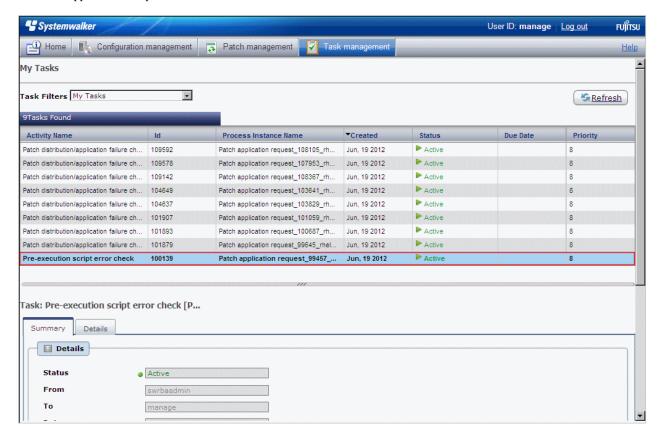
3. When a task is selected to confirm the status from the list of tasks displayed, detailed information about the task is displayed at the bottom of the window.

By selecting an option from the **Task Filters** pull-down menu above the list, the tasks displayed in the list can be filtered according to the filter conditions.

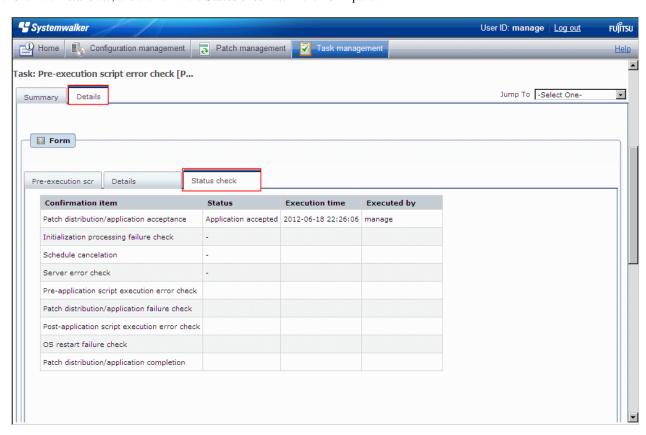
If My Completed Tasks is selected from the Task Filters pull-down menu, a list of the tasks that the login user has completed in the past can be viewed.

The following tasks complete automatically and so a list of these tasks can be viewed by selecting **My Completed Tasks** from the **Task Filters** pull-down menu.

- Patch distribution acceptance task
- Patch application acceptance task
- Patch distribution completion task
- Patch application completion task



4. Click the **Details** tab, and then click the **Status check** tab in the **Form** panel.



5. In the **Status check** tab, the status of various items can be checked to see the progress of ongoing tasks, and history information for completed tasks. All tasks can be viewed in the **Status check** tab.

Confirmation item	Status	Meaning	Execution time	Executed by
Patch distribution/ application acceptance	Distribution accepted	This is the state in which a patch distribution request has been made and the request has been accepted, with a distribution acceptance task being processed automatically as normal.	This column displays the date and time of the task execution.	This column displays the user that performed the patch distribution/application.
	Application accepted	This is the state in which a patch application request has been made and the request has been accepted, with an application acceptance task being processed automatically as normal.		
Initialization processing failure check	- (hyphen)	This is the state in which the task has been skipped, or when the task has not been reached. This state also means that an error has not occurred.		
	Normal (after retrying)	This is the state in which an error occurred but the		

Confirmation item	Status	Meaning	Execution time	Executed by
		processing was retried and has become normal.		
	Abnormal (canceled)	This is the state in which an error occurred and processing was canceled.		
Schedule cancelation	- (hyphen)	This is the state in which the task has been skipped, or when the task has not been reached.		
		This state also means that an error has not occurred.		
	Canceled	This is the state in which cancelation has been executed in a schedule cancelation task.		
Server error check	- (hyphen)	This is the state in which the task has been skipped, or when the task has not been reached.		
		This state also means that an error has not occurred.		
	Normal (after retrying)	This is the state in which a server error occurred but the processing was retried and has become normal.		
	Abnormal (canceled)	This is the state in which a server error occurred and processing was canceled.		
Pre-execution script error check	- (hyphen)	This is the state in which the task has been skipped, or when the task has not been reached.		
		This state also means that an error has not occurred.		
	Successful (after retrying)	This is the state in which processing failed but then the processing completed successfully after being retried.		
	Continued	This is the state in which an error occurred but processing continued, ignoring the error.		
	Failed (canceled)	This is the state in which an error occurred and processing was canceled.		
Patch distribution/ application failure check	- (hyphen)	This is the state in which the task has been skipped, or when the task has not been reached.		

Confirmation item	Status	Meaning	Execution time	Executed by
		This state also means that an error has not occurred.		
	Successful (after auto retrying)	Even if processing fails once during the patch application processing, retries will be performed automatically. This is the status in which processing was successful as a result of such a retry attempt.		
	Successful (after retrying)	This is the state in which processing failed but then the processing completed successfully after being retried.		
	Continued	This is the state in which an error occurred but processing continued, ignoring the error.		
	Failed (canceled)	This is the state in which an error occurred and processing was canceled.		
Post-execution script error check	- (hyphen)	This is the state in which the task has been skipped, or when the task has not been reached.		
		This state also means that an error has not occurred.		
	Successful (after retrying)	This is the state in which processing failed but then the processing completed successfully after being retried.		
	Continued	This is the state in which an error occurred but processing continued, ignoring the error.		
	Failed (canceled)	This is the state in which an error occurred and processing was canceled.		
OS restart failure check	- (hyphen)	This is the state in which the task has been skipped, or when the task has not been reached.		
		This state also means that an error has not occurred.		
	Successful (after retrying)	This is the state in which processing failed but then the processing completed successfully after being retried.		

Confirmation item	Status	Meaning	Execution time	Executed by
	Continued	This is the state in which an error occurred but processing continued, ignoring the error.		
	Failed (canceled)	This is the state in which an error occurred and processing was canceled.		
Patch distribution/ application completion	- (hyphen)	This is the state in which the task has been skipped, or when the task has not been reached.		
	Distribution complete	This is the state in which patch distribution has completed.		
	Application complete	This is the state in which patch application has completed.		

Figure 4.1 Example of the Status check tab when distribution processing has been performed normally

Confirmation item	Status	Execution time	Executed by
Patch distribution/application acceptance	Application accepted	2012-06-18 04:53:20	manage
nitialization processing failure check	-		
Schedule cancelation	-		
Server error check	-		
Pre-application script execution error check	-		
Patch distribution/application failure check	-		
Post-application script execution error check	-		
OS restart failure check	-		

Figure 4.2 Example of the Status check tab when distribution processing has been performed by retry operations

Confirmation item	Status	Execution time	Executed by
Patch distribution/application acceptance	Application accepted	2012-06-18 23:29:58	manage
Initialization processing failure check	-		
Schedule cancelation	-		
Server error check	-		
Pre-application script execution error check	-		
Patch distribution/application failure check	Continued	2012-06-18 23:33:21	manage
Post-application script execution error check	-		
OS restart failure check			

4.2 "My tasks" Operations

A task is an operation that has been assigned to the operator in the process of distributing and applying patches when the process has transitioned to an activity that requires the operator's judgment.

The tasks assigned to the login user are displayed in the **My tasks** list. By selecting a task, predetermined operations can be performed on the processing. The following tasks are assigned to each user:

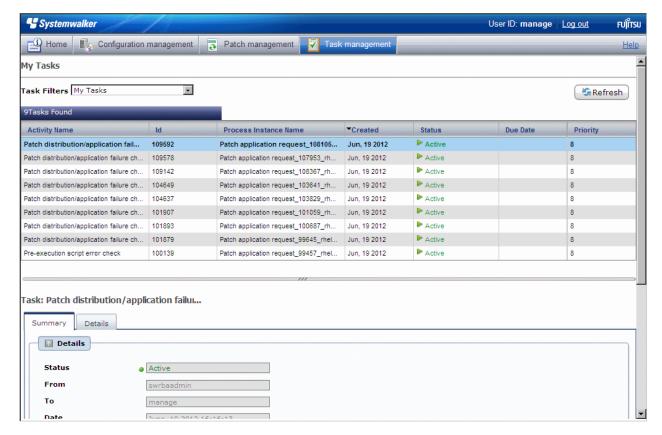
Table 4.1 List of tasks assigned to users

Task	Action	User assigned to the task
Patch distribution acceptance	No action is required.	The user that performed the patch
Patch application acceptance	No action is required.	distribution or application (one of the following users)
Initialization processing failure check	Select either of the following: - Retry - Cancel	- Tenant user - Tenant administrator
Schedule cancelation	Select the following to cancel the schedule: - Cancel	- Dual-role administrator
Server error check	Select either of the following: - Retry - Cancel	
Pre-execution script error check	Select one of the following: - Retry - Continue - Cancel	
Patch distribution/application failure check	Select one of the following: - Retry - Continue	

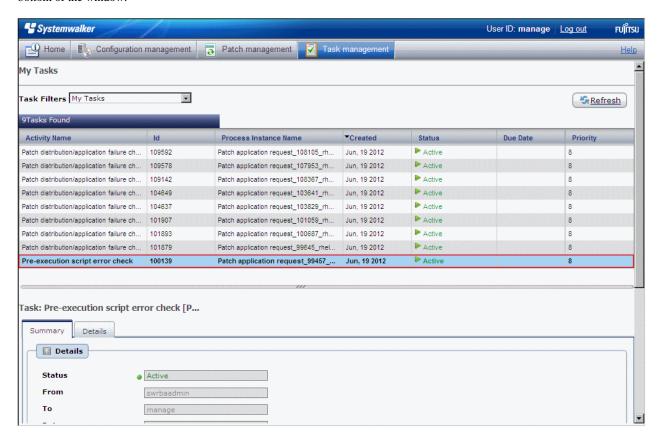
Task	Action	User assigned to the task
	- Cancel	
Post-execution script error	Select one of the following:	
check	- Retry	
	- Continue	
	- Cancel	
OS restart failure check	Select one of the following:	
	- Retry	
	- Continue	
	- Cancel	
Patch distribution completion	No action is required.	
Patch application completion	No action is required.	

Operation method

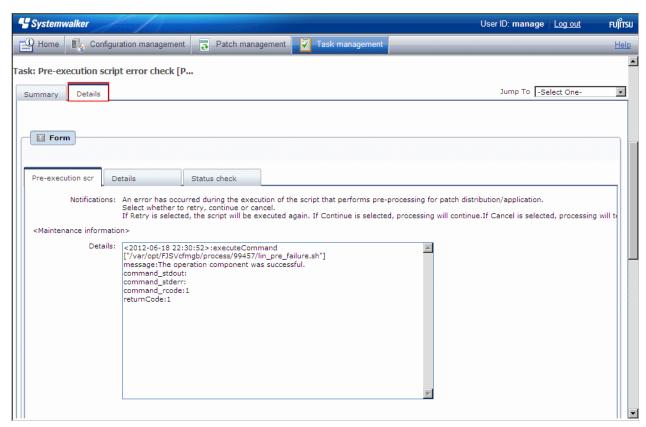
- 1. Log in to the management console.
- 2. Use either of the following methods to display the **Task management** window:
 - a. Select Task management from the menu in the management console.
 - $b. \ \ Click \ the \ \textbf{Task management} \ link \ in \ the \ \textbf{Home} \ window.$



3. When the task to be processed is selected from the list of tasks displayed, detailed information about the task is displayed at the bottom of the window.



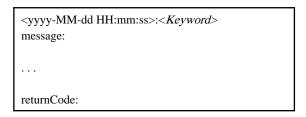
4. Click the **Details** tab, and then check the information in the **Form** panel.



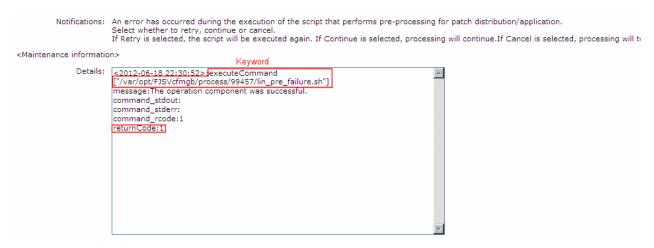
If an error has occurred with a process in the patch distribution/application processing, a log will be output to the **Details** field in the tab window. Logs are added to the field in the order in which they occur.

The most recent log is at the bottom.

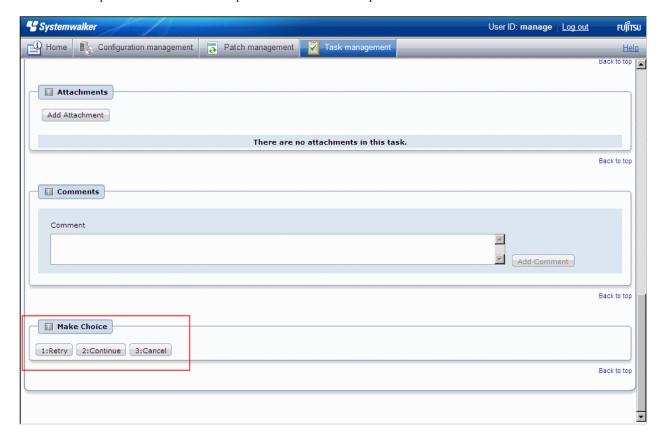
The log output format is as follows:



The following example shows the window that is displayed when an error has occurred with the pre-execution script.



5. The task will be processed when one of the options in the Make Choice panel is clicked.

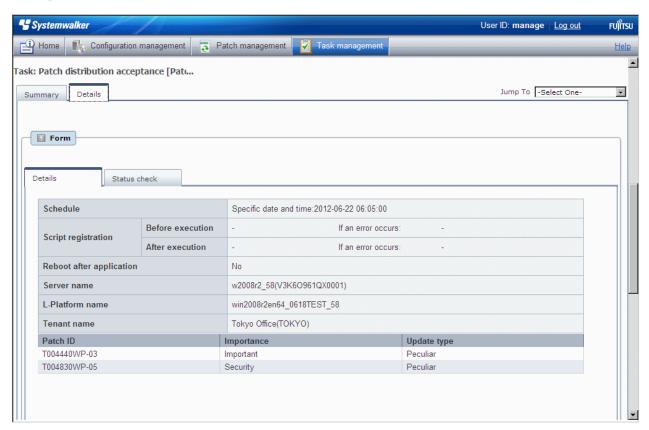


Refer to the explanations following this section for information on the operation methods for each task.

4.2.1 Patch distribution acceptance

No user action is required for the "Patch distribution acceptance" task. Once a patch distribution request has been accepted, the status changes automatically.

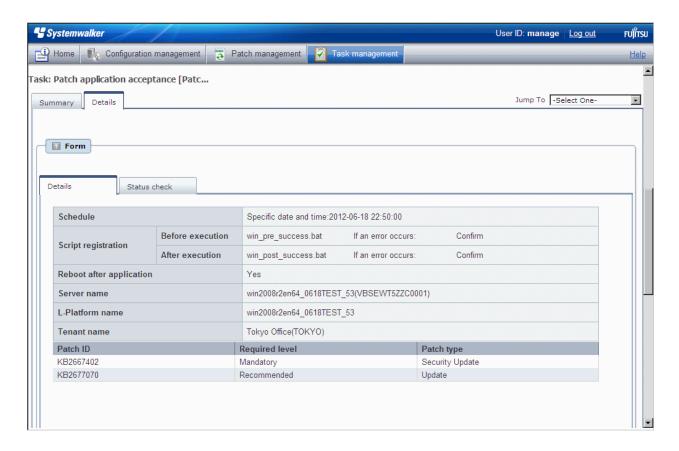
This means that these tasks are not displayed in the task list. They can be viewed by selecting My Completed Tasks from the Task Filters pull-down menu.



4.2.2 Patch application acceptance

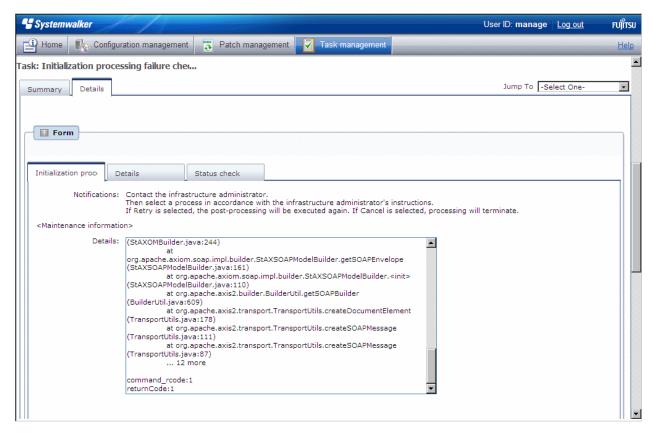
No user action is required for the "Patch application acceptance" task. Once a patch application request has been accepted, the status changes automatically.

This means that these tasks are not displayed in the task list. They can be viewed by selecting My Completed Tasks from the Task Filters pull-down menu.



4.2.3 Initialization processing failure check

An "initialization processing failure check" task occurs when patch distribution/application initialization processing has failed.

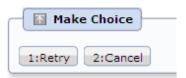


If an "initialization processing failure check" task has occurred, a log will be output to the **Details** field of the **Initialization processing failure check** tab window indicating what kind of error has occurred.

Refer to the "returnCode" information. The following table shows the expected values and their meaning:

Keyword	returnCode	Meaning
executeCommand	Other than 0	The command may have failed to access the CMDB.
<script path=""></td><td></td><td>Contact the infrastructure administrator to check whether ServerView Resource Orchestrator is running correctly.</td></tr><tr><td></td><td></td><td>Then retry the processing in accordance with the infrastructure administrator's instructions.</td></tr><tr><td>All</td><td>189</td><td>If one of the following values has been output for "message", this means that the connection for network communications with the business server has failed:</td></tr><tr><td></td><td></td><td>[LinkExpRBA] CategoryCode: 50</td></tr><tr><td></td><td></td><td>[LinkExpRBA] ErrorCode: 80</td></tr><tr><td></td><td></td><td>[Actions]</td></tr><tr><td></td><td></td><td>Check the following items:</td></tr><tr><td></td><td></td><td>- The file transfer infrastructure may not have been set up on the business server. Check whether the file transfer infrastructure has been set up.</td></tr><tr><td></td><td></td><td>- The business server may have stopped. Check the operational status of the business server.</td></tr><tr><td></td><td></td><td>- The file transfer infrastructure may not be running on the business server. Start the file transfer infrastructure.</td></tr><tr><td></td><td></td><td>[Windows]</td></tr><tr><td></td><td></td><td colspan=2>Restart the "Systemwalker File Transfer Library Control" service.</td></tr><tr><td></td><td></td><td>[Linux]</td></tr><tr><td></td><td></td><td>Execute the following command:</td></tr><tr><td></td><td></td><td># service FJSVlnkbs start</td></tr><tr><td></td><td></td><td>- There may be an error with the IP address of the business server that is specified in the "hosts" file. Check the IP address specified in the "hosts" file.</td></tr><tr><td></td><td></td><td>- If the remote server is a PC server with a TCP/IP connection, the number of connection requests on the business server may have exceeded the maximum number of requests that can be simultaneously processed by WinSock.</td></tr><tr><td></td><td></td><td>- The connection may have been blocked by a firewall on the communication path.</td></tr><tr><td></td><td></td><td>- If the business server is running Windows, the connection may have been blocked by security settings such as the Windows firewall.</td></tr><tr><td></td><td></td><td> If the situation still does not change even after you have taken the appropriate action and then retried the processing, collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support. </td></tr><tr><td></td><td></td><td>If one of the following values has been output for "message" or "server_check_result", this means that a timeout has occurred during communications with the business server.</td></tr><tr><td></td><td></td><td>[LinkExpRBA] CategoryCode: 50</td></tr><tr><td></td><td></td><td>[LinkExpRBA] ErrorCode: 60</td></tr><tr><td></td><td></td><td>[Actions]</td></tr><tr><td></td><td></td><td>The following are the possible causes of the problem:</td></tr></tbody></table></script>		

Keyword	returnCode	Meaning
		- The business server may be stopped.
		- The business server may have slowed down.
		- The network may be under high load.
		Check these possible causes and then try again.
		If the situation still does not change despite the retry attempt, collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.
		If one of the following values has been output for "message", this means that a timeout has occurred during communications with the business server:
		[LinkExpRBA] CategoryCode: 50
		[LinkExpRBA] ErrorCode: 60
		[Actions]
		The following are the possible causes of the problem:
		- The business server may be stopped.
		- The business server may have slowed down.
		- The network may be under high load.
		Check these possible causes and then try again.
		If the situation still does not change despite the retry attempt, collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.
	Other	Collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.



When the Retry button is clicked, the initialization processing will be performed again.

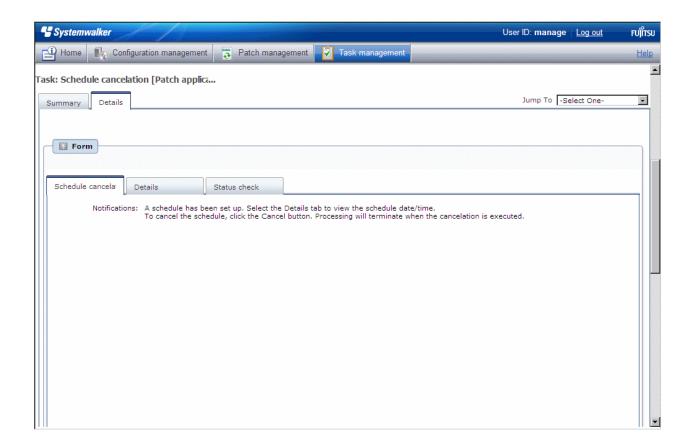
When the Cancel button is clicked, patch distribution/application processing will terminate.

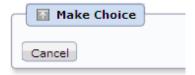
4.2.4 Schedule cancelation

The "schedule cancelation" task occurs when a schedule has been set up for patch distribution/application.

To cancel processing for which the scheduled date and time has been set up and that is waiting for the scheduled date and time, or to reset the scheduled date and time, patch distribution/application processing can be terminated by performing a cancellation operation. If patch distribution/application processing has been terminated, settings for patch distribution/application must be specified again.

Note also that "schedule cancelation" tasks are only active while a schedule is in effect and processing is waiting for the scheduled time. Once the scheduled date and time has arrived and processing has started, this task can no longer be viewed from the task list, and so cancellation operations cannot be performed.

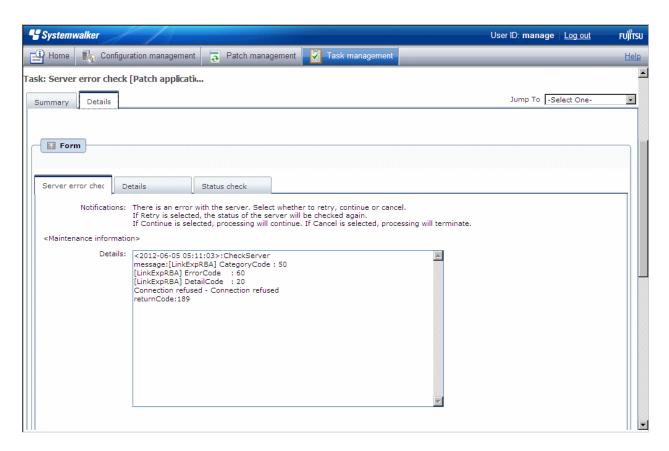




When the Cancel button is clicked, patch distribution/application processing will terminate.

4.2.5 Server error check

The "server error check" task occurs when a business server subject to patch distribution/application is not running normally.

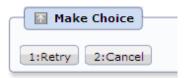


If a "server error check" task occurs, a log will be output to the **Details** field in the **Server error check** tab window indicating the type of error that has occurred.

Refer to the "returnCode" information. The following table shows the expected values and their meaning:

Keyword	returnCode	Meaning
CheckServer	189	If one of the following values has been output for "message" or "server_check_result", this means that the connection for network communications with the business server has failed:
		[LinkExpRBA] CategoryCode: 50
		[LinkExpRBA] ErrorCode: 80
		[Actions]
		Check the following items:
		- The file transfer infrastructure may not have been set up on the business server. Check whether the file transfer infrastructure has been set up.
		- The business server may have stopped. Check the operational status of the business server.
		- The file transfer infrastructure may not be running on the business server. Start the file transfer infrastructure.
		[Windows]
		Restart the "Systemwalker File Transfer Library Control" service.
		[Linux]
		Execute the following command:
		# service FJSVlnkbs start
		- There may be an error with the IP address of the business server that is specified in the "hosts" file. Check the IP address specified in the "hosts" file.

Keyword	returnCode	Meaning
		- If the remote server is a PC server with a TCP/IP connection, the number of connection requests on the business server may have exceeded the maximum number of requests that can be simultaneously processed by WinSock.
		- The connection may have been blocked by a firewall on the communication path.
		 If the business server is running Windows, the connection may have been blocked by security settings such as the Windows firewall.
		 If the situation still does not change even after you have taken the appropriate action and then retried the processing, collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.
		If one of the following values has been output for "message" or "server_check_result", this means that a timeout has occurred during communications with the business server:
		[LinkExpRBA] CategoryCode: 50
		[LinkExpRBA] ErrorCode: 60
		[Actions]
		The following are the possible causes of the problem:
		- The business server may be stopped.
		- The business server may have slowed down.
		- The network may be under high load.
		Check these possible causes and then try again.
		If the situation still does not change despite the retry attempt, collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.
	Other	Collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.

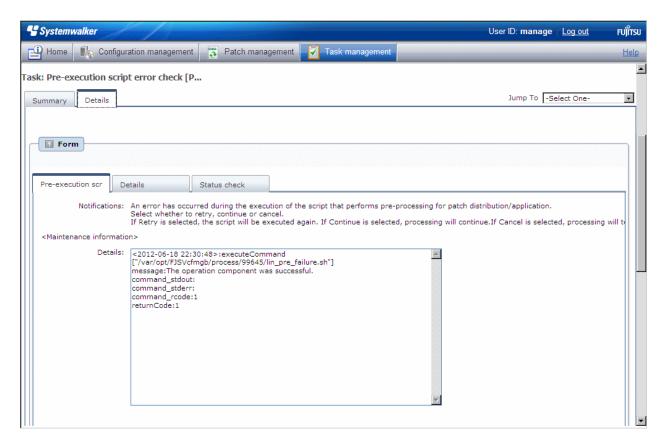


When the Retry button is clicked, another check is performed to see if the business server is operating normally.

When the Cancel button is clicked, patch distribution/application processing will terminate.

4.2.6 Pre-execution script error check

A "pre-execution script error check" task occurs when a pre-execution script has been registered and settings have been configured to terminate processing when an error occurs. For scripts, "0" is handled as normal termination, whereas values other than "0" are handled as errors. Refer to "4.2.6.1 Pre-execution and Post-execution Scripts" for information on pre-execution scripts.



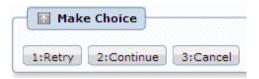
If a "pre-execution script error check" task occurs, a log will be output to the **Details** field in the **Pre-execution script error check** tab window, indicating the type of error that has occurred.

Refer to the "returnCode" information. The following table shows the expected values and their meaning:

Keyword	returnCode	Meaning
executeCommand <script< td=""><td>Other than 0</td><td>Logs are output using the following format:</td></script<>	Other than 0	Logs are output using the following format:
path>		Example:
		<2012-04-17 16:25:09>:executeCommand
		["C:/Fujitsu/Systemwalker/SWCFMGA/var/process/75974/pre_script.bat"]
		message: The operation component was successful.
		command_stdout:
		command_stderr:
		command_rcode:1
		returnCode:1
		The value of "command_rcode" is the return value output by the script.
		If the value of "command_rcode" is other than "0", this will be treated as an error.
		Check the script by referring to the return value.
All	189	If one of the following values has been output for "message", this means that the connection for network communications with the business server has failed.
		[LinkExpRBA] CategoryCode: 50
		[LinkExpRBA] ErrorCode: 80
		[Actions]
		Check the following items:

Keyword	returnCode	Meaning
		- The file transfer infrastructure may not have been set up on the business server. Check whether the file transfer infrastructure has been set up.
		- The business server may have stopped. Check the operational status of the business server.
		- The file transfer infrastructure may not be running on the business server. Start the file transfer infrastructure.
		[Windows]
		Restart the "Systemwalker File Transfer Library Control" service.
		[Linux]
		Execute the following command:
		# service FJSVlnkbs start
		- There may be an error with the IP address of the business server that is specified in the "hosts" file. Check the IP address specified in the "hosts" file.
		- If the remote server is a PC server with a TCP/IP connection, the number of connection requests on the business server may have exceeded the maximum number of requests that can be simultaneously processed by WinSock.
		- The connection may have been blocked by a firewall on the communication path.
		- If the business server is running Windows, the connection may have been blocked by security settings such as the Windows firewall.
		 If the situation still does not change even after you have taken the appropriate action and then retried the processing, collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.
		If one of the following values has been output for "message" or "server_check_result", this means that a timeout has occurred during communications with the business server.
		[LinkExpRBA] CategoryCode: 50
		[LinkExpRBA] ErrorCode: 60
		[Actions]
		The following are the possible causes of the problem:
		- The business server may be stopped.
		- The business server may have slowed down.
		- The network may be under high load.
		Check these possible causes and then try again.
		If the situation still does not change despite the retry attempt, collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.
		If one of the following values has been output for "message", this means that a timeout has occurred during communications with the business server.
		[LinkExpRBA] CategoryCode: 50
		[LinkExpRBA] ErrorCode: 60
		[Actions]
		The following are the possible causes of the problem:
		- The business server may be stopped.

Keyword	returnCode	Meaning
		- The business server may have slowed down.
		- The network may be under high load.
		Check these possible causes and then try again.
		If the situation still does not change despite the retry attempt, collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.
	Other	Collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.



When the Retry button is clicked, the script will be executed again.

When the **Continue** button is clicked, the error will be ignored and processing will continue.

When the **Cancel** button is clicked, patch distribution/application processing will terminate.

4.2.6.1 Pre-execution and Post-execution Scripts

It is possible to register process scripts on business servers before or after patch distribution or application is executed.

In order to apply Fujitsu middleware patches, a script specifying the application processing must be created and then registered as a post-execution script.

Example of creating a script that applies a Fujitsu middleware patch

The commands for the UpdateAdvisor (middleware) are used to apply Fujitsu middleware patches.

The following example shows a post-execution script that is executed after Fujitsu middleware patches are applied.

The path to the folder where distributed patches are stored is automatically set to the "DISTRIBUTE_PATCH_PATH" environment variable. The path to the folder where patches are stored is different for each distribution. All of the patches that have been distributed to this folder will be applied.

Example:

[Windows]

"C:\Program Files (x86)\Fujitsu\UpdateAdvisor\UpdateAdvisorMW\uam" add -s -d %DISTRIBUTE_PATCH_PATH%

[Linux]

/opt/FJSVfupde/bin/uam add -s -d \$DISTRIBUTE_PATCH_PATH

To apply multiple patches, enter additional lines to the script above for each patch.

Refer to "Applying Updates (Using uam add)" in the UpdateAdvisor (middleware) help for information on the commands for the UpdateAdvisor (middleware).

The sample file for the script for applying Fujitsu middleware patches is stored in the following directory.

Copy the file from this directory, and edit the file as required before using it.

Both of the script files for Windows and Linux are stored on the admin server, while only either of them is stored on business servers according to the operating system used.

File location

- Admin server

[Windows]

< Systemwalker Software Configuration Manager installation directory>\SWCFMGM\sample

[Linux]

/opt/FJSVcfmgm/sample

- Business server

[Windows]

<Systemwalker Software Configuration Manager installation directory>\SWCFMGB\sample

[Linux]

/opt/FJSVcfmgb/sample

File names

- For Windows: win_mw_patch.bat

- For Linux: lin_mw_patch.sh

Notes on creating scripts

- The return values that can be used with scripts

Create scripts so that they output "0" as a return value to indicate normal completion and a value other than "0" as a return value to indicate an error. Note that return values between 159 and 240 cannot be used.

- The file names for scripts

Only printable ASCII codes can be used for the names of script files.

For Windows, the script file extension should be either ".bat" or ".cmd".

- Notes on creating a script for use with different platforms

To create a script for use with different platforms, the linefeed code must be converted to match the linefeed code used by the operating system.

- For Windows, the linefeed code is CRLF (carriage return + linefeed).
- For Linux, the linefeed code is LF (linefeed).
- Commands that require interactive processing

If commands that require interactive processing are entered in the script, the script processing will wait for input on the business server, with the result that the script processing will be unable to complete.

Do not execute commands that require interactive processing from scripts.

For Windows, if a command that requires interactive processing is executed, an interactive service may start on the business server and a dialog box prompting the user to respond may be output. In this case, finish the script processing by accessing the business server and selecting which processing to perform with the interactive service.

- Checking the application conditions and application methods for Fujitsu middleware patches

Before creating a script that applies a Fujitsu middleware patch, check the application conditions and application method specified in the update information file.

Note that updates that cannot be applied just using scripts cannot be applied by Systemwalker Software Configuration Manager.

Example of log output when an error occurs

Errors with pre-execution and post-execution scripts are determined by taking "0" to indicate normal termination and values other than "0" to indicate errors.

If a script results in an error with a value other than "0", and **Continue** was not selected as the behavior for when script errors occur, then either a "pre-execution script error check" task or a "post-execution script error check" task will occur.

The following log can be checked in the **Details** section of the task tab:

Example:

```
<2012-04-16 16:23:24>:executeCommand["C:/Fujitsu/Systemwalker/SWCFMGA/var/process/65359/
pre_script.bat"]
message:The operation component was successful.
command_stdout:
command_stderr:
command_rcode:1
returnCode:1
```

The value of "command_rcode" above is the return value output by the script.

Review the script, taking this value into consideration.

Example of script attachments

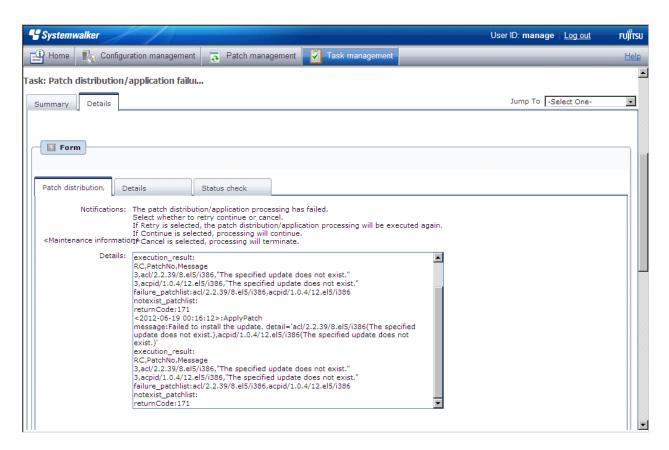
For "Patch distribution acceptance" and "Patch application acceptance" tasks, the registered scripts are attached as an attachment file.

An example is shown below.



4.2.7 Patch distribution/application failure check

A "patch distribution/application failure check" task occurs when patch distribution/application processing has failed.



If a "patch distribution/application failure check" task occurs, a log will be output to the **Details** field in the **Patch distribution/application failure check** tab window, indicating the type of error that has occurred.

Refer to the "returnCode" information. The following table shows the expected values and their meaning.

Keyword	returnCode	Meaning
ApplyPatch	171	Application of one or more patches has failed.
		[Action]
		Try again. If the result does not change despite the retry attempt, the patch may be in a state where it cannot be applied.
	172	The server needs to be restarted and application of one or more patches has failed.
		[Action]
		If the server needs to be restarted and "Reboot after application" has been set, the server will be restarted automatically. In this case, this problem is recorded as a log, but the server will be restarted and the application of the failed patches will be retried automatically.
		If there are any patches that have failed, perform a retry. If the result does not change despite the retry attempt, the patch may be in a state where it cannot be applied.
	173	Execution of the yum command has failed during the pre-application preparations.
		[Action]
		Try again. If the result does not change despite the retry attempt, there may be a problem with the environment for the yum repository server. Check the status of the linkage server.
All	189	If one of the following values has been output for "message", this means that the connection for network communications with the business server has failed.
		[LinkExpRBA] CategoryCode: 50
		[LinkExpRBA] ErrorCode: 80
		[Actions]

Keyword	returnCode	Meaning
		Check the following items:
		- The file transfer infrastructure may not have been set up on the business server. Check whether the file transfer infrastructure has been set up.
		- The business server may have stopped. Check the operational status of the business server.
		- The file transfer infrastructure may not be running on the business server. Start the file transfer infrastructure.
		[Windows]
		Restart the "Systemwalker File Transfer Library Control" service.
		[Linux]
		Execute the following command:
		# service FJSVlnkbs start
		- There may be an error with the IP address of the business server that is specified in the "hosts" file. Check the IP address specified in the "hosts" file.
		- If the remote server is a PC server with a TCP/IP connection, the number of connection requests on the business server may have exceeded the maximum number of requests that can be simultaneously processed by WinSock.
		- The connection may have been blocked by a firewall on the communication path.
		- If the business server is running Windows, the connection may have been blocked by security settings such as the Windows firewall.
		 If the situation still does not change even after you have taken the appropriate action and then retried the processing, collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.
		If one of the following values has been output for "message", this means that a timeout has occurred during communications with the business server.
		[LinkExpRBA] CategoryCode: 50
		[LinkExpRBA] ErrorCode: 60
		[Actions]
		The following are the possible causes of the problem:
		- The business server may be stopped.
		- The business server may have slowed down.
		- The network may be under high load.
		Check these possible causes and then try again.
		If the situation still does not change despite the retry attempt, collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.
	Other	Collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.

Table 4.2 Information output in relation to patch application failure

Item	Meaning
message	- If the operation terminates normally
	This variable will be set to the following message if patches are successfully applied to all of the servers.
	"The operation component was successful."

Item	Meaning		
	- If the operation terminates abnormally		
	The content of the error is set as a string.		
	The following output formats and output examples are for when application processing for all of the specified patches is performed but the application of even one patch fails. Refer to the Microsoft website for information on the "code" part of the error content.		
	- When a patch is applied to a Windows server		
	Failed to install the update. detail=" <update number(code)="">,<update number(code)="">"</update></update>		
	[Output example]		
	Failed to install the update. detail="KB00001(0x8024402c),"		
	Note: Refer to "Application of Windows cumulative patches" below.		
	- When a patch is applied to a Linux server		
	Failed to install the update. detail=" <package message)="" name(error="">,<package message)="" name(error="">"</package></package>		
	[Output example]		
	Failed to install the update. detail="openssh.i386(Error: Missing Dependency: openssh.i386 >= 1.0 is needed by package openssh-askpass.i386 (Server)),"		
execution_result	The result of applying the patch is stored in this variable.		
	The result is output using the following format:		
	<rc(patch application="" code)="" return="">,<patchno(number applied)="" for="" the="" update="">,<message(message)></message(message)></patchno(number></rc(patch>		
failure_patchlist	If the process of applying patches fails or is interrupted, or the patches to be applied do not exist in the list of applicable patches, the following information will be output in CSV format. Information is output in the order specified by the option.		
	The patches output to notexist_patchlist are also included.		
	- For Windows patches: Patch numbers		
	- For Linux patches: Package names		
notexist_patchlist	If the specified patch does not exist in the list of applicable patches returned by WSUS, the following information will be output in CSV format. Information is output in the order specified by the option.		
	- Patch numbers		
returnCode	This variable is set to the return value.		



Application of Windows cumulative patches

For Windows patches, the patches to be applied may have been absorbed into other, more recent patches (cumulative patches).

In this case, the latest cumulative patch that has absorbed the patches to be applied must be applied.

If the patch is not the latest patch, application may fail with the following message being output as detailed information.

```
message:Failed to install the update. detail='<Update number(Code)>'
execution_result:
RC,PatchNo,Message
4,<Update number>,"The specified update does not exist."
```

Apply the latest cumulative patch that has absorbed the patch that has failed to be applied. Check the Microsoft website for information on the latest cumulative patches.

If multiple patches are applied and some of these patches fail to be applied for the reason above, click the **Continue** button to continue processing, ignoring the failure.

Make Choice panel



When the **Retry** button is clicked, the patch will be distributed and applied again.

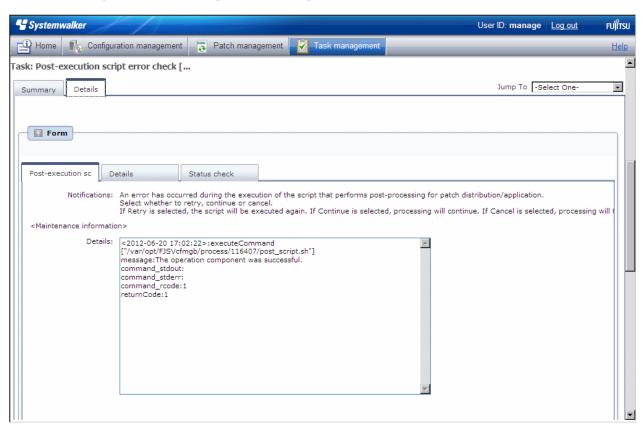
When the Continue button is clicked, the error will be ignored and processing will continue.

When the Cancel button is clicked, patch distribution/application processing will terminate.

4.2.8 Post-execution script error check

A "post-execution script error check" task occurs when a post-execution script has been registered and settings have been configured to terminate processing when an error occurs.

For scripts, "0" is handled as normal termination, whereas values other than "0" are handled as errors. Refer to "4.2.6.1 Pre-execution and Post-execution Scripts" for information on post-execution scripts.



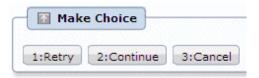
If a "post-execution script error check" task occurs, a log will be output to the **Details** field in the **Post-execution script error check** tab window, indicating the type of error that has occurred.

Refer to the "returnCode" information. The following table shows the expected values and their meaning.

Keyword	returnCode	Meaning
executeCommand <script< td=""><td>Other than 0</td><td>Logs are output using the following format.</td></script<>	Other than 0	Logs are output using the following format.
path>		Example:
		<2012-04-17 16:25:09>:executeCommand
		["C:/Fujitsu/Systemwalker/SWCFMGA/var/process/75974/post_script.bat"]
		message: The operation component was successful.
		command_stdout:
		command_stderr:
		command_rcode:1
		returnCode:1
		The value of "command_rcode" is the return value output by the script.
		If the value of "command_rcode" is other than "0", this will be treated as an error.
		Check the script by referring to the return value.
All	189	If one of the following values has been output for "message", this means that the connection for network communications with the business server has failed.
		[LinkExpRBA] CategoryCode: 50
		[LinkExpRBA] ErrorCode: 80
		[Actions]
		Check the following items:
		- The file transfer infrastructure may not have been set up on the business server. Check whether the file transfer infrastructure has been set up.
		- The business server may have stopped. Check the operational status of the business server.
		- The file transfer infrastructure may not be running on the business server. Start the file transfer infrastructure.
		[Windows]
		Restart the "Systemwalker File Transfer Library Control" service.
		[Linux]
		Execute the following command:
		# service FJSVlnkbs start
		- There may be an error with the IP address of the business server that is specified in the "hosts" file. Check the IP address specified in the "hosts" file.
		- If the remote server is a PC server with a TCP/IP connection, the number of connection requests on the business server may have exceeded the maximum number of requests that can be simultaneously processed by WinSock.
		- The connection may have been blocked by a firewall on the communication path.
		- If the business server is running Windows, the connection may have been blocked by security settings such as the Windows firewall.
		- If the situation still does not change even after you have taken the appropriate action and then retried the processing, collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu

technical support.

Keyword	returnCode	Meaning
		If one of the following values has been output for "message", this means that a timeout has occurred during communications with the business server.
		[LinkExpRBA] CategoryCode: 50
		[LinkExpRBA] ErrorCode: 60
		[Actions]
		The following are the possible causes of the problem:
		- The business server may be stopped.
		- The business server may have slowed down.
		- The network may be under high load.
		Check these possible causes and then try again.
		If the situation still does not change despite the retry attempt, collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.
	Other	Collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.



When the **Retry** button is clicked, the script will be executed again.

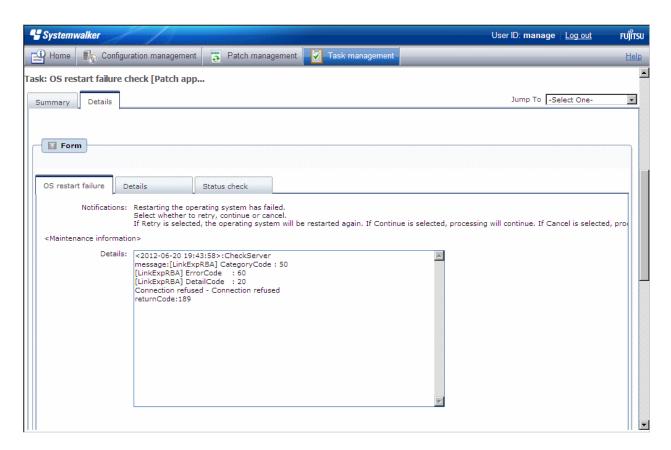
When the Continue button is clicked, the error will be ignored and processing will continue.

When the Cancel button is clicked, patch distribution/application processing will terminate.

4.2.9 OS restart failure check

An "OS restart failure check" task occurs when the operating system has failed to restart.

The operating system is restarted when a restart is required after the patch has been applied and when **Yes** has been specified for **Reboot after application** in the application settings. If **No** is specified for **Reboot after application** in the application settings, the operating system will not be restarted even if the operating system needs to be restarted after the patch is applied. Also, if there is no need to restart the operating system after the patch is applied, the operating system will not be restarted, regardless of the settings for **Reboot after application**.

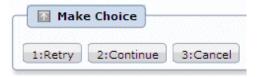


If an "OS restart failure check" task occurs, a log will be output to the **Details** field in the **OS restart failure check** tab window, indicating the type of error that has occurred.

Refer to the "returnCode" information. The following table shows the expected values and their meaning:

Keyword	returnCode	Meaning
All	189	If one of the following values has been output for "message", this means that the connection for network communications with the business server has failed.
		[LinkExpRBA] CategoryCode: 50
		[LinkExpRBA] ErrorCode: 80
		[Actions]
		Check the following items:
		- The file transfer infrastructure may not have been set up on the business server. Check whether the file transfer infrastructure has been set up.
		- The business server may have stopped. Check the operational status of the business server.
		- The file transfer infrastructure may not be running on the business server. Start the file transfer infrastructure.
		[Windows]
		Restart the "Systemwalker File Transfer Library Control" service.
		[Linux]
		Execute the following command:
		# service FJSVlnkbs start
		- There may be an error with the IP address of the business server that is specified in the "hosts" file. Check the IP address specified in the "hosts" file.

Keyword	returnCode	Meaning
		- If the remote server is a PC server with a TCP/IP connection, the number of connection requests on the business server may have exceeded the maximum number of requests that can be simultaneously processed by WinSock.
		- The connection may have been blocked by a firewall on the communication path.
		 If the business server is running Windows, the connection may have been blocked by security settings such as the Windows firewall.
		 If the situation still does not change even after you have taken the appropriate action and then retried the processing, collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.
		If one of the following values has been output for "message", this means that a timeout has occurred during communications with the business server:
		[LinkExpRBA] CategoryCode: 50
		[LinkExpRBA] ErrorCode: 60
		[Actions]
		The following are the possible causes of the problem:
		- The business server may be stopped.
		- The business server may have slowed down.
		- The network may be under high load.
		Check these possible causes and then try again.
		If the situation still does not change despite the retry attempt, collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.
	Other	Collect investigation data using the problem investigation data collection command (swcfmg_collectinfo), and then contact Fujitsu technical support.



When the Retry button is clicked, the operating system will be restarted again.

When the Continue button is clicked, the error will be ignored and processing will continue.

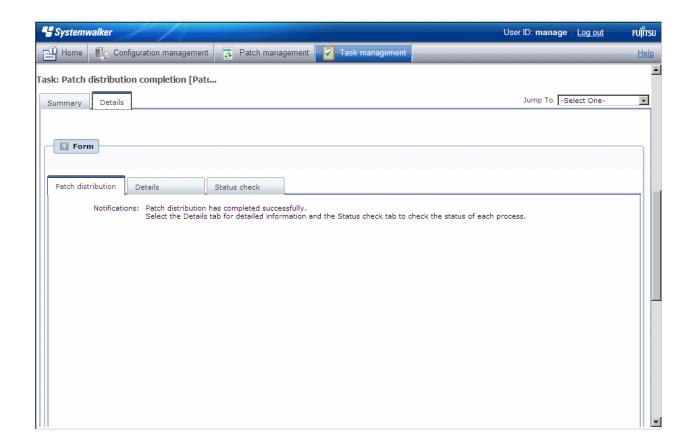
When the Cancel button is clicked, patch distribution/application processing will terminate.

4.2.10 Patch distribution completion

If patch distribution has been performed normally, this task occurs at the end.

No user action is required for the "Patch distribution completion" task. Once patch distribution has completed, the status changes automatically.

This means that these tasks are not displayed in the task list. They can be viewed by selecting My Completed Tasks from the Task Filters pull-down menu.



4.2.11 Patch application completion

If patch application has been performed normally, this task occurs at the end.

No user action is required for the "Patch application completion" task. Once patch application has completed, the status changes automatically.

This means that these tasks are not displayed in the task list. They can be viewed by selecting My Completed Tasks from the Task Filters pull-down menu.

