FUJITSU Software
Systemwalker
Software Configuration Manager Express

User's Guide

Windows/Linux

Preface

Purpose of This Document

This document explains the overview, setup procedure, operation procedure, and management procedure of Systemwalker Software Configuration Manager.

Intended Readers

This document is intended for the users of Systemwalker Software Configuration Manager Express.

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

- Basic knowledge of the operating system being used

In this document, Systemwalker Software Configuration Manager Express is abbreviated to "Systemwalker Software Configuration Manager".

Structure of This Document

This document is structured as follows:

Conventions Used in this Document

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

Abbreviations and Generic Terms Used for Operating Systems

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

Official name	Abbreviation	
Microsoft(R) Windows Server(R) 2012 Datacenter Microsoft(R) Windows Server(R) 2012 Standard	Windows Server 2012	Windows
Microsoft(R) Windows Server(R) 2012 R2 Datacenter Microsoft(R) Windows Server(R) 2012 R2 Standard	Windows Server 2012 R2	
Microsoft(R) Windows Server(R) 2008 Standard Microsoft(R) Windows Server(R) 2008 Standard without Hyper-V Microsoft(R) Windows Server(R) 2008 Enterprise Microsoft(R) Windows Server(R) 2008 Enterprise without Hyper-V	Windows Server 2008	
Microsoft(R) Windows Server(R) 2008 R2 Standard Microsoft(R) Windows Server(R) 2008 R2 Enterprise	Windows Server 2008 R2	
Red Hat(R) Enterprise Linux(R) (for x86)	RHEL (x86)	RHEL
Red Hat(R) Enterprise Linux(R) (for Intel64)	RHEL (Intel64)	
Oracle Solaris	Solaris Operating System Solaris OS	Solaris

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Issue Date and Version

Version	Manual code
August 2014: First edition	B1X1-0320-01ENZ0(00) / B1X1-0320-01ENZ2(00)
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Contents

Part 1   Overview

Chapter 1 Overview

This chapter provides an overview of the Systemwalker Software Configuration Manager product.

1.1 What is Systemwalker Software Configuration Manager?

Systemwalker Software Configuration Manager is a software product that centrally manages the configuration information of an entire system including hardware, OS, and middleware.

In recent years there has been a growing trend for the ICT department of a company to use virtualization to consolidate corporate servers in data centers, in order to improve cost competitiveness. However, the workload on system administrators is increasing, as it is no longer possible to keep up with dynamic changes or increasing server resources (such as IP addresses, operating systems, and middleware).

Systemwalker Software Configuration Manager makes it possible to centrally manage the information of the hardware and the information of the resources that have been dynamically deployed via the cloud. Moreover, the ability to install software, manage software parameters and the status of patch applications to servers, enables the workload of system administrators to be reduced.

It is also possible to limit the range of which software configuration information is visible and which operations can be performed according to the tenancy that the administrator belongs to and the privileges of that administrator, thereby making it possible to prevent operation mistakes and reduce security risks.

1.2 Product Road Map

As an edition of Systemwalker Software Configuration Manager, the following product provides only the configuration management function for hardware/virtual environments.

- Systemwalker Software Configuration Manager Express

  Automatically collects configuration information of hardware (chassis/servers) and virtual environments (hypervisor/guest OS) and store it in the CMDB for management.

The functions provided by Systemwalker Software Configuration Manager Express are shown below.
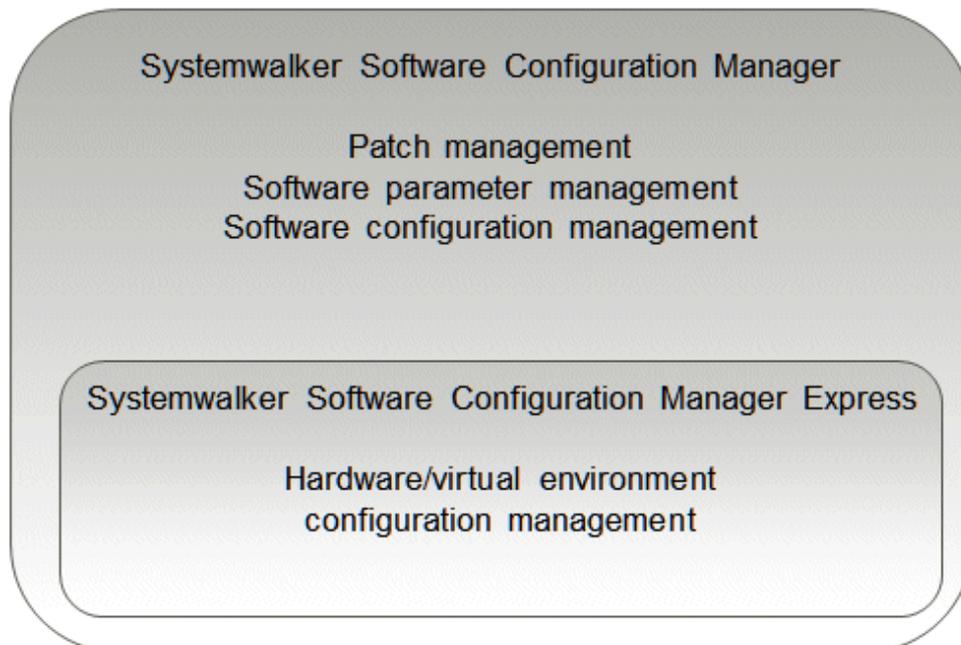
Relationships between hardware configuration information, virtual environment configuration information, and software configuration information are shown below.
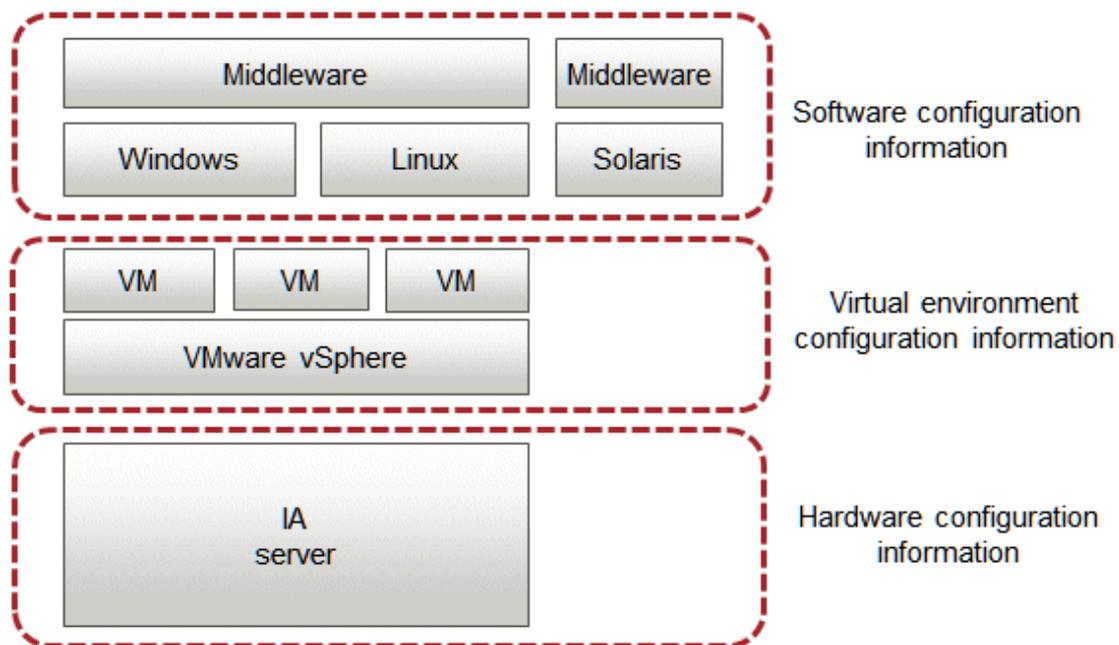
1.3 System Configuration

This section explains the system configuration for Systemwalker Software Configuration Manager.

1.3.1 System Configuration for Managing Hardware/Virtual Environment Configurations

The following diagram illustrates the system configuration for managing hardware and virtual environment configuration.

Figure 1.1 System Configuration for Managing Hardware/Virtual Environment Configurations
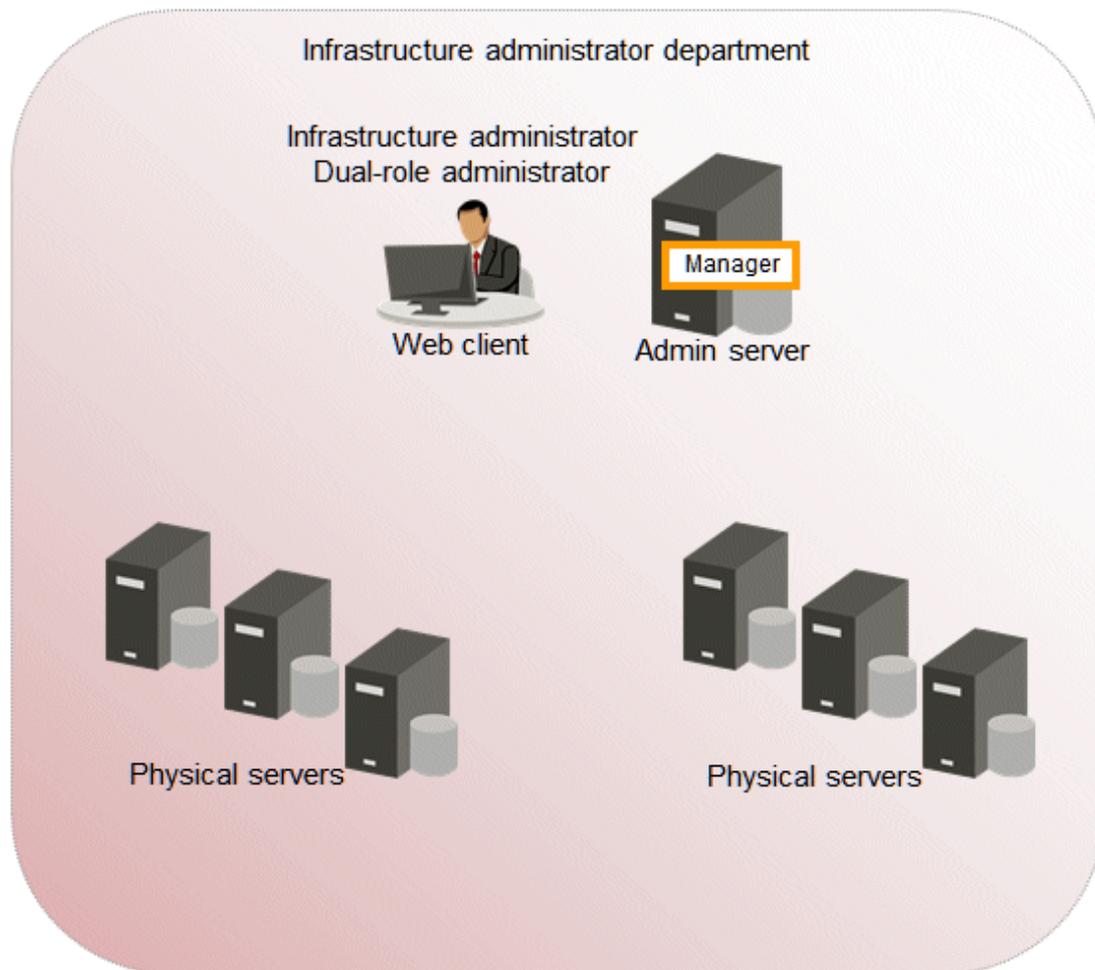
Admin server

The admin server is the server that operates Systemwalker Software Configuration Manager. The admin server collects the configuration information of physical server hardware and virtual environments.

The manager of Systemwalker Software Configuration Manager is installed on the admin server. The manager is a Systemwalker Software Configuration Manager program that runs on the admin server.

Physical server (business server)

A physical server managed by Systemwalker Software Configuration Manager.

Web client

A client for operating the Systemwalker Software Configuration Manager admin server. The management console is used in a web browser.

Chapter 2 Function Explanation

This product provides the following functions:

- Discovery

- Configuration management

2.1 Discovery

"Discovery" is a function that collects configuration information for business servers and registers it in the configuration management database (CMDB).

The configuration information collected by the discovery function is registered in the CMDB as configuration items (CI).

Figure 2.1 Overview of the discovery function
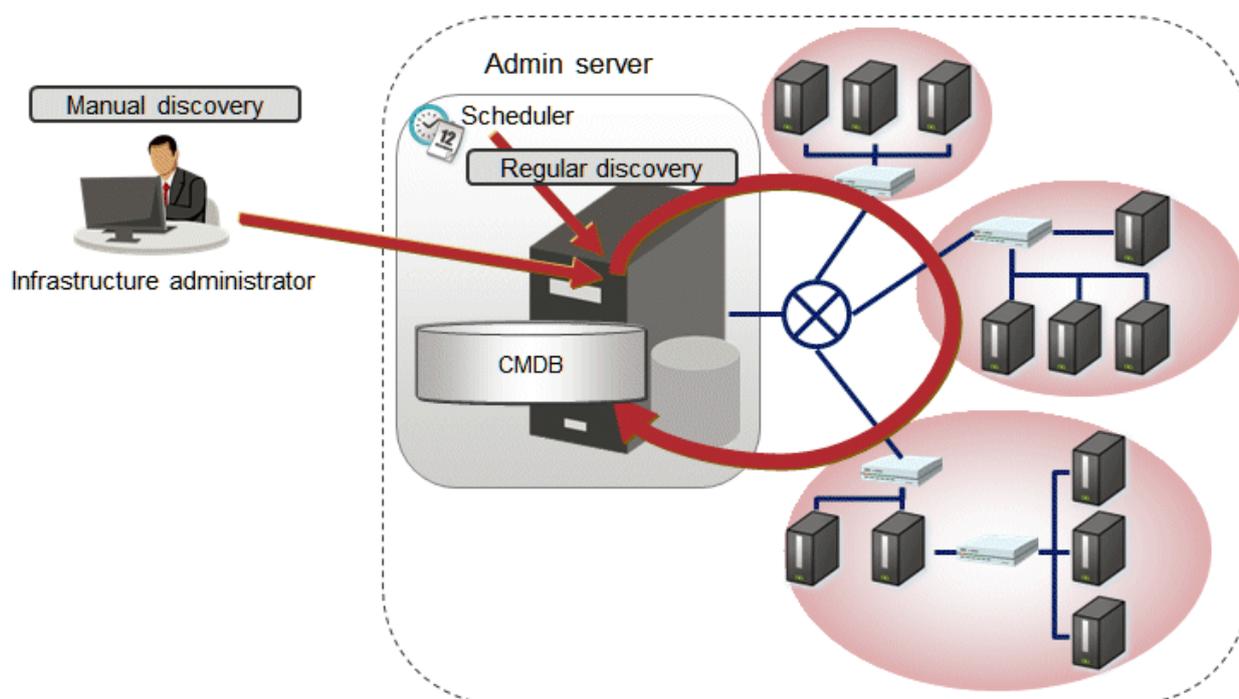
Hardware/virtual environment configuration to be collected

The following hardware/virtual environment configuration information can be collected using the discovery function:

The configuration information of the virtual environments is collected from VMware vSphere ESXi.

Table 2.1 Hardware configuration information collected by the discovery function (chassis, blade servers)

Device	Item	Example
Chassis body Fujitsu PRIMERGY BX400 S1, BX600 S2/S3, BX900 S1/S2	Product name	BX900
	Serial number	AA1234567890
	Firmware version(*1)	5.32
Blade server Fujitsu PRIMERGY BX620 S3 - S6, BX920 S1 - S4, BX922 S2, BX924 S2 - S4, BX960 S1	Slot number	1
	Vendor name	FUJITSU
	Product name	PRIMERGY BX920 S1
	Serial number	BB1234567890

Device	Item	Example
	CPU Type	Xeon
	Frequency	1995 MHz
	Quantity	2
	Memory size	4096 MB
	Firmware version(*2)	551
	BIOS version(*2)	3D41
	OS name(*3)	VMware ESXi 5.1.0 build-1157734

*1: On PRIMERGY BX400 S1 and BX600 S2/S3, the firmware version cannot be discovered.

*2: On PRIMERGY BX620 S3 - S6, the firmware version and BIOS version cannot be discovered.

*3: Only when the version of the mounted hypervisor is VMware vSphere ESXi 5.1 or later can discovery be performed.

Table 2.2 Hardware configuration information collected by the discovery function (rack mount servers)

Device	Item	Example
Fujitsu PRIMERGY RX100/ RX200/RX300 S6 or later, RX1330/RX2520/RX2540 M1 or later IBM System x3550 M4 HP ProLiant DL320e Gen8 v2	Product name	PRIMERGY RX300 S7
	Serial number	CC1234567890
	CPU Type (*2)	Intel(R) Xeon(R) CPU E5-2609 v2 @ 2.50GHz
	Frequency(*3)	2500 MHz
	Quantity	2
	Memory size	4096 MB
	OS name(*1)	VMware ESXi 5.1.0 build-1157734

*1: Only when the version of the mounted hypervisor is VMware vSphere ESXi 5.1 or later can discovery be performed.

*2: On PRIMERGY RX100/RX200/RX300 S6 the CPU type cannot be discovered.

*3: On IBM servers and HP servers, the frequency cannot be discovered.

Table 2.3 Virtual environment configuration information collected by the discovery function (for VMware vSphere ESXi)

Hypervisor	Type	Item	Example
VMware vSphere ESXi	VM host information	OS name	VMware ESXi 5.1.0 build-1021289
		CPU core count	8
		MAC address	60:EB:69:07:F3:xx
		IP address	192.168.1.12
	VM guest information	Virtual machine name	VM001
		OS name	Microsoft Windows Server 2012 (64-bit)
		CPU core count	2
		Frequency (GHz)	1.0
		Memory size (GB)	2.0
		MAC address	60:EB:69:07:D3:xx
		IP address	192.168.10.122

The timing of discovery

Discovery is performed at the following times:

- Regular discovery

  Discovery is executed periodically according to a schedule.

- Manual discovery

  Discovery is manually performed by the infrastructure administrator executing a command.

Regular discovery

With regular discovery, the latest configuration information is collected according to a schedule that the infrastructure administrator has defined in advance.

Figure 2.2 Regular discovery
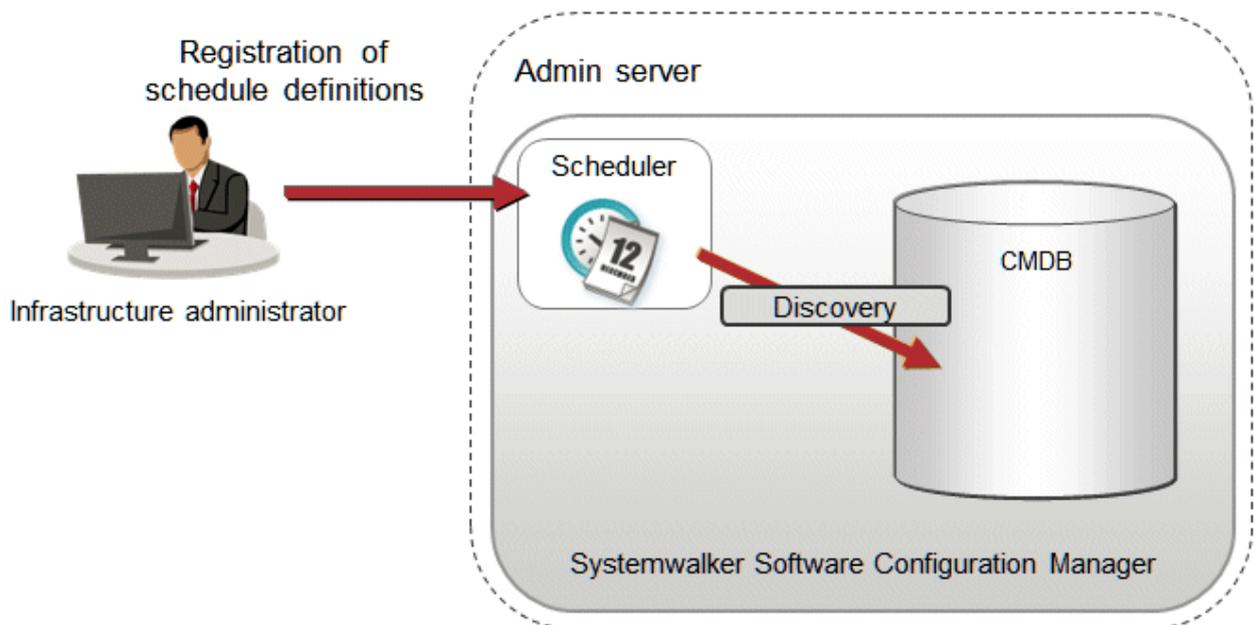
Manual discovery

The infrastructure administrator collects the latest configuration information by executing the command to perform discovery.

Figure 2.3 Manual discovery
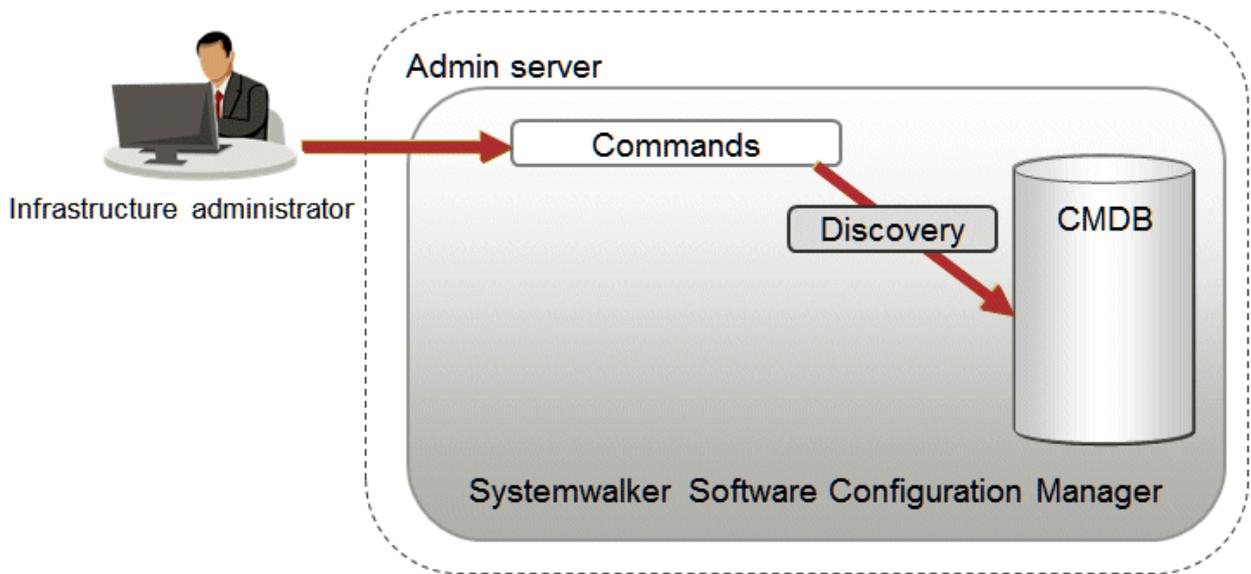
2.2 Configuration Management

2.2.1 Hardware/Virtual Environment Configuration Management

Discovery of hardware configuration information collects serial numbers of chassis, blade servers, rack mount servers, firmware versions, and CPU/memory information.

Discovery of virtual environment configuration information collects the host OS version, guest OS type, IP address, and CPU/memory information in VMware vSphere environments.

To manage hardware/virtual environment configuration management, perform the following operations.

- Referencing the hardware/virtual configuration information

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

The following table shows the range within which each role can use hardware/virtual environment configuration management:

Role	Usage range of hardware/virtual environment configuration information
Infrastructure administrator	Can look up software configuration information for all servers.
Dual-role administrator	Can look up software configuration information for all servers.

Figure 2.4 Overview of hardware/virtual environment configuration management
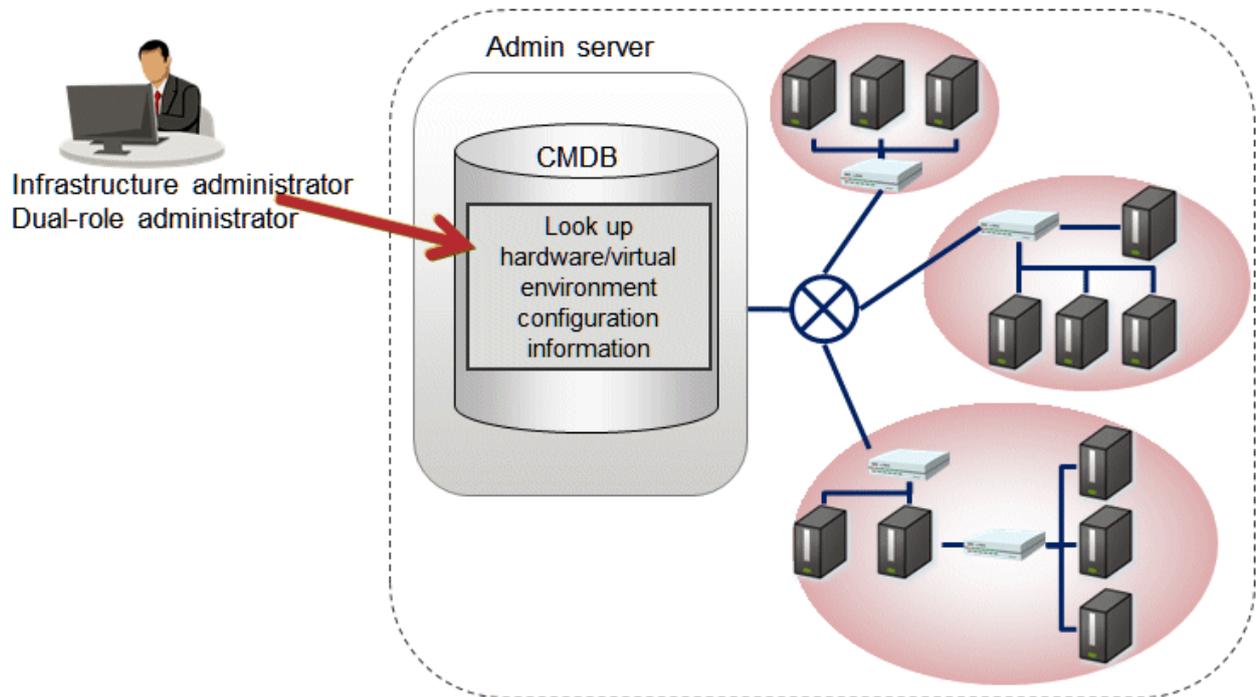
Chapter 3 Operating Environment

This chapter explains the operating environment for this product.

3.1 Hardware Environments

3.1.1 Recommended Hardware Resources

Admin server

Type of hardware	Requirements
Supported model	PRIMERGY, PRIMEQUEST 1000/2000 series
CPU	Intel(R) Xeon(R) 3 GHz or higher
Number of CPUs	2 or more
Memory capacity (excluding the operating system)	8.0 GB or more

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Memory space for the CMDB manager

The size of the memory space for the CMDB manager increases as the number of managed business servers increases. Estimate the memory size based on the number of business servers. Refer to "Database and memory space for the CMDB manager" for details.
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3.1.2 Disk Capacity

Admin server

Static disk capacity [Windows]

Product name	Disk space required for installation
Systemwalker Software Configuration Manager	Installation directory: 13.3 GB

Note: In addition to the disk space requirements above, the following disk space is required to manage and uninstall the software.

- %SYSTEMDRIVE%\FujitsuF4CR: 150 MB

When linking to ServerView Resource Orchestrator

Product name	Disk space required for installation
Systemwalker Software Configuration Manager	Installation directory: 3 GB

Note: In addition to the disk space requirements above, the following disk space is required to manage and uninstall the software:

- %SYSTEMDRIVE%\FujitsuF4CR: 150 MB

Static disk capacity [Linux]

Product name	Area used	Disk space required for installation
Systemwalker Software Configuration Manager	/opt	3.2 GB or more
	/var	9.2 GB or more
	/etc	0.7 GB or more

Note: In addition to the disk space requirements above, the following disk space is required to manage and uninstall the software.

-/opt: 150 MB

Dynamic disk capacity

Database and memory space for the CMDB manager

Use the following list as a guide to estimate the space for the database and memory.

Number of physical servers	Total amount of disk space used	Total amount of memory space used
500	1.0GB	1.5 GB

3.2 Software Environments

This section explains the software resources that are required to install this product.

3.2.1 Operating Systems for Managing Hardware/Virtual Environment Configuration

This section lists the operating systems supported for managing hardware and virtual environment configuration.

Admin server

- Windows Server 2012 (for x64)

- Windows Server 2012 R2 (for x64)

- Red Hat Enterprise Linux 6 (for Intel64)

- Red Hat Enterprise Linux 7

3.2.2 Mandatory Software

This section lists mandatory software.

Admin server

- ServerView Operations Manager V6.0 or later except following versions.

  [Windows]

  V7.11.04 to V7.11.06

  [Linux]

  V7.11.04 to V7.11.07

  This software is required for Single Sign-On.

Web client

- Internet Explorer 9, 10, 11, or Microsoft Edge

- Adobe Reader XI or Adobe Acrobat Reader DC (required to view PDF manuals)

 Note

The recommended display size (screen resolution) for the management console is 1024x768 pixels.

Business server

- VMware Tools must be installed on the guest OS on ESXi (required for managing hardware and virtual environment configurations)

3.2.2.1 Mandatory Software for Linux

Admin server

For Red Hat Enterprise Linux 6.0 or later, the following software, which comes with the operating system, is required.

Red Hat Enterprise Linux 6.0 (for Intel64)

- alsa-lib package (64-bit version)

- apr package (32-bit version)

- apr-util package (32-bit version)

- cloog-ppl package (64-bit version)

- compat-expat1 package (32-bit version)

- compat-openldap package (32-bit version)

- cpp package (64-bit version)

- cyrus-sasl-lib package (32-bit version)

- db4 package (32-bit version)

- expat package (32-bit version)

- file package (64-bit version)

- gcc package (64-bit version)

- gcc-c++ package (64-bit version)

- gdb package (64-bit version)

- glibc package (32-bit version)

- glibc package (64-bit versions)

- glibc-devel package (64-bit version)

- glibc-headers package (64-bit version)

- kernel-headers package (64-bit version)

- keyutils-libs package (32-bit version)

- krb5-libs package (32-bit version)

- libICE package (64-bit version)

- libSM package (64-bit version)

- libX11 package (64-bit version)

- libX11-common package

- libXau package (64-bit version)

- libXext package (64-bit version)

- libXi package (64-bit version)

- libXp package (64-bit version)

- libXrender package (64-bit versions)

- libXt package (64-bit version)

- libXtst package (64-bit version)

- libattr package (32-bit version)

- libcap package (32-bit version)

- libgcc package (32-bit version)

- libgomp package (64-bit version)

- libselinux package (32-bit version)

- libstdc++ package (32-bit version)

- libstdc++-devel package (64-bit version)

- libtool-ltdl package (64-bit version)

- libuuid package (32-bit version)

- libxcb package (64-bit version)

- lksctp-tools package (64-bit versions)

- make package (64-bit version)

- mpfr package (64-bit version)

- ncurses-libs package (64-bit versions)

- net-snmp package (64-bit version)

- net-snmp-utils package (64-bit version)

- nss-softokn-freebl package (32-bit version)

- nss-softokn-freebl package (64-bit versions)

- openssl package (32-bit version)

- openssl098e package (32-bit versions)

- perl package (64-bit version)

- perl-Module-Pluggable package (64-bit version)

- perl-Pod-Escapes package (64-bit version)

- perl-Pod-Simple package (64-bit version)

- perl-libs package (64-bit version)

- perl-version package (64-bit version)

- ppl package (64-bit version)

- redhat-lsb package (64-bit version)

- strace package (64-bit version)

- sysstat package (64-bit version)

- tcsh package (64-bit version)

- unixODBC package (64-bit version)

- zlib package (32-bit version)

- zlib package (64-bit versions)

For Red Hat Enterprise Linux 7.0 or later, the following software, which comes with the operating system, is required.

Red Hat Enterprise Linux 7.0 or later

- apr package (32-bit version)

- apr-util package (32-bit version)

- compat-openldap package (32-bit version)

- cpp package (64-bit version)

- cyrus-sasl-lib package (32-bit version)

- expat package (32-bit version)

- gcc package (64-bit version)

- gcc-c++ package (64-bit version)

- glibc package (32-bit version)

- glibc package (64-bit version)

- glibc-devel package (64-bit version)

- glibc-headers package (64-bit version)

- kernel-headers package (64-bit version)

- keyutils-libs package (32-bit version)

- krb5-libs package (32-bit version)

- libICE package (64-bit version)

- libSM package (64-bit version)

- libX11 package (64-bit version)

- libX11-common package

- libXau package (64-bit version)

- libXext package (64-bit version)

- libXi package (64-bit version)

- libXp package (64-bit version)

- libXrender package (64-bit version)

- libXt package (64-bit version)

- libXtst package (64-bit version)

- libattr package (32-bit version)

- libcap package (32-bit version)

- libdb package (32-bit version)

- libgcc package (32-bit version)

- libselinux package (32-bit version)

- libstdc++ package (32-bit version)

- libstdc++-devel package (64-bit version)

- libtool-ltdl package (64-bit version)

- libuuid package (32-bit version)

- libxcb package (64-bit version)

- lksctp-tools package (64-bit version)

- mpfr package (64-bit version)

- ncurses-libs package (64-bit version)

- net-snmp package (64-bit version)

- net-snmp-utils package (64-bit version)

- nss-softokn-freebl package (32-bit version)

- nss-softokn-freebl package (64-bit version)

- openssl package (64-bit version)

- openssl-libs package (32-bit version)

- openssl098e package (32-bit version)

- perl package (64-bit version)

- perl-Module-Pluggable package (64-bit version)

- perl-Pod-Escapes package (64-bit version)

- perl-Pod-Simple package (64-bit version)

- perl-libs package (64-bit version)

- perl-version package (64-bit version)

- redhat-lsb package (64-bit version)

- strace package (64-bit version)

- sysstat package (64-bit version)

- tcsh package (64-bit version)

- unixODBC package (64-bit version)

- zlib package (32-bit version)

- zlib package (64-bit version)

3.2.3 Related Software

This section lists related software programs that are required for this product.

Admin server

- ServerView Resource Orchestrator V3.2 Cloud Edition

    This software is required to manage business servers deployed by ServerView Resource Orchestrator.

Note

If Systemwalker Software Configuration Manager is linked to ServerView Resource Orchestrator, uninstall Systemwalker Software Configuration Manager before performing the following tasks:

 - Upgrading ServerView Resource Orchestrator

 - Uninstalling ServerView Resource Orchestrator

Note

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For the authentication method for ServerView Resource Orchestrator, use ServerView Single Sign-On (SSO). If the internal authentication system is used for authentication, ServerView Resource Orchestrator cannot coordinate with Systemwalker Configuration Manager.

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Public cloud

Systemwalker Software Configuration Manager can manage servers on the following public cloud environment:

- FUJITSU Cloud Service K5

Note

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Notes on public cloud environments

Take note of the following:

- This product does not support functions for configuration management of hardware and virtual environments.

- This product does not support the following operating systems:

    - Admin server

        - All OS types

    - Business servers

        - Red Hat Enterprise Linux 5 (for x86)

        - Red Hat Enterprise Linux 5 (for Intel64)

        - Oracle Solaris 11

- To manage business servers in a public cloud environment using an admin server in an on-premises or private cloud environment, a virtual private network (VPN) connection is required.

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3.2.4 Conflicting Software

The following table lists software that conflicts with this product.

Admin server

The Systemwalker Software Configuration Manager admin server cannot coexist with the following software:

[Windows]

Product	V/L
Cloud Services Management	V1.0.0
Systemwalker Runbook Automation (Management Server)	Cannot coexist with V15.1.3 or earlier
Systemwalker Runbook Automation (Linkage Server/Relay Server)	Cannot coexist with V15.1.3 or earlier
Systemwalker Runbook Automation (Business Server)	Cannot coexist with V15.1.3 or earlier
Systemwalker Software Configuration Manager (linkage server)	Cannot coexist with any version
Systemwalker Software Configuration Manager (business server)	Cannot coexist with any version
Cloud infrastructure management software	Cannot coexist with any version

[Linux]

Product	V/L
Systemwalker Runbook Automation (Management Server)	Cannot coexist with V15.1.3 or earlier
Systemwalker Runbook Automation (Linkage Server/Relay Server)	Cannot coexist with V15.1.3 or earlier
Systemwalker Runbook Automation (Business Server)	Cannot coexist with V15.1.3 or earlier
Systemwalker Software Configuration Manager (linkage server)	Cannot coexist with any version
Systemwalker Software Configuration Manager (business server)	Cannot coexist with any version
Cloud infrastructure management software	Cannot coexist with any version

3.3 Virtual Environments

This section explains the points to consider when operating this product in a virtual environment.

Admin server

Operation of the admin server is supported in the following virtual environments:

- VMware vSphere 4 ESX 4.0/4.1 and ESXi 4.1

- VMware vSphere 5 ESXi 5.0/5.1/5.5

- VMware vSphere 6 ESXi 6.0

- Hyper-V

- Linux virtual machine function

📝 **Note**

Notes common for all virtual environments

- When a problem occurs, support is provided under the condition that it is reproducible in a physical environment (outside of a virtual environment). For this reason, reproduction of the problem in a physical environment may be requested.

- Cloning cannot be used on the admin server.

For VMware

- VMware vMotion can be used only when communication processing (discovery, parameter setting, and deployment and application of patches) is not performed on managed servers.

- When switchover occurs using the HA function of VMware during an operation (discovery, parameter setting, and deployment and application of patches), the operation may need to be performed again after the switchover.

- When switchover occurs using the DR function of VMware, the states which were affected by operations (discovery, definitions, operation information) between the creation of the last backup and occurrence of the disaster are restored to the states at the time when the last backup was created. In addition, operations are not possible when the host name or IP address is not taken over.

For Hyper-V

- The Live Migration and Quick Migration functions of Hyper-V can be used only when communication processing (discovery, parameter setting, and deployment and application of patches) is not performed on managed servers.

- When switchover occurs using the replication function of Hyper-V, the states which were affected by operations (discovery, definitions, operation information) between the creation of the last backup and occurrence of the disaster are restored to the states at the time when the last backup was created. In addition, operations are not possible when the host name or IP address is not taken over.

- The import and export functions of Hyper-V do not work when the host name or IP address is not taken over.

- When switchover occurs using the failover function of VMware during an operation (discovery, parameter setting, and deployment and application of patches), the operation may need to be performed again after the switchover.

3.4 Hardware and Hypervisor Supported for Configuration Management of Hardware/Virtual Environment

Hardware supported for hardware configuration management is as follows.

Table 3.1 Hardware supported for hardware configuration management (chassis, blade servers)

Device	Attribute name	Management blade			Server blade					
		BX600 S2/S3	BX900 S1/S2	BX400 S1	BX620 S3/S4	BX620 S5/S6	BX920 S1 - S4	BX922 S2	BX924 S2 - S4	BX960 S1
Chassis body	Product name	Y	Y	Y	-	-	-	-	-	-
	Serial number	Y	Y	Y	-	-	-	-	-	-
	Firmware version	-	Y	-	-	-	-	-	-	-
Blade server	Slot number	-	-	-	Y	Y	Y	Y	Y	Y
	Vendor name	-	-	-	Y	Y	Y	Y	Y	Y
	Product name	-	-	-	Y	Y	Y	Y	Y	Y
	Serial number	-	-	-	Y	Y	Y	Y	Y	Y
	CPU Type	-	-	-	Y	Y	Y	Y	Y	Y
	Frequency	-	-	-	Y	Y	Y	Y	Y	Y
	Quantity	-	-	-	Y	Y	Y	Y	Y	Y
	Memory size	-	-	-	Y	Y	Y	Y	Y	Y
	Firmware version	-	-	-	-	-	Y	Y	Y	Y
	BIOS version	-	-	-	-	-	Y	Y	Y	Y
	OS name	-	-	-	Y (*1)	Y (*1)	Y (*1)	Y (*1)	Y (*1)	Y (*1)

Y: Target of discovery.

-: Not target of discovery.

*1: When the version of the mounted hypervisor is VMware vSphere ESXi 5.1 or later, discovery can be performed.

Table 3.2 Hardware supported for hardware configuration management (rack mount servers)

Device	Attribute name	Target of discovery
Fujitsu PRIMERGY RX100/ RX200/RX300 S6 or later,RX1330/RX2520/RX2540 M1 or later	Vendor name	Y
	Product name	Y
	Serial number	Y
IBM System x3550 M4	CPU Type	Y(*1)
HP ProLiant DL320e Gen8 v2	Frequency	Y(*2)

Device	Attribute name	Target of discovery
	Quantity	Y
	Memory size	Y
	OS name	Y(*3)

Y: Target of discovery.

*1: On PRIMERGY RX100/RX200/RX300 S6 the CPU type cannot be discovered.

*2: On IBM servers and HP servers, the frequency cannot be discovered.

*3: Discovery can only be performed when the version of the mounted hypervisor is VMware vSphere ESXi 5.1 or later.

The following diagram illustrates the hypervisors for which virtual environment configuration can be managed.

Table 3.3 Hypervisor supported for virtual environment configuration management

Hypervisor	Type	Item	Target of discovery
VMware vSphere ESXi5.1 or later	VM host information	OS name	Y
		CPU core count	Y
		MAC address	Y
		IP address	Y
	VM guest information	Virtual machine name	Y
		OS name	Y
		CPU core count	Y
		Frequency	Y
		Memory size	Y
		MAC address	Y
		IP address	Y

Y: Target of discovery.

3.5 Advisory Notes

This section explains the points to consider regarding this product.

Operations in IPv6 environments

IPv6 may be used when connecting to the management console from a web browser.

IPv4 must be used for management-related communications such as the discovery function.

Character encoding

This product does not support JIS2004 (JIS X 0213:2004).

Part 2   Installation

Chapter 4 Operation Design

This chapter explains how to design operations for Systemwalker Software Configuration Manager.

4.1 Authentication

This section explains how to authenticate users in Systemwalker Software Configuration Manager.

In Systemwalker Software Configuration Manager, authentication is performed using single sign-on. For users of this product, the users registered in the repository of the single sign-on environment are used for authentication. This method has the following features:

- User information can be shared between products that support the single sign-on environment. User information can be managed centrally in the repository of the single sign-on environment.

- When logged in to the management console of Systemwalker Software Configuration Manager, the user information can be used to seamlessly start up software products that use single sign-on, without having to display a new login screen.

Systemwalker Software Configuration Manager uses the ServerView Operations Manager single sign-on. OpenDS (*1), which is provided by ServerView Operations Manager, is used as the repository of the ServerView Operations Manager single sign-on environment.

*1: OpenDJ is bundled as a directory service in ServerView Operations Manager V6.1 and later. Therefore, where the explanation in this manual includes "OpenDS", read this as "OpenDJ" if applicable.

4.2 Managing User Information

This chapter explains how to manage the user information in Systemwalker Software Configuration Manager.

This product uses a directory service as the repository of user information. The directory service is also used for user authentication.

The content of user operations carried out by the User Information Management command is reflected to the directory service created at the following location:

ou=users,dc=fujitsu,dc=com

User information is stored in the inetOrgPerson class. The user information stored for each attribute is listed in the table below.

Attribute name	Value	Remarks
objectClass	inetOrgPerson	
cn	User ID	
sn	Surname	
initials	Middle name(s)	
givenName	Given name	
userPassword	Password	
uid	User ID	
ou	Tenant name	Stores the name of the tenant that the user belongs to.
o	Company or organization name	
telephoneNumber	Telephone number	
mail	Email address	
description	Role	One of the following values is set according to the user role: - Dual-role administrator: administrator - Infrastructure administrator: infra_admin

Also, all users are registered as members of the IflowUsers group below.

Group name	Identifier (dn)	Object class
IflowUsers	cn=IflowUsers,ou=Group,dc=fujitsu,dc=com	organizationalUnit

Information

Requirements to use this product

In addition to users registered using the User Information Management command, directory service user entries that satisfy the following three conditions can be used as users of Systemwalker Software Configuration Manager:

- A value is stored in all the following attributes:

    - cn

    - uid

    - sn

    - givenName

    - mail

- The same value is stored in the following attributes:

    - cn

    - uid

- The value of the description attribute is one of the following:

    - administrator

    - infra_admin

Note

Notes on sharing with another product the directory service used by this product

- Ensure that the cn and uid attributes in the directory service have unique values, otherwise you will not be able to log in to the management console.

- Users who have not been registered using the User Information Management command and users who do not satisfy the requirements to use this product cannot use the management console.

- You cannot perform operations using the User Information Management command for users who have not been registered using the User Information Management command or users who do not satisfy the requirements to use this product.

- Note the following when using users of this product on a different product:

    - Attribute values in the directory service are updated using the values you specified when updating, moving, or changing the password of user information with the User Information Management command.

    - Deleting a user with the User Information Management command also deletes the user entry from the directory service.

Users and Groups used by this product

This product uses the following users and groups contained in the directory service, and therefore should not be deleted. Also, the following users cannot be used by the user of this product.

User name	Identifier (dn)	Object class	Remarks
User for process control	cn=*<userForProcessControl>*,ou=users, dc=fujitsu,dc=com	inetOrgPerson	- The user for process control is specified during setup of this product. - It is created automatically during setup of this product and deleted automatically during unsetup of this product.

Group name	Identifier (dn)	Object class	Remarks
AdminRole	cn=AdminRole,ou=Group,dc=fujitsu,dc=com	organizationalUnit	It is created automatically during setup of this product and deleted automatically during unsetup of this product.
swrba_Exe	cn=swrba_Exe,ou=Group,dc=fujitsu,dc=com	organizationalUnit	
Role	cn=Role,ou=Group,dc=fujitsu,dc=com	organizationalUnit	
IflowUsers	cn=IflowUsers,ou=Group,dc=fujitsu,dc=com	organizationalUnit	
IflowGroups	cn=IflowGroups,ou=Group,dc=fujitsu,dc=com	organizationalUnit	

Refer to the following manual for information on the users registered when building the ServerView Operations Manager single sign-on environment:

- "ServerView user management with OpenDJ" in *User Management in ServerView*

If linked to ServerView Resource Orchestrator

If linked to ServerView Resource Orchestrator, then use it to manage user information - refer to the following manual for details.

- "Defining User Accounts" in *ServerView Resource Orchestrator Cloud Edition Design Guide.*

Chapter 5 Installation

This chapter explains how to install Systemwalker Software Configuration Manager.

5.1 Pre-installation Notes

Perform the following tasks before installing this product.

5.1.1 Checking the Port Numbers and Firewall Settings

Check whether the port numbers to be used by Systemwalker Software Configuration Manager are already being used. For the ports to be used, refer to "Appendix A Port Number List" and check each server to see that none of the required ports are being used.

When installing this product in an environment where a firewall function is being used, the firewall function must be set up to allow communications via the necessary ports. Refer to "Appendix A Port Number List" for information on the required ports, and set up the "port numbers for which communications from external servers must be allowed" for each server. Refer to the operating system manuals for information on how to set up the firewall function so as to allow communications via the necessary ports.

5.1.2 Checking the Settings in the Hosts File or the DNS Server

It must be possible to resolve the IP address correctly from the local host name. Check the hosts file or the DNS server settings before installing the product, also check that the host name can be resolved to the IP address correctly.

5.1.3 Building a Single Sign-On Environment

Before installing Systemwalker Software Configuration Manager, it is necessary to build the single sign-on environment using ServerView Operations Manager - refer to the relevant ServerView Operations Manager manual for information on how to install it (it is not necessary to perform a new installation if it is already installed).

> 📝 **Note**
>
> ....
>
> - Install ServerView Operations Manager on the admin server for Systemwalker Software Configuration Manager.
>
> - The password for the LDAP administrator used in ServerView Operations Manager single sign-on cannot contain halfwidth spaces, fullwidth characters, or $ \ " = | [ ] : * ; + , < > ? /.
>
> ....

5.1.4 Checking Linked Products (ServerView Resource Orchestrator)

If Systemwalker Software Configuration Manager is to be linked to ServerView Resource Orchestrator, ensure that the latter has been installed and configured on the admin server.

> 📝 **Note**
>
> ....
>
> Use ServerView Single Sign-On (SSO) for the authentication method of ServerView Resource Orchestrator. When using internal authentication, coordination with Systemwalker Configuration Manager is not possible.
>
> ....

5.2 Installing on the Admin Server

This section explains how to install the product on the admin server.

> 📝 **Note**
>
> ....
>
> Check if any conflicting products have been installed.
>
> ....

5.2.1 Points to Note before Installing on the Admin Server

Checking linked products

If Systemwalker Software Configuration Manager is to be linked to ServerView Resource Orchestrator, check if the following software has been installed and is ready for use:

- ServerView Resource Orchestrator Cloud Edition V3.2.0

Functions to be installed

The following functions must be installed in the admin server:

- The following functions are necessary for operating Systemwalker Software Configuration Manager:

  - CMDB Manager

  - SMEE, Securecrypto library runtime (*1)

  - File transfer infrastructure

*1: When this product is operated linked to ServerView Resource Orchestrator, the function will not be installed again as it has already been installed.

Checking the port numbers

Ensure that the port number specified when installing Systemwalker Software Configuration Manager is not being used:

```
netstat -a -n
```

Even if the port number specified is not being used, it may already have been assigned to other software - refer to "Appendix A Port Number List" for information on how to check if the port number is not in use.

Checking the language setting for the operating system

[Windows]

If installing Systemwalker Software Configuration Manager, ensure that the operating system is not a Japanese environment.

[Linux]

- Red Hat Enterprise Linux 6

  Check the LANG item in /etc/sysconfig/i18n, and ensure that the value of the character code for the system is not "ja_JP.UTF-8".

- Red Hat Enterprise Linux 7

  Check the LANG item in /etc/locale.conf, and ensure that the value of the character code for the system is not "ja_JP.UTF-8".

Checking the operating system users

When installing Systemwalker Software Configuration Manager, register the following users as operating system users. If they have already been registered in the operating system, delete them before proceeding.

[Windows]

- swcfmgdb

[Linux]

- swcfmgdb

Required software [Linux]

For Red Hat Enterprise Linux 6.0 or later, install the software listed below, which is distributed with the operating system. Refer to the operating system manuals before installing.

Red Hat Enterprise Linux 6.0 or later (for Intel64)

- alsa-lib package (64-bit version)

- apr package (32-bit version)

- apr-util package (32-bit version)

- cloog-ppl package (64-bit version)

- compat-expat1 package (32-bit version)

- compat-openldap package (32-bit version)

- cpp package (64-bit version)

- cyrus-sasl-lib package (32-bit version)

- db4 package (32-bit version)

- expat package (32-bit version)

- file package (64-bit version)

- gcc package (64-bit version)

- gcc-c++ package (64-bit version)

- gdb package (64-bit version)

- glibc package (32-bit version)

- glibc package (64-bit version)

- glibc-devel package (64-bit version)

- glibc-headers package (64-bit version)

- kernel-headers package (64-bit version)

- keyutils-libs package (32-bit version)

- krb5-libs package (32-bit version)

- libICE package (64-bit version)

- libSM package (64-bit version)

- libX11 package (64-bit version)

- libX11-common package

- libXau package (64-bit version)

- libXext package (64-bit version)

- libXi package (64-bit version)

- libXp package (64-bit version)

- libXrender package (64-bit version)

- libXt package (64-bit version)

- libXtst package (64-bit version)

- libattr package (32-bit version)

- libcap package (32-bit version)

- libgcc package (32-bit version)

- libgomp package (64-bit version)

- libselinux package (32-bit version)

- libstdc++ package (32-bit version)

- libstdc++-devel package (64-bit version)

- libtool-ltdl package (64-bit version)

- libuuid package (32-bit version)

- libxcb package (64-bit version)

- lksctp-tools package (64-bit version)

- make package (64-bit version)

- mpfr package (64-bit version)

- ncurses-libs package (64-bit version)

- net-snmp package (64-bit version)

- net-snmp-utils package (64-bit version)

- nss-softokn-freebl package (32-bit version)

- nss-softokn-freebl package (64-bit version)

- openssl package (32-bit version)

- openssl098e package (32-bit version)

- perl package (64-bit version)

- perl-Module-Pluggable package (64-bit version)

- perl-Pod-Escapes package (64-bit version)

- perl-Pod-Simple package (64-bit version)

- perl-libs package (64-bit version)

- perl-version package (64-bit version)

- ppl package (64-bit version)

- redhat-lsb package (64-bit version)

- strace package (64-bit version)

- sysstat package (64-bit version)

- tcsh package (64-bit version)

- unixODBC package (64-bit version)

- zlib package (32-bit version)

- zlib package (64-bit version)

For Red Hat Enterprise Linux 7.0 or later, install the software listed below, which is distributed with the operating system. Refer to the operating system manuals before installing.

Red Hat Enterprise Linux 7.0 or later

- apr package (32-bit version)

- apr-util package (32-bit version)

- compat-openldap package (32-bit version)

- cpp package (64-bit version)

- cyrus-sasl-lib package (32-bit version)

- expat package (32-bit version)

- gcc package (64-bit version)

- gcc-c++ package (64-bit version)

- gdb package (64-bit version)

- glibc package (32-bit version)

- glibc package (64-bit version)

- glibc-devel package (64-bit version)

- glibc-headers package (64-bit version)

- kernel-headers package (64-bit version)

- keyutils-libs package (32-bit version)

- krb5-libs package (32-bit version)

- libICE package (64-bit version)

- libSM package (64-bit version)

- libX11 package (64-bit version)

- libX11-common package

- libXau package (64-bit version)

- libXext package (64-bit version)

- libXi package (64-bit version)

- libXp package (64-bit version)

- libXrender package (64-bit version)

- libXt package (64-bit version)

- libXtst package (64-bit version)

- libattr package (32-bit version)

- libcap package (32-bit version)

- libdb package (32-bit version)

- libgcc package (32-bit version)

- libselinux package (32-bit version)

- libstdc++ package (32-bit version)

- libstdc++-devel package (64-bit version)

- libtool-ltdl package (64-bit version)

- libuuid package (32-bit version)

- libxcb package (64-bit version)

- lksctp-tools package (64-bit version)

- mpfr package (64-bit version)

- ncurses-libs package (64-bit version)

- net-snmp package (64-bit version)

- net-snmp-utils package (64-bit version)

- nss-softokn-freebl package (32-bit version)

- nss-softokn-freebl package (64-bit version)

- openssl package (64-bit version)

- openssl-libs (32-bit version)

- openssl098e package (32-bit version)

- perl package (64-bit version)

- perl-Module-Pluggable package (64-bit version)

- perl-Pod-Escapes package (64-bit version)

- perl-Pod-Simple package (64-bit version)

- perl-libs package (64-bit version)

- perl-version package (64-bit version)

- redhat-lsb package (64-bit version)

- strace package (64-bit version)

- sysstat package (64-bit version)

- tcsh package (64-bit version)

- unixODBC package (64-bit version)

- zlib package (32-bit version)

- zlib package (64-bit version)

5.2.2 Tasks Required before Installing on the Admin Server

5.2.2.1 Stopping ServerView Resource Orchestrator (If Linking to ServerView Resource Orchestrator)

If ServerView Resource Orchestrator is running, then stop it:

[Windows]

```
<ServerView Resource Orchestrator installation directory>\SVROR\Manager\bin\rcxmgrctl stop
```

[Linux]

```
/opt/FJSVrcvmr/bin/rcxmgrctl stop
```

5.2.2.2 Changing Terminal Services to Install Mode [Windows]

If a Terminal Server has been installed, then change the Terminal Services to Install mode:

```
CHANGE USER /INSTALL
```

5.2.2.3 Tuning System Parameters [Linux]

The system parameters must be tuned.

Settings dependent on the parameter type

Set the parameters as below, depending on the "Type" above.

- If the Type is "Maximum":

  If the value that has already been set (either the initial value or the previous setting) is equal to or greater than the value in the table above, there is no need to change the parameter value. If the current value is smaller than the value in the table, change the parameter to the value in the table.

- If the Type is "Addition":

  Add the value in the table to the value that has already been set (either the initial value or the previous setting). Check the upper limit for the system before setting the parameter to the result of the addition, and if the result of the addition is greater than the upper limit for the system, then set the parameter to the upper limit for the system.

Refer to the Linux manuals and other documents for details.

Tuning values for system parameters

Refer to the following tables for information on the system parameters that require tuning and their values:

- Shared memory

Parameter	Description	Value	Type
kernel.shmmax	Maximum segment size in shared memory	2684354560	Maximum
kernel.shmall	Total amount of shared memory available	16777216	Maximum
kernel.shmmni	Maximum number of shared memory segments	113	Addition

- Semaphores

  For the semaphore settings, specify each parameter value using the following format:

```
kernel.sem = para1 para2 para3 para4
```

Parameter	Description	Value	Type
para1	Maximum number of semaphores per semaphore identifier	512	Maximum
para2	Number of semaphores for the entire system	15933	Addition
para3	Maximum number of operators per semaphore call	50	Maximum
para4	Number of semaphore operators for the entire system	2271	Addition

- Message queues

Parameter	Description	Value	Type
kernel.msgmax	Maximum size of messages	16384	Maximum
kernel.msgmnb	Maximum value for messages that can be held in one message queue	114432	Maximum
kernel.msgmni	Maximum number of message queue IDs	1066	Addition

Tuning procedure

Use the following procedure to perform tuning tasks:

1. Use the following command to check the current settings for the system parameters:

```
# /sbin/sysctl -a
```

Example

```
# /sbin/sysctl -a
. . .
  (omitted)
. . .
kernel.sem = 250 32000 32 128
. . .
kernel.msgmnb = 65536
kernel.msgmni = 16
kernel.msgmax = 8192
kernel.shmmni = 4096
kernel.shmall = 2097152
kernel.shmmax = 33554432
. . .
  (omitted)
. . .
```

2. Refer to "Tuning values for system parameters", and compare the current settings to the values in the tables above. Calculate an appropriate value for each parameter, taking into account the parameter type ("Maximum" or "Addition").

3. Edit the following definition file as shown in the following example: Add any items that are missing.

   - Red Hat Enterprise Linux 6

   ```
   /etc/sysctl.conf
   ```

   - Red Hat Enterprise Linux 7

   ```
   /etc/sysctl.d/99-sysctl.conf
   ```

Example

```
kernel.sem = 512 47933 50 2399
kernel.msgmnb = 114432
kernel.msgmni = 1082
kernel.msgmax = 16384
kernel.shmmax = 2684354560
kernel.shmall = 16777216
kernel.shmmni = 4209
```

4. Use the following command to check that the changes have been applied to the /etc/sysctl.conf file:

   - Red Hat Enterprise Linux 6

   ```
   # /bin/cat /etc/sysctl.conf
   ```

   - Red Hat Enterprise Linux 7

   ```
   # /bin/cat /etc/sysctl.d/99-sysctl.conf
   ```

5. To enable the settings in Step 4 above, perform either of the following methods:

   - Apply the settings by rebooting the system.

   ```
   # /sbin/shutdown -r now
   ```

   - Apply the settings by executing the "/sbin/sysctl -p" command.

     - Red Hat Enterprise Linux 6

     ```
     # /sbin/sysctl -p /etc/sysctl.conf (*1)
     ```

- Red Hat Enterprise Linux 7

```
# /sbin/sysctl -p /etc/sysctl.d/99-sysctl.conf (*1)
```

*1: There is no need to reboot the system if this command is used.

6. The output of the following command can be used to check that the changes made to the system parameter settings have been applied:

```
# /sbin/sysctl -a
```

Example

```
# /sbin/sysctl -a
...
  (omitted)
kernel.sem = 512 47933 50 2399
...
kernel.msgmnb = 114432
kernel.msgmni = 1082
kernel.msgmax = 16384
kernel.shmmax = 2684354560
kernel.shmall = 16777216
kernel.shmmni = 4209
...
  (omitted)
...
```

5.2.2.4 syslog Settings [Linux]

This product outputs logs to syslog. In order to output logs to syslog, check the following settings and adjust the settings if necessary.

Settings for rsyslog.conf

It is recommended that the default settings for the operating system be used.

Systemwalker Software Configuration Manager outputs logs using local0 (facility). The following settings are required. If the following settings are missing even though rsyslog.conf has already been edited, add the following settings to rsyslog.conf.

Refer to the rsyslog.conf manuals for information on how to edit the rsyslog.conf file.

- "/etc/rsyslog.conf"

  <Rules>

Selector field (facility.priority)	Action field
local0.info	/var/log/messages

Point

There is no need to make modifications if "*.info" has been set for the selector field (facility.priority).

Enabling remote reception for syslog

Remote reception must be enabled in order to output logs to the syslog on the admin server from Systemwalker Software Configuration Manager.

Configure settings so that syslog automatically starts in remote reception mode when the operating system starts.

Edit the following files:

- "/etc/rsyslog.conf"

  Enable $UDPServerRun.

  ```
  $ModLoad imudp.so

  $UDPServerRun 514
  ```

  Note that the port used for remote reception is "514/udp". Refer to "Appendix A Port Number List" for a list of ports used by Systemwalker Software Configuration Manager.

Restarting rsyslogd

If the settings have been changed in "Settings for rsyslog.conf" or "Enabling remote reception for syslog", restart rsyslogd for the changes to take effect.

Refer to the rsyslogd manuals for information on rsyslogd.

- " rsyslogd "

  ```
  > service rsyslog stop

  > service rsyslog start
  ```

5.2.2.5 Temporarily disabling SELinux [Linux]

Only when using Red Hat Enterprise Linux 7, temporarily disable SELinux.

Use the following command to confirm the current SELinux configuration.

```
getenforce
```

When the configuration is "Enforcing" (enabled), use the following command to disable SELinux.

```
setenforce 0
```

5.2.3 Installing Systemwalker Software Configuration Manager

Use the following procedure to install the product on the admin server:

Install the product on a Windows or a Linux machine.

5.2.3.1 Installation in Windows

This section explains how to install Systemwalker Software Configuration Manager on a Windows admin server.

Setting value	Meaning of the setting value	Default value
Installation directory	Installation directory for Systemwalker Software Configuration Manager	C:\Program Files\Fujitsu\SWCFMG

1. Log in with administrator privileges.

2. Insert the DVD-ROM labeled "Systemwalker Software Configuration Manager Media Pack V15.6.0 DISC1 (Admin Servers Program)" in the DVD-ROM drive.

   The following window will be displayed:

Select **Install on admin server**.

Note

- If this window is not displayed automatically, start the installer manually by executing "swsetup.exe" on the DVD-ROM.

- Run this command as an administrator.

3. A welcome window will be displayed.

   Click the **Next** button.

4. The **Select the installation folder** window will be displayed.

   Specify the installation folder, and then click the **Next** button.
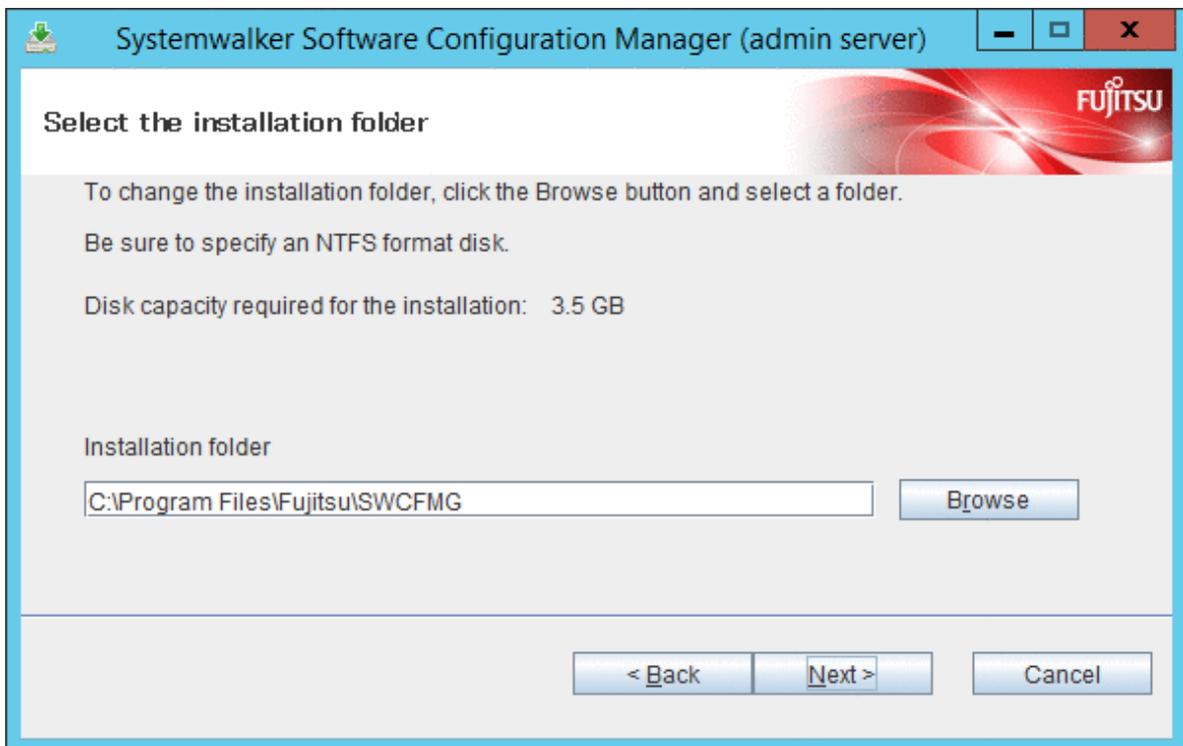
Note
. . . .

- Specify an NTFS format disk.

- Specify a path up to 40 bytes long.

- Specify a new folder.

- Do not specify relative paths or paths that start with "\\".

- Specify only alphanumeric characters, spaces, hyphens ("-"), and underscores ("_").

- The required packages for operating Systemwalker Software Configuration Manager are installed in the following directories:

    - Systemwalker Software Configuration Manager installation directory

    <specified installation directory>\SWCFMGA

    <specified installation directory>\SWCFMGM

    <Specified installation directory>\RBAM

    <Specified installation directory>\BPM

    <Specified installation directory>\APS

    <Specified installation directory>\CMDB

    <Specified installation directory>\ PGSQL

. . . .

5. The **Confirm the installation settings** window will be displayed.

   Check the settings, and then click the **Confirm** button to start the installation.
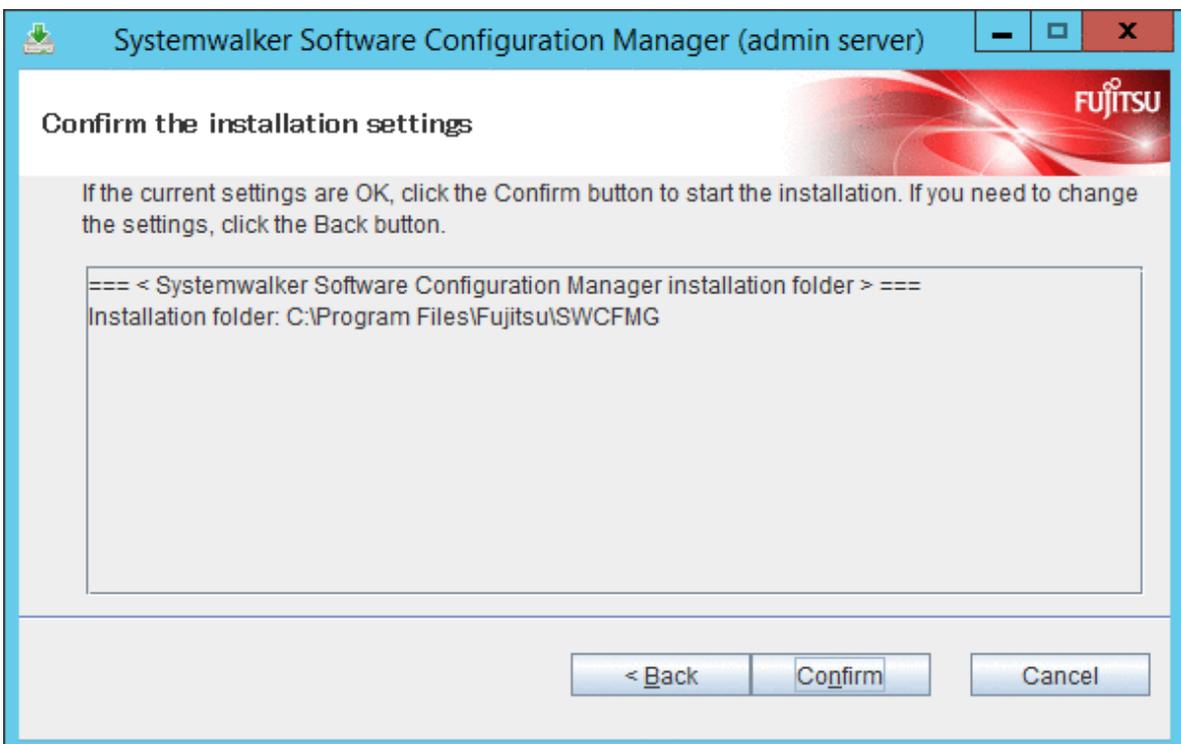
6. Upon completion, the window below will be displayed.

   Click the **Finish** button.
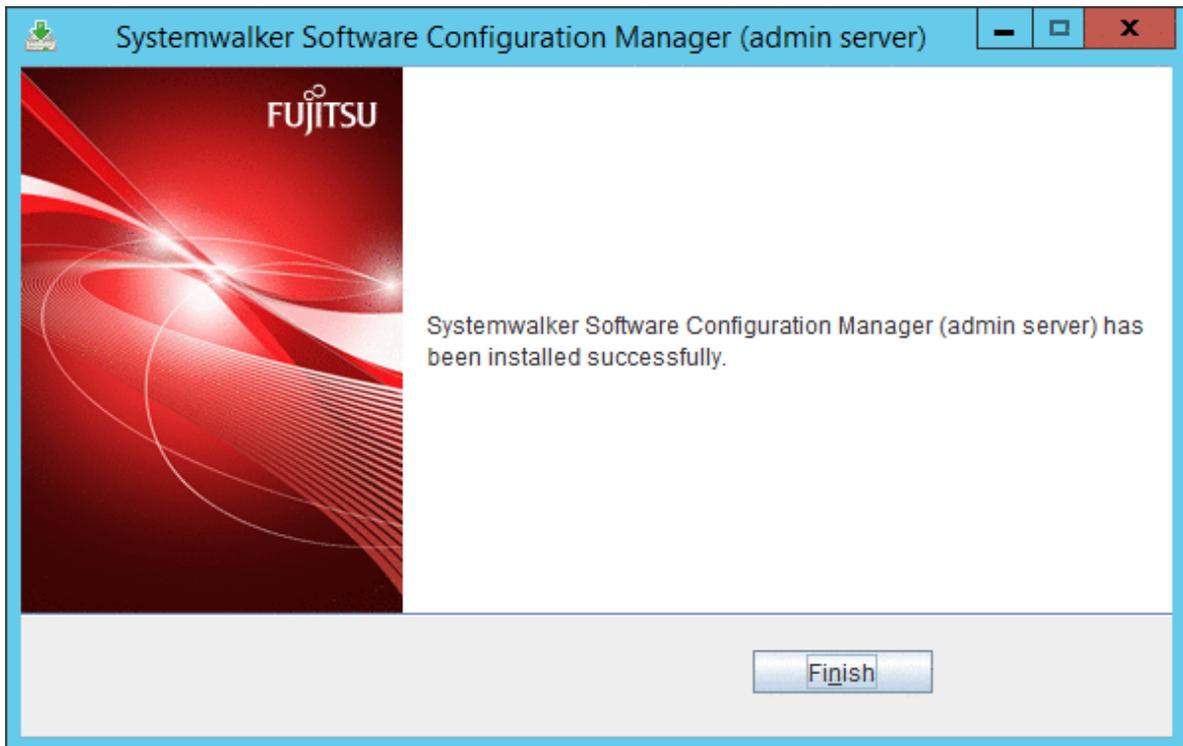
7. The **Confirm** window (prompting for system restart confirmation) will be displayed.

   Click the Yes button to restart the system.
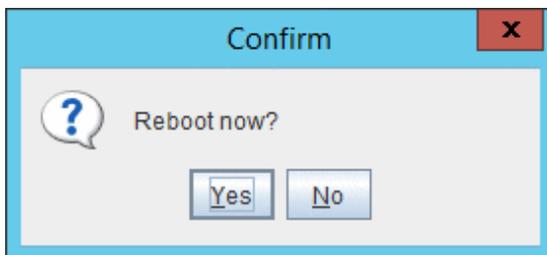
5.2.3.2 Installation in Linux

This section explains how to install Systemwalker Software Configuration Manager on a Linux admin server.

1. Login to the system as a superuser.

2. Insert the DVD-ROM labeled "Systemwalker Software Configuration Manager Media Pack V15.6.0 DISC1 (Admin Servers Program)" in the DVD-ROM drive.

   If the DVD-ROM has not been mounted, mount the DVD-ROM by executing the following command:

   ```
   # mount -t iso9660 -r /dev/mnt <Mount point for the DVD-ROM>
   ```

3. Start the common installer.

   Run the installation command (swsetup).

   ```
   # cd <Mount point for the DVD-ROM>
   # ./swsetup
   ```

4. Start installation.

    A welcome window will be displayed. Press the **Enter** key.

```
================================================================================
                Systemwalker Software Configuration Manager Setup
                                    V15.6.0
                      Copyright 2010-2016 FUJITSU LIMITED
================================================================================


Welcome to Systemwalker Setup!
The setup will install Systemwalker Software Configuration Manager.


Press ENTER.
```

5. The **Select the installation target** window will be displayed.

    Select **Install on admin server**. Enter "1".

```
================================================================================
                Systemwalker Software Configuration Manager Setup
                                    V15.6.0
                      Copyright 2010-2016 FUJITSU LIMITED
================================================================================


<< Select the installation target >>


1. Install on admin server


================================================================================
Select one of the items above.
[q,number]
=>
```

6. The installation for the admin server will start. To start the installation process, press "y".

```
Systemwalker Software Configuration Manager (admin server)
Do you want to start install?
[y,n]
=>
```

7. Confirm the installation.

    In the confirm the installation settings window, check the entered values. If they are correct, enter "y" - The installation will start.

    To correct the installation information, enter the number of the item you want to correct.

```
=== < Systemwalker Software Configuration Manager installation folder > ===
Program location(Can't Change): /opt
Configuration file location(Can't Change): /etc/opt
Work file location(Can't Change): /var/opt


Install the product using these settings?
[y,q,number]
=> y
```

8. The installation will start.

   Once the preparations for the installation are complete, the following message will be displayed, and the installation will start:

   ```
   installing...
   ```

9. The installation will complete.

   Upon successful completion, the following message will be displayed.

   ```
   Systemwalker Software Configuration Manager (admin server) install completed.
   ```

5.2.4 Points to Note after Installing on the Admin Server

This section explains points to note after installing the product on the admin server.

[Windows]

- If a Terminal Server has been installed, then change the Terminal Services to Execute mode:

```
CHANGE USER /EXECUTE
```

[Linux]

- When SELinux has been temporarily disabled as described in "5.2.2 Tasks Required before Installing on the Admin Server", execute the following command to enable SELinux. However, if setup of the admin server will be performed immediately, as it is necessary to disable SELinux again before setup, waiting until after setup of the admin server is finished to execute the command will cause no problems.

```
setenforce 1
```

- Character encoding

  Do not change the system character encoding after installing Systemwalker Software Configuration Manager.

5.3 If the Installation Fails

If the installation fails, restart the system and then log in again as the same user that performed the installation. Remove the cause of the problem based on the message that has been output, and then perform the installation again.

Chapter 6 Setup

This chapter explains how to set up Systemwalker Software Configuration Manager.

6.1 Registering a License Key

After installation of the product is completed, enter the license key using a command. Entering a license key registers the authorized user of the product. The license key is provided with the licensed product.

6.1.1 License Key Registration Procedure

Once the license key is registered using a command, authorized use of the product starts. Using the command, you can enter the license key as a parameter or enter the license key in a file and specify the file.

Entering the license key as a parameter

Specify the register -k option in the fjlic command to enter the license key as a parameter. To specify multiple license keys, separate them using commas.

[Windows]

```
<Systemwalker Software Configuration Manager installation directory>\FJLIC\fjlic\fjlic.exe register -
k "License key" [,...]
```

[Linux]

```
/opt/FJSVcfmgm/FJLIC/fjlic/fjlic register -k "License key" [,...]
```

Entering the license key in a file

Specify the register -f option for the fjlic command to enter the license key in a file and specify the file.

1. Creating a license key file

   Create a file containing license keys. Create the file using the following format. To enter multiple license keys, separate them using line breaks.

   ```
   XXXX-XXXX-XXXX-XXXX-XXXX-XXXX-XX
   XXXX-XXXX-XXXX-XXXX-XXXX-XXXX-XX
   ```

2. Executing the command

   Specify the full path of the license key file for the register -f option in the fjlic command and execute the command.

   [Windows]

   ```
   <Systemwalker Software Configuration Manager installation directory>\FJLIC\fjlic\fjlic.exe
   register -f "The path of the license key file"
   ```

   [Linux]

   ```
   /opt/FJSVcfmgm/FJLIC/fjlic/fjlic register -f "The path of the license key file"
   ```

6.2 Setting up the Admin Server

This section explains how to set up the admin server.

6.2.1 Pre-setup Tasks for the Admin Server

This section explains the tasks required before setup for the admin server.

6.2.1.1 Stopping ServerView Resource Orchestrator (When Linking to ServerView Resource Orchestrator)

Stop ServerView Resource Orchestrator if linking to it to operate the admin server:

[Windows]

```
<ServerView Resource Orchestrator installation directory>\SVROR\Manager\bin\rcxmgrctl stop
```

[Linux]

```
/opt/FJSVrcvmr/bin/rcxmgrctl stop
```

6.2.1.2 Temporarily disabling SELinux [Linux]

Only when using Red Hat Enterprise Linux 7, temporarily disable SELinux.

Use the following command to confirm the current SELinux configuration.

```
getenforce
```

When the configuration is "Enforcing" (enabled), use the following command to disable SELinux.

```
setenforce 0
```

6.2.1.3 Setting Port Numbers Used by Systemwalker Software Configuration Manager

Systemwalker Software Configuration Manager uses the following port numbers. The default port numbers are configured in the following definition file. If any of those default port numbers are being used by other software, change the corresponding values in the definition file before performing setup.

Definition file

[Windows]

```
<Systemwalker Software Configuration Manager installation
directory>\SWCFMGM\config\swcfmg_serverport.properties
```

[Linux]

```
/etc/opt/FJSVcfmgm/config/swcfmg_serverport.properties
```

Setting value	Meaning of the setting value	Default value
WebServerPort	Web server for the management console	31500
SubWebServerAhsExtPort	Sub-web server for the management console	31600
SubWebServerAhsIntPort	Port for internal use	31601
SubWebServerMongrel1Port	Port for internal use	31501
SubWebServerMongrel2Port	Port for internal use	31502
APSHTTPListenerAdminPort	Port for internal use	12031
APSHTTPListenerPort	Port for internal use	28081
APSJMXAdminPort	Port for internal use	8689
APSHTTPSListenerPort	Port for internal use	9181
APSMessageBrokerPort	Port for internal use	7681
APSIIOPPort	Port for internal use	23603

Setting value	Meaning of the setting value	Default value
APSIIOPSSLPort	Port for internal use	23604
APSIIOPMutualAuthPort	Port for internal use	23605
CFMGMQHTTPListenerAdminPort	Port for internal use	21020
CFMGMQHTTPListenerPort	Port for internal use	21021
CFMGMQHTTPSListenerPort	Port for internal use	21022
CFMGMQIIOPPort	Port for internal use	21024
CFMGMQIIOPSSLPort	Port for internal use	21025
CFMGMQIIOPMutualAuthPort	Port for internal use	21026
CFMGMQJMXAdminPort	Port for internal use	21023
CFMGMQJPDAPort	Port for internal use	21027
CFMGManagerHTTPListenerAdminPort	Port for internal use	27571
CFMGManagerHTTPListenerPort	Port for internal use	11080
CFMGManagerHTTPSListenerPort	Port for internal use	27573
CFMGManagerIIOPPort	Port for internal use	27575
CFMGManagerIIOPSSLPort	Port for internal use	27576
CFMGManagerIIOPMutualAuthPort	Port for internal use	27577
CFMGManagerJMXAdminPort	Port for internal use	27574
CFMGManagerJPDAPort	Port for internal use	27579
PGSQLDBPort	Port for internal use	9658
CMDBManagerHTTPListenerPort	Port for internal use	13306
CMDBManagerHTTPListenerAdminPort	Port for internal use	13310
CMDBManagerJMXAdminPort	Port for internal use	13311
CMDBGuiHTTPListenerPort	Port for internal use	13305
CMDBGuiHTTPListenerAdminPort	Port for internal use	13312
CMDBGuiJMXAdminPort	Port for internal use	13313
BPMServerHTTPListenerAdminPort	Port for internal use	27551
BPMServerHTTPListenerPort	Port for internal use	27552
BPMServerHTTPSListenerPort	Port for internal use	27553
BPMServerIIOPPort	Port for internal use	27555
BPMServerIIOPSSLPort	Port for internal use	27556
BPMServerIIOPMutualAuthPort	Port for internal use	27557
BPMServerJMXAdminPort	Port for internal use	27554
BPMServerJPDAPort	Port for internal use	27559
BPMConsoleHTTPListenerAdminPort	Port for internal use	27561
BPMConsoleHTTPListenerPort	Port for internal use	27562
BPMConsoleHTTPSListenerPort	Port for internal use	27563
BPMConsoleIIOPPort	Port for internal use	27565
BPMConsoleIIOPSSLPort	Port for internal use	27566
BPMConsoleIIOPMutualAuthPort	Port for internal use	27567

Setting value	Meaning of the setting value	Default value
BPMConsoleJMXAdminPort	Port for internal use	27564
BPMConsoleJPDAPort	Port for internal use	27569
RBAServerHTTPListenerAdminPort	Port for internal use	21028
RBAServerHTTPListenerPort	Port for internal use	21029
RBAServerHTTPSListenerPort	Port for internal use	21030
RBAServerIIOPPort	Port for internal use	21032
RBAServerIIOPSSLPort	Port for internal use	21033
RBAServerIIOPMutualAuthPort	Port for internal use	21034
RBAServerJMXAdminPort	Port for internal use	21031
RBAServerJPDAPort	Port for internal use	21035
RBAOpeExeHTTPListenerAdminPort	Port for internal use	21036
RBAOpeExeHTTPListenerPort	Port for internal use	21037
RBAOpeExeHTTPSListenerPort	Port for internal use	21038
RBAOpeExeIIOPPort	Port for internal use	21040
RBAOpeExeIIOPSSLPort	Port for internal use	21041
RBAOpeExeIIOPMutualAuthPort	Port for internal use	21042
RBAOpeExeJMXAdminPort	Port for internal use	21039
RBAOpeExeJPDAPort	Port for internal use	21043

6.2.1.4 Building the SSL Communication Environment for Management Console

SSL communication is used when accessing the management console of Systemwalker Software Configuration Manager from a browser. To configure the environment for SSL communication, create the SSL server certificate before setting up the admin server.

6.2.1.4.1 Creating SSL Server Certificates

1. Open the command prompt on the admin server.

2. Execute the following command to move to the installation folder.

   [Windows]

   ```
   cd "%SWCFMGM_HOME%\config"
   ```

   [Linux]

   ```
   cd /etc/opt/FJSVcfmgm/config
   ```

3. Create a new Apache certificate.
   For Common Name, be sure to enter the host name of the admin server (FQDN).

   [Windows]

   ```
   set OPENSSL_CONF=%SWCFMGM_HOME%\config\openssl.cnf
   "%SWCFMGM_HOME%\bin\ssl\openssl.exe" req -new -x509 -sha256 -newkey rsa:2048 -nodes -out ssl
   \server.crt -keyout ssl\server.key -days 5479
   ```

   [Linux]

   ```
   openssl req -new -x509 -sha256 -newkey rsa:2048 -nodes -out ssl/server.crt -keyout ssl/
   server.key -days 5479
   ```

Example

[Windows]

```
cd "%SWCFMGM_HOME%config" <RETURN>
set OPENSSL_CONF=%SWCFMGM_HOME%\config\openssl.cnf <RETURN>
"%SWCFMGM_HOME%\bin\ssl\openssl.exe" req -new -x509 -sha256 -newkey rsa:2048 -nodes -out ssl
\server.crt -keyout ssl\server.key -days 5479 <RETURN>
Loading 'screen' into random state - done
Generating a 2048 bit RSA private key
................+++
.........................+++
writing new private key to 'ssl\server.key'
-----
You are about to be asked to enter information that will be incorporated
into your certificate request.
What you are about to enter is what is called a Distinguished Name or a DN.
There are quite a few fields but you can leave some blank
For some fields there will be a default value,
If you enter '.', the field will be left blank.
-----
Country Name (2 letter code) []: <RETURN>
State or Province Name (full name) []: <RETURN>
Locality Name (eg, city) []: <RETURN>
Organization Name (eg, company) []: <RETURN>
Organizational Unit Name (eg, section) []: <RETURN>
Common Name (eg, YOUR name) []:Host name of the Admin Server (FQDN) (*) <RETURN>
Email Address []: <RETURN>
```

[Linux]

```
# cd /etc/opt/FJSVcfmgm/config/ <RETURN>
# openssl req -new -x509 -sha256 -newkey rsa:2048 -nodes -out ssl/server.crt -keyout ssl/server.key -
days 5479 <RETURN>
Generating a 2048 bit RSA private key
................+++
.........................+++
writing new private key to 'ssl/server.key'
-----
You are about to be asked to enter information that will be incorporated
into your certificate request.
What you are about to enter is what is called a Distinguished Name or a DN.
There are quite a few fields but you can leave some blank
For some fields there will be a default value,
If you enter '.', the field will be left blank.
-----
Country Name (2 letter code) [XX]: <RETURN>
State or Province Name (full name) []: <RETURN>
Locality Name (eg, city) [Default City]: <RETURN>
Organization Name (eg, company) [Default Company Ltd]: <RETURN>
Organizational Unit Name (eg, section) []: <RETURN>
Common Name (eg, your name or your server's hostname) []:Host name of the Admin Server (FQDN) (*)
<RETURN>
Email Address []: <RETURN>
#
```

* Note: Enter the host name (FQDN) to be entered on the Web browser.

Example: Host name: myhost.company.com

··

When the site certificate expires, you are no longer able to log in to Systemwalker Software Configuration Manager. When the site certificate expires, update the site certificate referring to "Appendix B Corrective Actions If the Site Certificate has Expired".

··

6.2.2 Setting up Systemwalker Software Configuration Manager

If necessary, set up the product on a Windows or a Linux machine.

 Note

··

Before performing this procedure, ensure that the following operations have been completed.

If the operations have not been completed, setup of Systemwalker Software Configuration Manager will fail.

"6.2.1 Pre-setup Tasks for the Admin Server"

··

6.2.2.1 Execution of Setup

Perform the setup by opening a new command prompt and executing the following command:

```
<Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_setup_express -s
```

1. The setup start window will be displayed.

   Click the **Next** button.
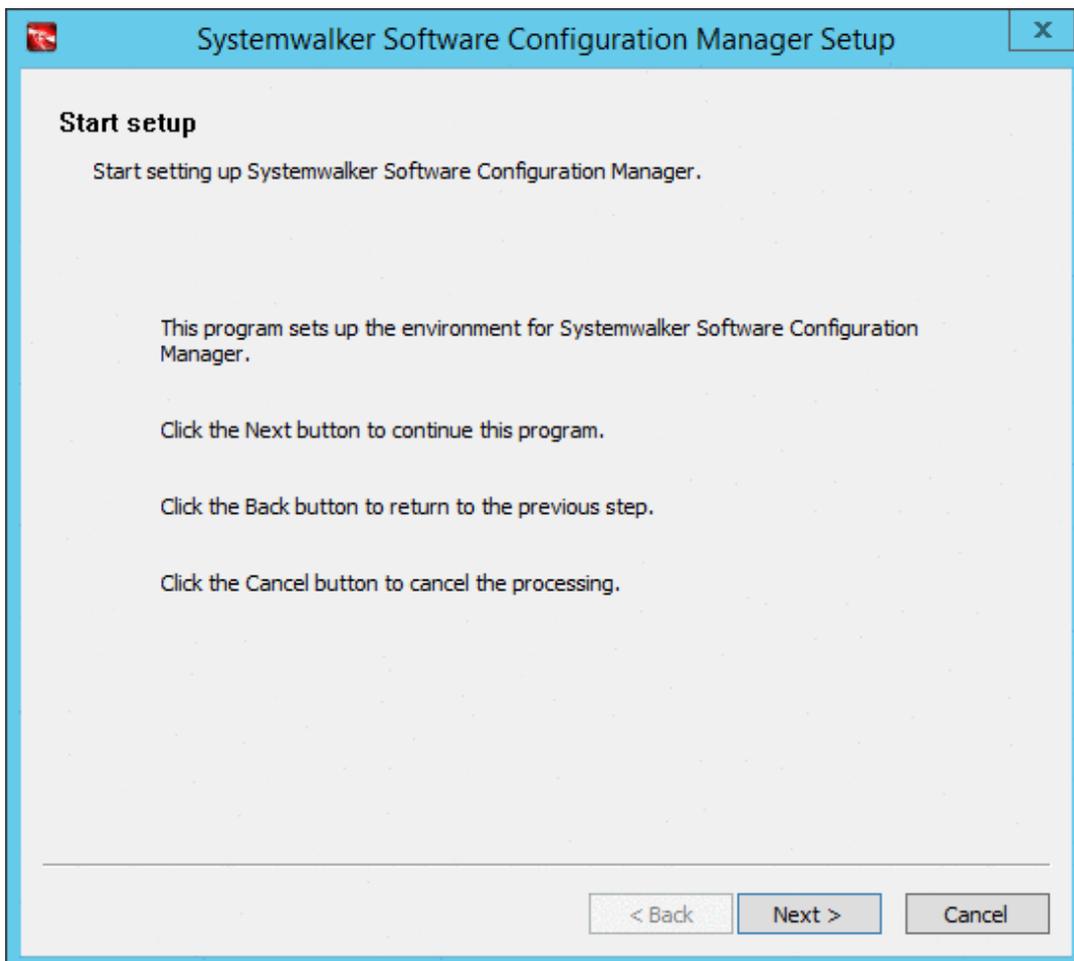
2. The User settings for the operating environment window will be displayed.

   Specify the following items, and then click the **Next** button.

Input parameter	Input value (default)
Password for administrator (svuser)	Specify the password for the repository administrator (svuser) of LDAP (OpenDJ/OpenDS). (*1)
Name of the process control user	Specify the name of the process control user to be registered in LDAP using up to 32 characters.(*1) (*2)
Password of the process control user	Specify the password for the user for process control to be registered in LDAP using up to 64 characters. (*1)

*1: Spaces and the following symbols cannot be used: $ \ " = | [ ] : * ; + , < > ? / .

*2: Be sure to specify a user name that does not exist in LDAP.

3. The **Database storage folder for CMDB Manager** window will be displayed.

Specify the following items, and then click the **Next** button.
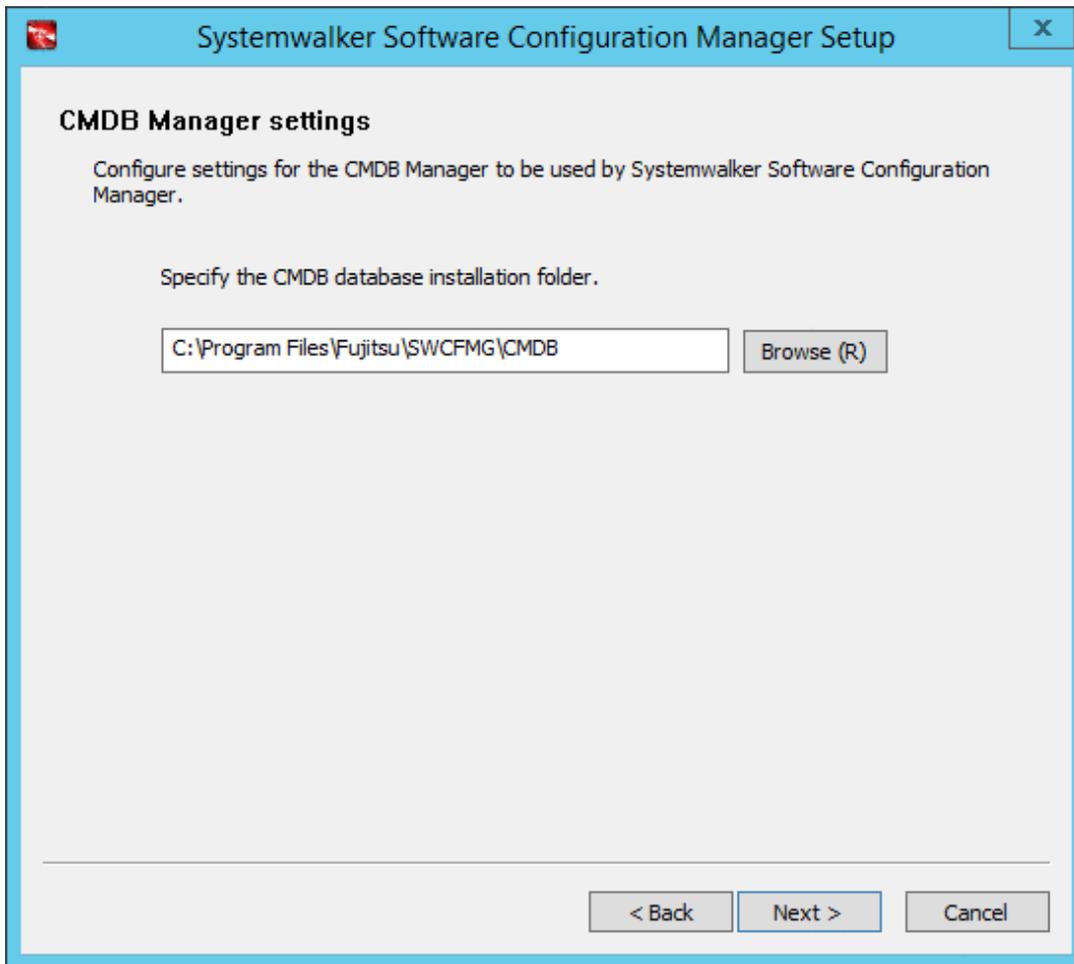
Set up the database for CCMDB Manager. Enter the following item:

Input item	Default value
Database storage directory for CMDB Manager	*<Systemwalker Software Configuration Manager installation directory>*\CMDB (*1)

*1: If ServerView Resource Orchestrator has been already installed, this setting will be ignored and the storage directory of the software that is already installed will be used.

4. The **Check the settings** window will be displayed.

Check the settings, and then click the **Next** button to start the setup.
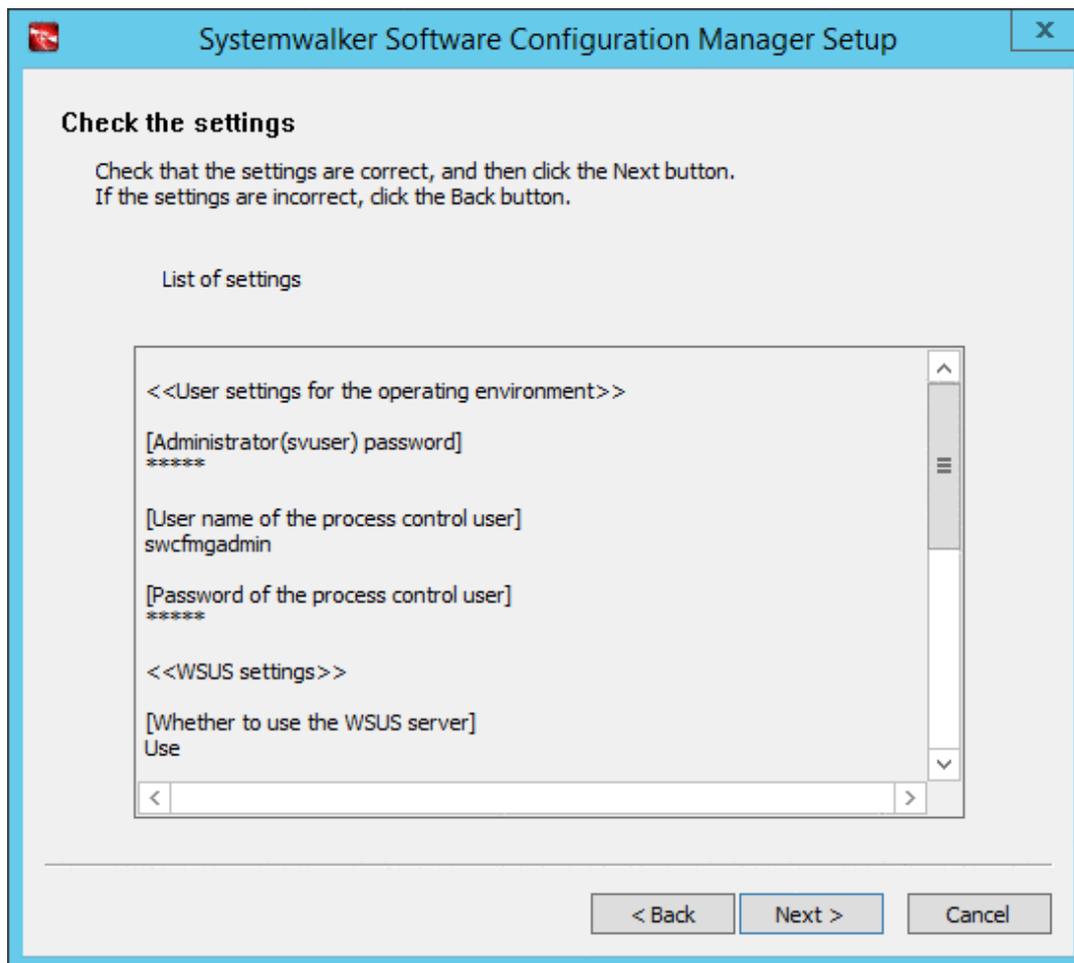
5. Upon successful completion, the following window will be displayed.

Click the **Finish** button.
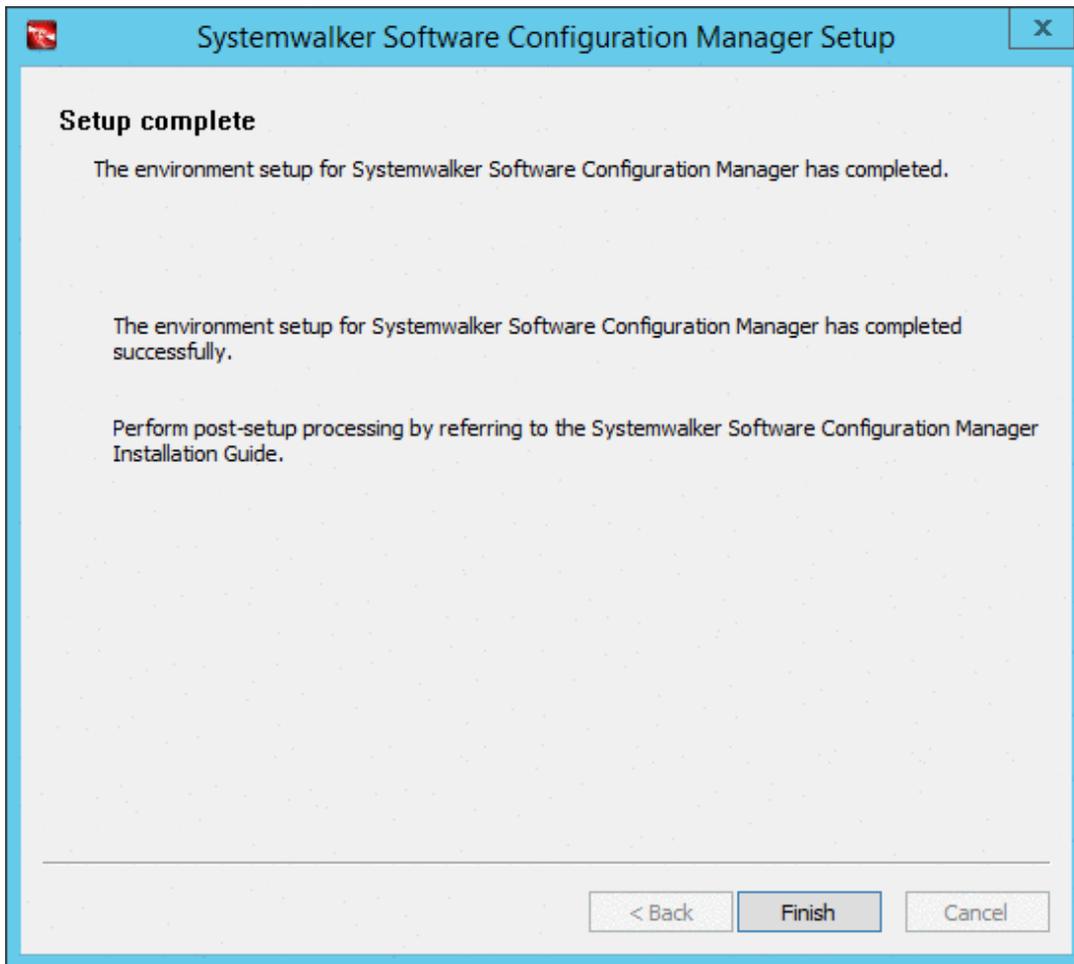
[Linux]

Perform the setup by opening a new command prompt and executing the following command:

```
/opt/FJSVcfmgm/bin/swcfmg_setup_express -s
```

1. A welcome window will be displayed. Press the **Enter** key.

```
================================================================================
                Systemwalker Software Configuration Manager Setup
                                   V15.6.0
                       Copyright 2010-2016 FUJITSU LIMITED
================================================================================


Welcome to Systemwalker Setup!
Set up Systemwalker Software Configuration Manager.


Press ENTER.
```

2. The setup start window will be displayed. Enter "y".

```
================================================================================
                  Systemwalker Software Configuration Manager Setup
                                     V15.6.0
                      Copyright 2010-2016 FUJITSU LIMITED
================================================================================


Systemwalker Software Configuration Manager (admin server)


Start the setup?
[y,n]
=>
```

3. The **User settings for the operating environment** window will be displayed.

   a. Specify the password for the LDAP repository administrator (svuser).

   Specify the value that is specified for ServerView Operations Manager. The password cannot contain half-width spaces, full-width characters, or $ \ " = | [ ] : * ; + , < > ? /.

```
<< User settings for the operating environment >>
Set the password for the LDAP repository administrator.
================================================================================


Enter the password of the administrator (svuser) for LDAP (OpenDJ/OpenDS).
=>
```

   b. Specify the name of the process control user to be registered in LDAP using up to 32 characters. Be sure to specify a user name that does not exist in LDAP. The user name cannot contain half-width spaces, full-width characters, or $ \ " = | [ ] : * ; + , < > ? /.

```
<< User settings for the operating environment >>

Set the process control user to register in LDAP.
================================================================================


Enter the user name of the process control user to register in LDAP (OpenDJ/OpenDS).
=>
```

   c. Specify the password for the user for process control to be registered in LDAP using up to 64 characters. The password cannot contain half-width spaces, full-width characters, or $ \ " = | [ ] : * ; + , < > ? /.

```
<< User settings for the operating environment >>

Set the process control user to register in LDAP.
================================================================================


Enter the password of the process control user to register in LDAP (OpenDJ/OpenDS).
=>
```

4. The **CMDB manager settings** window will be displayed.

   Specify the directory where the database is to be installed.

   However, if ServerView Resource Orchestrator has been already installed, this setting will be ignored and the storage directory of the software that is already installed will be used.

```
<<CMDB manager settings>>
The CMDB manager used by Systemwalker Software Configuration Manager will be configured.
================================================================================


Current DB: Not configured


Specify the database installation directory.
```

```
Installation directory (can be changed): /var/opt


Accept the above settings?
[y,n,q]
=>
```

5. The **Check the settings** window will be displayed.

   Check the settings, and then enter "y" to start the setup.

```
<< Check the settings >>
Ensure the settings are correct, and then start setup.
===============================================================================


[User settings for the operating environment]
Password for administrator (svuser): *********
User's for process control name of user: swcfmgadmin
Password of the process control user: *********

[CMDB manager settings]
Database installation directory:/var/opt


Start the setup with the above settings?
[y,q]
=>
```

6. When the setup completes, the following message will be displayed:

```
The environment setup for Systemwalker Software Configuration Manager has completed successfully.
Perform post-setup processing by referring to the Systemwalker Software Configuration Manager
Installation Guide.
```

See
....

For the processes for after setup, refer to 6.2.3 Post-setup Tasks.
....

6.2.3 Post-setup Tasks

This section explains the tasks required after setup for the admin server.

6.2.3.1 Enabling SELinux [Linux]

When temporarily disabling SELinux in "5.2.2 Tasks Required before Installing on the Admin Server" or "6.2.1 Pre-setup Tasks for the Admin Server", execute the following command to enable SELinux.

```
setenforce 1
```

6.2.3.2 Starting the Products

6.2.3.2.1 Starting ServerView Resource Orchestrator (If Linking to ServerView Resource Orchestrator)

Start ServerView Resource Orchestrator if linking to it to operate the admin server:

[Windows]

```
<ServerView Resource Orchestrator installation directory>\SVROR\Manager\bin\rcxmgrctl start
```

[Linux]

```
/opt/FJSVrcvmr/bin/rcxmgrctl start
```

6.2.3.2.2 Starting Systemwalker Software Configuration Manager

Start Systemwalker Software Configuration Manager:

[Windows]

```
<Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_start
```

[Linux]

```
/opt/FJSVcfmgm/bin/swcfmg_start
```

6.3 Registering an Infrastructure Administrator

An infrastructure administrator is a user who operates and maintains Systemwalker Software Configuration Manager. Create an infrastructure administrator before starting operation of Systemwalker Software Configuration Manager.

Refer to "9.1 User Management" for information on how to create an infrastructure administrator.

If linking to ServerView Resource Orchestrator

If linking to ServerView Resource Orchestrator, create an infrastructure administrator in ServerView Resource Orchestrator - refer to "Registering User Accounts" in the *ServerView Resource Orchestrator Cloud Edition User's Guide for Infrastructure Administrators (Resource Management)* for details.

An infrastructure administrator who is already operating ServerView Resource Orchestrator can also operate Systemwalker Software Configuration Manager. In that situation, it is not necessary to register a new infrastructure administrator.

6.4 Registering Hardware Information

To collect the configuration information of the hardware and virtual environments, it is necessary to register the blade chassis, blade servers, rack mount servers, and the virtual environments of the discovery targets.

For details on the hardware information management commands, refer to the *Reference Guide*.

6.5 Executing the Initial Discovery

The first discovery performed after installation is called the initial discovery. Establish the following environment before performing the initial discovery:

- Discovering the hardware information

    - Discovering the hardware configuration information

        - Register the hardware information of the discovery target using the hardware information management command.

        - Confirm that the manager of this product can communicate with the hardware to be discovered.

Information
. . . .

In order to collect CPU information and memory information of a blade server, the target blade server must have been powered on at least one time.
. . . .

        - When collecting chassis and blade server information, confirm that the chassis is powered on.

    - Discovering the virtual environment configuration information

        - Register the hardware information and the VM host information of the discovery target using the hardware information management command.

- Install VMware Tools on the VM guest.

- Confirm that the VM host and the VM guest are powered on.

- Specify the admin LAN subnet address in the "Hardware discovery definition file". For details on the "Hardware discovery definition file", refer to the *Reference Guide*.

- If **Host Isolation Response** of vSphere HA clusters has been set to **Leave Powered On**, when isolating the VM host, the VM host information is not updated by discovery. In addition, the information of the VM guests on that VM host will be deleted.

Hardware Information

Perform the initial discovery of hardware information by executing the following command:

[Windows]

```
%SWCFMGM_INSTALL_PATH%\CMDB\FJSVcmdbm\bin\cmdbrefresh.exe -q type=AGT_CFMGSRV
```

[Linux]

```
/opt/FJSVcfmgm/CMDB/FJSVcmdbm/bin/cmdbrefresh.sh -q type=AGT_CFMGSRV
```

Point

Guide to the time required for the initial discovery

It is recommended that the initial discovery be executed before operations commence.

The following tables show an approximate indication of the time required for the initial discovery:

- Hardware configuration information

  - **Blade server**

Number of physical servers	Time required for the initial discovery
500	100 minutes or more

  - **Rack mount server**

Number of physical servers	Time required for the initial discovery
500	170 minutes or more

- Virtual environment configuration information

Number of Virtual guests	Time required for the initial discovery
500	10 minutes or more
1,000	20 minutes or more
1,500	30 minutes or more

6.6 Registering Discovery Schedules

Register schedules for regular discoveries.

Hardware Information

Discovery of hardware information is performed every day at the following time by default:

- 2:00 AM

When modifying the discovery schedule, edit the configuration information collection schedule definition file, and modify it to the arbitrary date for collection. For details on configuration information collection schedule definition files, refer to the Reference Guide.

When it is not necessary to schedule automatic collection, add "#" to the top of the following line of the "configuration information collection schedule definition file".

```
AGT_CFMGSRV 0 2 * * *
```

If the schedule is modified or disabled, restart this product. If linked to ServerView Resource Orchestrator, restart ServerView Resource Orchestrator

P Point

Guide to the execution interval for regular discovery

It is recommended that regular discovery be executed once a day, outside business hours (such as late at night).

Take the following guide into account when setting an execution interval:

- Hardware configuration information

  - **Blade server**

Number of physical servers	Execution interval
500	100 minutes or more

  - **Rack mount server**

Number of physical servers	Execution interval
500	170 minutes or more

- Virtual environment configuration information

Number of Virtual guests	Execution interval
500	10 minutes or more
1,000	20 minutes or more
1,500	30 minutes or more

Chapter 7 Setup Cancellation

This chapter explains how to cancel the setup for Systemwalker Software Configuration Manager.

7.1 Points to Note before Canceling the Setup

Note the following points when canceling the setup.

7.1.1 Backing up the Resources

If setup is canceled, all files and settings information including user assets will be deleted. For this reason, back up any necessary assets before canceling the setup.

Refer to "11.2.2 Backing Up the Admin Server" for information on the various assets to back up.

7.2 Canceling the Setup for the Admin Server

This section explains how to cancel the setup for the admin server.

7.2.1 Tasks Required before Setup Cancellation

This section explains the tasks required before setup cancellation for the admin server.

7.2.1.1 Stop Systemwalker Software Configuration Manager

Execute the following command:

[Windows]

```
<Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_stop
```

[Linux]

```
/opt/FJSVcfmgm/bin/swcfmg_stop
```

7.2.2 Canceling the Setup for Systemwalker Software Configuration Manager

Cancel the setup for Systemwalker Software Configuration Manager by executing the following command:

[Windows]

```
<Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_setup_express -u
```

[Linux]

```
/opt/FJSVcfmgm/bin/swcfmg_setup_express -u
```

Chapter 8 Uninstallation

This chapter explains how to uninstall Systemwalker Software Configuration Manager.

8.1 Pre-uninstallation Notes

Before uninstalling Systemwalker Software Configuration Manager, the environment settings for Systemwalker Software Configuration Manager must be canceled. Refer to "Chapter 7 Setup Cancellation" for information on setup cancellation.

8.2 Uninstalling from the Admin Server

8.2.1 Points to Note before Uninstalling from the Admin Server

Deleting the environment

- Before uninstalling Systemwalker Software Configuration Manager, the setup for the environment of Systemwalker Software Configuration Manager must be canceled - refer to "Chapter 7 Setup Cancellation" for details.

8.2.2 Uninstalling Systemwalker Software Configuration Manager

This section explains the procedure for uninstalling the manager of Systemwalker Software Configuration Manager from the admin server.

Uninstall the product from a Windows or a Linux machine.

[Windows]

1. Log in with administrator privileges.

2. Select **Start** >> **All Programs** or **All apps** >> **Fujitsu** >> **Uninstall (middleware)**.

   The uninstaller will start.

   Select **Systemwalker Software Configuration Manager (admin server)**, and then click the **Delete** button.
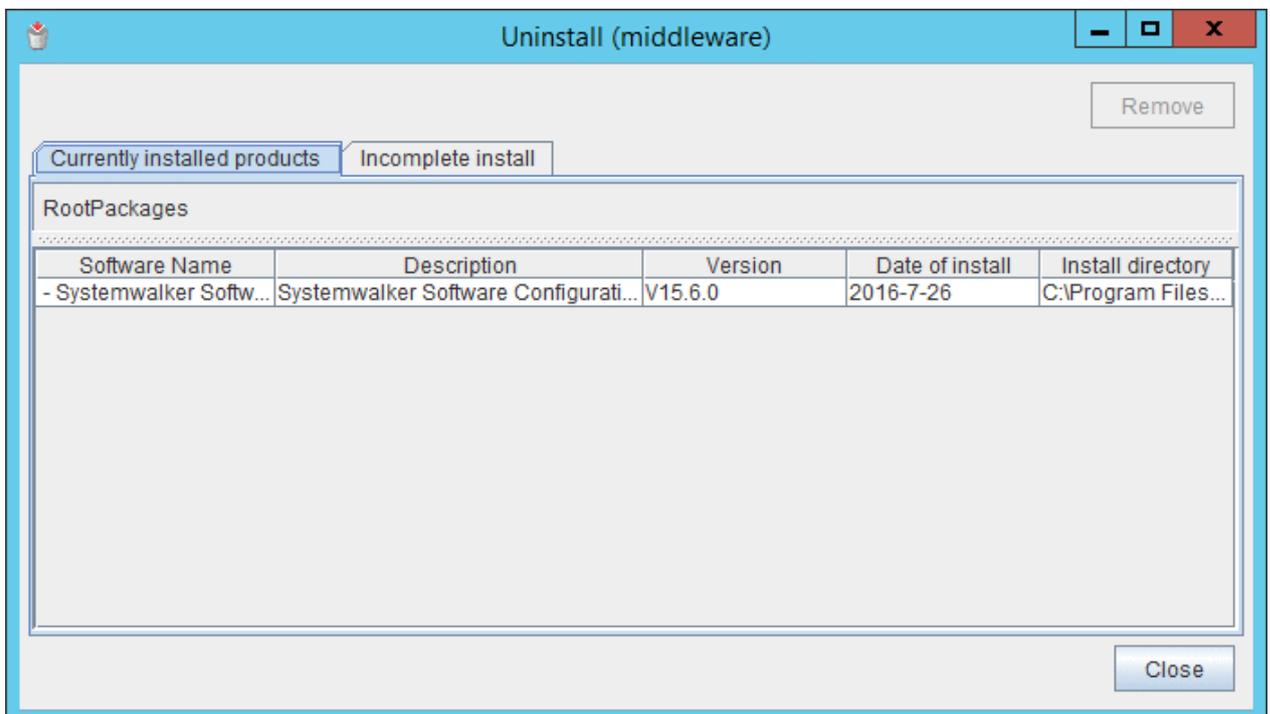
When uninstalling Systemwalker Software Configuration Manager because of installation failure or for some other reason, Systemwalker Software Configuration Manager may be displayed in the **Incomplete install** tab. If Systemwalker Software

Configuration Manager is not displayed in the **Currently installed products** tab, click the **Incomplete install** tab to check that Systemwalker Software Configuration Manager is displayed there. The subsequent uninstallation procedure is the same even if Systemwalker Software Configuration Manager is displayed in the **Incomplete install** tab.

3. The **Uninstall Systemwalker Software Configuration Manager (admin server)** window will be displayed.

   If the software can be removed, click the **Uninstall** button.

4. Upon successful completion, the following window will be displayed.

   Click the **Finish** button.
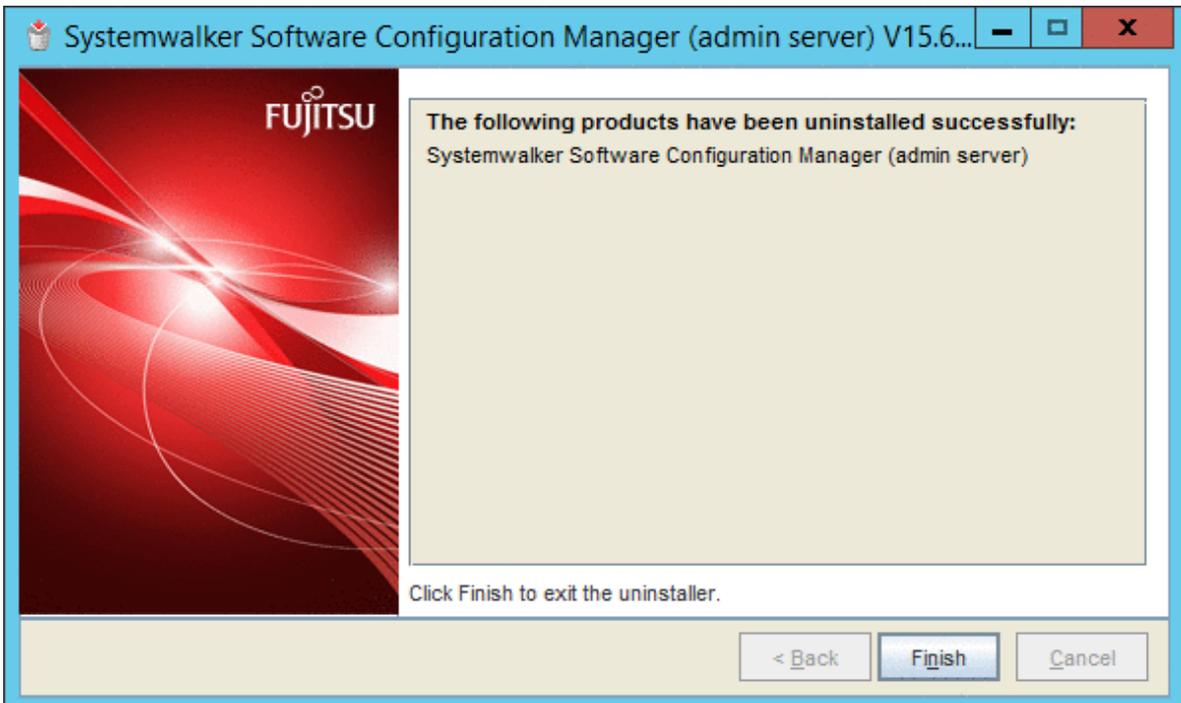
5. The **Confirm** window (prompting for system restart confirmation) will be displayed.

6. Click the **Yes** button to restart the system.
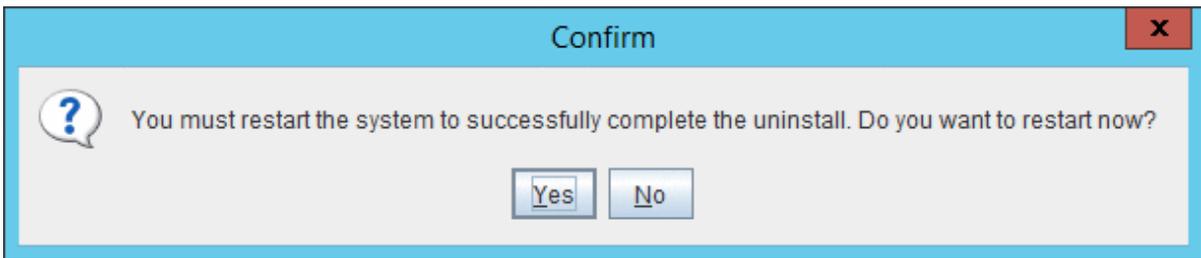
[Linux]

1. Log in as a superuser on the system.

2. Start the uninstaller.

```
# /opt/FJSVcir/cimanager.sh -c
```

3. The window for selecting the product to uninstall will be displayed.

   Select **Systemwalker Software Configuration Manager (admin server).**

   Entering "q" closes the uninstaller.

```
Loading Uninstaller...


Currently installed products
1. Systemwalker Software Configuration Manager (admin server) V15.6.0

Type [number] to select the software you want to uninstall.
[number,q]
=>
```

4. Execute the uninstallation.

   Enter "y" (Entering "b" returns to the previous window, and entering "q" closes the uninstaller).

```
Systemwalker Software Configuration Manager (admin server)
    Description: Systemwalker Software Configuration Manager (admin server)
    Version: V15.6.0
    Manufacturer: Fujitsu Limited
    Install directory: /opt
    Date of install: 2016-05-10


Starting the uninstall of the software. Are you sure you want to continue?
[y,b,q]
=>
```

5. Start the uninstallation.

   When the uninstallation completes, the following window will be displayed:

```
Uninstalling...


The following products have been uninstalled successfully:
    Systemwalker Software Configuration Manager (admin server)


Exiting Uninstaller.
```

8.2.3 Uninstalling SMEE [Linux]

This section describes how to uninstall SMEE.

🈁 **Note**
. . . .

Ensure that no other products are using SMEE before uninstalling it.
. . . .

1. Log in as a superuser on the system.

2. Remove the FJSVsmee64 package:

> rpm -e FJSVsmee64

8.2.4 Uninstalling Securecrypto Library RunTime [Linux]

This section describes how to uninstall Securecrypto Library RunTime.

🈁 **Note**
. . . .

Ensure that no other products are using Securecrypto Library RunTime before uninstalling it.
. . . .

1. Log in as a superuser on the system.

2. Remove the FJSVsclr64 package:

> rpm -e FJSVsclr64

8.3 Post-uninstallation Notes

8.3.1 Points to Note after Uninstalling from the Admin Server

This section provides points to note after uninstalling System Software Configuration Manager from the admin server.

Files and directories that remain after uninstalling Systemwalker Software Configuration Manager

🈁 **Note**
. . . .

Deletion may fail if these files are locked. In this case, restart the operating system and then delete the files.
. . . .

The following files and directories may still remain after the uninstallation. When the uninstallation completes successfully, manually delete them.

[Windows]

- Systemwalker Software Configuration Manager installation directory

[Linux]

- *<home directory of root account>*/InstallShield

- *<Home directory of root account>*/WriteAttachment

- *<Home directory of root account>*/ReadAttachment

- *<Home directory of root account>*/TWFRepository

- /etc/opt/FJSVcfmgb

- /etc/opt/FJSVcfmgm

- /etc/opt/FJSVlnkcf

- /opt/FJSVcfmgb

- /opt/FJSVcfmgm

- /opt/FJSVlnkcf

- /var/opt/FJSVcfmgb

- /var/opt/FJSVcfmgm

- /var/opt/FJSVlnkcf

Files and directories that remain after uninstalling SMEE and Securecrypto Library RunTime [Linux]

The following directories remain after uninstalling SMEE and Securecrypto Library RunTime. Check that these directories are not being used by other products, and when the uninstallation completes successfully, manually delete them.

Note that files or directories under these directories may also still remain, so delete them as well.

- /opt/FJSVsmee64

- /etc/opt/FJSVsclr64

Directory service data that remains after uninstallation of Systemwalker Software Configuration Manager

The following directories remain after uninstalling SMEE and Securecrypto Library RunTime. Check that these directories are not being used by other products, and when the uninstallation completes successfully, manually delete them.

- User information registered using the user information management command

- The following group information used by this product

    - AdminRole

    - swrba_Exe

    - Role

    - IflowUsers

    - IflowGroups

8.3.2 Uninstalling the "Uninstall (middleware)"

The "Uninstall (middleware)" is a common tool for Fujitsu middleware products.

This tool manages information about the Fujitsu middleware products that have been installed, as well as launching the product uninstallers.

This product supports the Uninstall (middleware).

When this product is installed, the "Uninstall (middleware)" is installed first, after which the installation and uninstallation of Fujitsu middleware products is controlled by this tool. The installation processing for the "Uninstall (middleware)" tool will not be performed if it has already been installed.

This section explains how to uninstall the "Uninstall (middleware)". It also presents points to note during uninstallation.

Note
....

- Be sure to use the "Uninstall (middleware)" tool when uninstalling this product.

- This tool also manages information for Fujitsu middleware products other than this product. Do not uninstall this tool unless absolutely necessary.

    If this tool is uninstalled by mistake, use the following procedure to reinstall it:

    [Windows]

1. Log in to the target machine (where the tool is to be installed) using an account with administrator privileges.

2. Insert the DVD-ROM.

   Insert the "Systemwalker Software Configuration Manager Media Pack V15.6.0 DISC1 (Admin Servers Program)" or "Systemwalker Software Configuration Manager Media Pack V15.6.0 DISC2 (Linkage Servers/Business Servers Program)" DVD-ROM into the DVD-ROM drive.

3. Execute the installation command.

```
<DVD-ROM mount point>\<CIR installer root directory>\cirinst.exe
```

[Linux]

1. Log in as a superuser on the system.

2. Insert the DVD-ROM.

   Insert the "Systemwalker Software Configuration Manager Media Pack V15.6.0 DISC1 (Admin Servers Program)" or "Systemwalker Software Configuration Manager Media Pack V15.6.0 DISC2 (Linkage Servers/Business Servers Program)" DVD-ROM into the DVD-ROM drive.

   If the DVD-ROM has not been mounted, mount the DVD-ROM by executing the following command:

```
# mount -t iso9660 -r /dev/mnt <DVD-ROM mount point>
```

3. Execute the installation command.

```
# <DVD-ROM mount point>/<CIR installer root directory>/cirinst.sh
```

Use the following procedure to uninstall the Uninstall (middleware):

1. Start the "Uninstall (middleware)" to check whether there are any other Fujitsu middleware products left on the system. The method for starting this tool is as below.

   [Windows]

   Select **Start** >> **All Programs** or **All apps** >> **Fujitsu** >> **Uninstall (middleware)**.

   [Linux]

```
/opt/FJSVcir/cimanager.sh [-c]
```

   -c: Command interface

Information

To run the tool in command mode, specify "-c". If "-c" is not specified, the tool will run in GUI mode if there is a GUI environment, or in command mode if there is no GUI environment.

2. If no Fujitsu middleware products have been installed, execute the following uninstallation command:

   [Windows]

```
%SystemDrive%\FujitsuF4CR\bin\cirremove.exe
```

   [Linux]

```
# /opt/FJSVcir/bin/cirremove.sh
```

3. When "This software is a tool that is shared with other Fujitsu products. Are you sure you want to remove this software? [y/n]" is displayed, enter "y" to continue with the uninstallation process.

   The uninstallation process will finish in a few seconds.

4. After the uninstallation completes, the following directory and the files that it contains will still remain, so delete them:

[Windows]

%SystemDrive%\FujitsuF4CR

%ProgramData%\Fujitsu\FujitsuF4CR

[Linux]

/var/opt/FJSVcir/

Part 3   Operation

Chapter 9 Operation Setup

This chapter explains how to set up Systemwalker Software Configuration Manager operations.

9.1 User Management

This section explains the following items with regard to managing users:

- Registering a user

- Changing the password

- Updating a user

- Moving a user

- Deleting a user

When linked to ServerView Resource Orchestrator

When linked to ServerView Resource Orchestrator, tasks such as registering a user or changing the password, as well as updating, moving, or deleting a user, should be performed from ServerView Resource Orchestrator. Refer to the following manuals for information on how to perform these tasks using ServerView Resource Orchestrator:

- "Tenant" in the *ServerView Resource Orchestrator Cloud Edition User's Guide for Infrastructure Administrators*

- "Tenant" in the *ServerView Resource Orchestrator Cloud Edition User's Guide for Tenant Administrators*

Refer to "Login Users" for information on the correspondences between the roles of users registered with ServerView Resource Orchestrator and the roles for Systemwalker Software Configuration Manager.

9.1.1 Registering a User

The following kinds of information can be specified when registering a user with the swcfmg_account command (refer to "swcfmg_account (User Information Management Command)" in the *Reference Guide* for details):

Information	Description
User ID	An ID that uniquely identifies the user.
Password	User password.
Tenant	Tenant to whom the user belongs.
Role	Role of the user.
Email address	Email address of the user.
Surname	Name of the user. Registration of middle names is optional.
Middle name(s)	
Given name	
Telephone number	Registration of the user's telephone number is optional.
Company or organization name	Name of the company or organization to which the user belongs. Registration is optional.

9.1.2 Changing the Password

Use swcfmg_account to change the user password (refer to "swcfmg_account (User Information Management Command)" in the *Reference Guide* for details).

9.1.3 Updating a User

Use swcfmg_account to update user information (refer to "swcfmg_account (User Information Management Command)" in the *Reference Guide* for details).

9.1.4 Moving a User

The tenant to which the user belongs can be changed by moving the user with swcfmg_account.

Moving of users is performed using the User Information Management command. Refer to "swcfmg_account (User Information Management Command)" in the *Reference Guide* for details.

9.1.5 Deleting a User

Use swcfmg_account to delete a user (refer to "swcfmg_account (User Information Management Command)" in the *Reference Guide* for details).

9.2 Hardware/Virtual Environment Management

The following hardware can be managed using this product.

- Blade server chassis

- Blade server server blades

- Single servers (rack mount or tower)

The following virtual environments can be managed:

- VMware vSphere 5.1 or later

- OpenStack virtual environments

This section describes the following operations for managing hardware and virtual environments:

- Registering Hardware and Virtual Environments

- Updating hardware

- Deleting hardware

Note

Ensure that the IP addresses of physical servers, hypervisors, and OSs managed using Systemwalker Software Configuration Manager are unique.

9.2.1 Registering Hardware/Virtual Environment

Register hardware to enable chassis, server blades, and single servers to be managed by Systemwalker Software Configuration Manager. VMware vSphere and OpenStack virtual environments can also be managed.

The following kinds of information can be registered when registering hardware. Use the hardware information management command to register hardware. For details, refer to "swcfmg_hardware (Hardware Information Management Command)" in the *Reference Guide*.

To manage a server blade as the management target, it is also necessary to register the chassis on which the server blade is mounted as a management target.

Item	Description
ipaddress	The admin IP address.

Item	Description
serial-number	The serial number.
hardware-type	The hardware type.
vendor-classification-name	Indicates the vendor. Specify FUJITSU, IBM, or HP.
model-group-name	Leave this field blank in this version.
hardware-name	The hardware name. A name can be assigned to the hardware for management purposes.
asset-number	The asset number.
description	A memo about the hardware.
snmp-community-name	The SNMP community name of the chassis.
hardware-user-id	A user ID used for iRMC connections.
hardware-password	A user password used for iRMC connections.
os-ipaddress	The OS IP address.
hypervisor-type	Type of Hypervisor. When managing VMware vSphere, specify VMware. When coordinating with OpenStack, specify KVM.
hypervisor-user-id	The user ID for the user for connection to the hypervisor.
hypervisor-password	The password for the user for connection to the hypervisor.

9.2.2 Updating Hardware

Use the hardware information management command to update the hardware information. For details, refer to "swcfmg_hardware (Hardware Information Management Command)" in the *Reference Guide*.

9.2.3 Deleting Hardware

To stop hardware from being managed by Systemwalker Software Configuration Manager, delete it.

Use the hardware information management command to delete the hardware. For details, refer to "swcfmg_hardware (Hardware Information Management Command)" in the *Reference Guide*.

9.3 Notification Settings in the Management Console

When a user logs in to the management console, the **Home** window is displayed. Notifications (such as maintenance information) can be sent from the system to tenant administrators and tenant users.

How to edit notifications

This section explains how to edit the notifications that are displayed in the bottom part of the **Home** window.

Edit notifications by editing the following text file. Data that has been changed is applied immediately.

[Windows]

<Systemwalker Software Configuration Manager installation directory>\SWCFMGM\config\information_mes.txt

[Linux]

/etc/opt/FJSVcfmgm/config/information_mes.txt

 Note

. . . .

If the text file does not exist, no notifications will be displayed.

. . . .

Settings

Enter each message on separate lines using the following format:

date,message

- There is no set format for the date.

- Use UTF-8 as the character encoding for the text file.

- The text file contains "YYYY-MM-DD,XXXX" as the default value. If necessary, edit this default value.

Settings example

2013-07-15, There will be maintenance for related networks over the weekend.
2013-07-10, A new patch has been released.
2013-07-02, An urgent security patch has been released.

Chapter 10 Starting and Stopping Systemwalker Software Configuration Manager

This chapter explains how to start and stop the Systemwalker Software Configuration Manager admin server.

10.1 Starting Systemwalker Software Configuration Manager

This section explains how to start Systemwalker Software Configuration Manager.

1. Ensure that ServerView Resource Orchestrator is running if you want to use it to manage servers deployed by the tool.

   Refer to the ServerView Resource Orchestrator manuals for more information.

2. Execute the following command on the admin server:

   [Windows]

   Select **Run as administrator** to execute the command:

   > *<Systemwalker Software Configuration Manager installation directory>*\SWCFMGM\bin\swcfmg_start

   [Linux]

   Execute the command as a superuser:

   > /opt/FJSVcfmgm/bin/swcfmg_start

3. If Systemwalker Software Configuration Manager starts successfully, the following message will be output:

   ```
   Startup processing for Systemwalker Software Configuration Manager will start.
   The startup processing for Systemwalker Software Configuration Manager has completed normally.
   ```

📖 See
. . . .
Refer to the *Reference Guide* for information on this command.
. . . .

10.2 Stopping Systemwalker Software Configuration Manager

This section explains how to stop Systemwalker Software Configuration Manager.

1. Execute the following command on the admin server:

   [Windows]

   Select **Run as administrator** to execute the command:

   > *<Systemwalker Software Configuration Manager installation directory>*\SWCFMGM\bin\swcfmg_stop

   [Linux]

   Execute the command as a superuser:

   > /opt/FJSVcfmgm/bin/swcfmg_stop

2. If Systemwalker Software Configuration Manager stops successfully, the following message will be output:

```
Stop processing for Systemwalker Software Configuration Manager will start.
The stop processing for Systemwalker Software Configuration Manager has completed normally.
```

 See

. . . .

Refer to the *Reference Guide* for information on this command.

. . . .

10.3 Checking the Status of Systemwalker Software Configuration Manager

Use the status display command to check the setup status and startup status of Systemwalker Software Configuration Manager. The following statuses can be checked:

- Systemwalker Software Configuration Manager has not been set up.

- Systemwalker Software Configuration Manager is running.

- Systemwalker Software Configuration Manager is not running.

Use the following procedure to check the status of Systemwalker Software Configuration Manager:

1. Execute the following command on the admin server:

   [Windows]

   Select **Run as administrator** to execute the command:

   > *<Systemwalker Software Configuration Manager installation directory>*\SWCFMGM\bin\swcfmg_status

   [Linux]

   Execute the command as a superuser:

   > /opt/FJSVcfmgm/bin/swcfmg_status

2. The following messages are output according to the status of Systemwalker Software Configuration Manager:

   - If Systemwalker Software Configuration Manager has not been set up:

   ```
   Systemwalker Software Configuration Manager has not been set up.
   ```

   - If Systemwalker Software Configuration Manager is running:

   ```
   Systemwalker Software Configuration Manager is running.
   ```

   - If Systemwalker Software Configuration Manager is not running:

   ```
   Systemwalker Software Configuration Manager is not running.
   ```

 See

. . . .

Refer to the *Reference Guide* for information on this command.

. . . .

Chapter 11 Maintenance

This chapter explains topics relating to maintenance, such as the logs that are output when Systemwalker Software Configuration Manager is used, and how to back up and restore the admin server.

11.1 Log Output

This section explains the logs output by Systemwalker Software Configuration Manager.

11.1.1 Logs Output on the Admin Server

The types of logs that are output on the admin server are shown in the tables below.

Investigation logs

Log name	Description	Size	Number of generations
mdr_cfmg_srv.log	A trace log with the following is output: - Information that is output when hardware/virtual environment information is collected using cmdbrefresh (Observed Record Collection Request Command).	10MB	10 generations (*1)

*1: If this number is exceeded, previous generations will be deleted, starting with the oldest.

11.1.1.1 Log Output Destination

The output destination for mdr_cfmg_srv.log is shown below.

[Windows]

Output folder	Output file
<Systemwalker Software Configuration Manager installation directory>\CMDB\FJSVcmdbm\var\log	Same as the log name.

[Linux]

Output folder	Output file
/opt/FJSVcfmgm/CMDB/FJSVcmdbm/var/log	Same as the log name.

[Linux]

Output folder	Output file
/var/opt/FJSVcfmgm/logs	Same as the log name.

11.1.1.2 Investigation Logs

The output format for investigation logs is as below. The output destination for investigation logs can be changed.

Output format for investigation logs

Output format
<Date/time> <Log level> <Message text>

Item	Description	
Date/time	YYYY-MM-DD HH:MM:SS.sss (local time)	
Log level	One of the following:	
	INFO	Information message
	WARN	Warning message
	ERROR	Error message
	FATAL	Fatal message
Message text	Body text of the message	

11.1.1.3 Event Logs or syslogs

Output format for event logs [Windows]

Source	Description
Systemwalker Software Configuration Manager EXPMGR	Message ID and message content

Output format for syslogs [Linux]

Date/time	Host name	Package name	Description
Jun 11 01:01:01	Server	FJSVcfmgm	Message ID and message content

11.1.2 Audit Logs for CMDB

When operations are performed on the CMDB via agents, commands, or the **Maintenance** window of the **Resources** window on the management console, the content of the operation is output as an audit log.

Audit logs are output to the following file:

[Windows]

> *<Systemwalker Software Configuration Manager installation directory>*\CMDB\FJSVcmdbm\var\log\audit\audit.log

[Linux]

> /opt/FJSVcfmgm/CMDB/FJSVcmdbm/var/log/audit/audit.log

- Up to 10 generations of audit log files are kept, named "audit.log", "audit.log.1", "audit.log.2", and so on up to "audit.log.9". Each audit log is 5 MB. Once the maximum number of generations is exceeded, the oldest file (audit.log.9) is deleted.

Output format for audit logs

> *<Date/time>*,*<Operation location>*,*<Execution host>*,*<Operator>*,*<Operation type>*,*<Operation target>*,*<Operation content>*,*<Execution result>*,*<Component>*,*<Additional information>*,*<Reserved area>*

- *<Date/time>*: This item indicates the date and time in "date time time-difference" format.

- *<Operation location>*: This item indicates the IP address of the machine where the operation was performed

- *<Execution host>*: This item indicates the host name of the machine where the operation was performed (The machine hosting the CMDB manager).

- *<Operator>*: This item indicates information on the agent or command that performed the operation.

  - If the operation was performed by an agent, this item indicates the agent ID. However, if it is the first operation and the agent ID has not yet been set up, this item indicates the agent type name.

  - If the operation was performed by a command, this item indicates the OS user name for the user that executed the command.

- *<Operation type>*: This item indicates the operation name.

- *<Operation target>*: This item indicates the target and result of the operation in "name=value;" format.

- *<Operation content>*: This item indicates the content of the operation. If the execution result is operation failure, this item indicates error details.

- *<Execution result>*: This item indicates one of the following values:

    - S: Success

    - F: Failure

- *<Component>*: This item indicates "FSERV".

- *<Additional information>*: This item indicates any additional information for the operation in "name=value;" format.

- *<Reserved area>*: This item is not used. No value is set for this item.

Output example

> "2012/05/10 15:29:37.009
> +0900","192.168.1.10","Server1","mdr000000000005","addEntities","id=gid000000000086;
> type=LogicalServer; record=observed; version=1;","updateEntity","S","FSERV","",""
>
> "2012/05/10 15:44:21.878
> +0900","192.168.1.10","Server1","Administrator","updateEntities","id=gid000000000714; type=Patch;
> record=cataloged; version=3;","updateEntity","S","FSERV","",""
>
> "2012/05/10 15:44:21.882
> +0900","192.168.1.10","Server1","Administrator","updateEntities","id=gid000000000689; type=Patch;
> record=cataloged; version=3;","updateEntity","S","FSERV","",""
>
> "2012/05/10 15:53:24.214 +0900","192.168.1.10","Server1","SYSTEM","updateEntity","id=gid000000008583;
> type=Server; record=observed; version=1;","addEntity","S","FSERV","",""
>
> "2012/05/10 15:53:48.316 +0900","192.168.1.10","Server1","SYSTEM","updateEntity","id=gid000000008584;
> type=Server; record=observed; version=1;","addEntity","S","FSERV","",""
>
> "2012/05/10 15:54:27.822 +0900","192.168.1.10","Server1","SYSTEM","addEntity","id=gid000000008583;
> type=Server; record=observed; version=1;","updateEntity","S","FSERV","",""
>
> "2012/05/10 15:55:28.062 +0900","192.168.1.10","Server1","SYSTEM","addEntity","id=gid000000008583;
> type=Server; record=observed; version=1;","updateEntity","S","FSERV","",""

11.1.3 Audit Logs for Job Management

The history of operations performed by a user is output to an audit log. This includes when one of the following operations is performed using a wizard on the management console or using a command, when an action is executed from the **Job Management** window, or using the job information management command.

- Patch distribution

- Patch application

- Parameter settings

- Script execution

- Configuration modification

Audit logs

Log name	Description	Size	Number of generations
swcfmg_job_audit_log	Outputs audit logs for patch distribution, patch application, parameter settings, and script execution.	10 MB	10 generations

Output destination

The output destination for logs is shown below.

[Windows]

Output folder	Description
<Systemwalker Software Configuration Manager installation directory>\SWCFMGM\logs	Same as the log name.

[Linux]

Output folder	Description
/var/opt/FJSVcfmgm/logs	Same as the log name.

Output format

The output format is shown below. It is possible to change the output destination for audit logs, the file size, and the number of generations held.

Output format
<Operation date/time>,<User ID>,<Tenant name>,<Operation type>,<Parameters>,<Operation result>

Item	Description
Operation date/time	YYYY-MM-DD HH:MM:SS.sss (local time)
User ID	The user ID of the user that executed the operation Note: When the operation is performed using the command, "#COMMAND" is output.
Tenant name	The tenant name of the user that executed the operation Note: For operations performed by infrastructure administrators, "admin" is output. It is not output when the operation is performed using the command.
Operation type	A string indicating the content of the operation
Parameters	The parameters specified by the request
Operation result	"SUCCESS" if the operation was successful and "FAILURE" if the operation failed

Operation type

Operation type	Description	Parameter
patchDistributionStart	Requests patch distribution from the **Patch Application** wizard or using the patch application command	jobid="*<job ID>*"&jobname="*<job name>*"
patchApplicationStart	Requests patch application from the **Patch Application** wizard or using the patch application command	jobid="*<job ID>*"&jobname="*<job name>*"

Operation type	Description	Parameter
parameterSettingStart	Requests parameter settings from the **Parameter Settings** wizard or from the parameter settings command	jobid="*\<job ID>*"&jobname="*\<job name>*"
scriptExecutionStart	Request script execution from the **Script Execution** wizard or using the script execution command	jobid="*\<job ID>*"&jobname="*\<job name>*"
configurationChangeStart	Request configuration change from the configuration modification wizard or the configuration modification command	jobid="*job ID*"&jobname="*job name*"
patchDistributionAction	After requesting patch distribution, execute an action from the **Job Management** window or using the job information management command	jobid="*\<job ID>*"&jobname="*\<job name>*"&processname="*\<process name>*"&processorder="*\<process order>*"&processtype="*\<process type>*"&action="*\<action>*"
patchApplicationAction	After requesting patch distribution, execute an action from the **Job Management** window or using the job information management command	jobid="*\<job ID>*"&jobname="*\<job name>*"&processname="*\<process name>*"&processorder="*\<process order>*"&processtype="*\<process type>*"&action="*\<action>*"
parameterSettingAction	After requesting parameter settings, execute an action from the **Job Management** window or using the job information management command	jobid="*\<job ID>*"&jobname="*\<job name>*"&processname="*\<process name>*"&processorder="*\<process order>*"&processtype="*\<process type>*"&action="*\<action>*"
scriptExecutionAction	After requesting script execution, execute an action from the **Job Management** window or using the job information management command	jobid="*\<job ID>*"&jobname="*\<job name>*"&processname="*\<process name>*"&processorder="*\<process order>*"&processtype="*\<process type>*"&action="*\<action>*"
configurationChangeAction	After requesting configuration modification, execute an action from the **Job Management** window or using the Job Information Management command	jobid="*job ID*"&jobname="*job name*"&processname="*process name*"&processorder="*process order*"&processtype="*process type*"&action="*action*"

11.2 Backing Up and Restoring the Admin Server

This section explains how to back up and restore the Systemwalker Software Configuration Manager admin server.

11.2.1 Notes on Backup and Restoration

This section provides notes regarding Systemwalker Software Configuration Manager backup and restore.

Advisory notes when coordinating with ServerView Resource Orchestrator

When coordinating with ServerView Resource Orchestrator, ServerView Resource Orchestrator and Systemwalker Software Configuration Manager share the CMDB. Backup and restore of the CMDB data are performed using ServerView Resource Orchestrator.

For details on backup and restore of ServerView Resource Orchestrator, refer to "Mechanism of Backup and Restoration" in the "ServerView Resource Orchestrator Cloud Edition Operation Guide" for details.

Notes on the environments where backups and restorations are performed

The backup and restoration environments must follow the criteria below:

- When OS are different between the backup source and the restore destination. However, execution will be possible if the operating system versions of the same vendor are different.

- When the product installation directories are different [Windows]

- When the host information (host name/IP address) is different

- When the code types are different

- When the CMDB database storage directories are different

- When the Web server (Interstage HTTP Server), message broker, and server function port numbers are different

-

Notes on the timing of backups and restorations

- When backup and restore are executed, it will be necessary to restart Systemwalker Software Configuration Manager. When linked to ServerView Resource Orchestrator, it will be necessary to restart Systemwalker Software Configuration Manager and ServerView Resource Orchestrator. For this reason, the operator should execute backup and restore in a time zone that does not use Systemwalker Software Configuration Manager and ServerView Resource Orchestrator.

- The statuses of patch application, patch distribution, parameter setting, and script execution that were in effect at the time of backup will be restored. If restore is performed using backup resources for which script execution is in progress, operation will be resumed. Before performing backup, confirm that patch application, patch distribution, parameter setting, and script execution are not running.

Handling backup resources

- When moving backup resources to the restoration target, move the directory specified as the backup directory and all its files.

- Do not delete the backup resources in the directory specified as the backup directory until the restoration completes.

- The backup command cannot be used to back up data to the following types of media:

  - Optical disks such as CD-Rs and DVD-Rs

    To save user assets to optical disks, first back up the data to the local disk, and then, write it to the media using a dedicated optical disk writer, for example.

  - Network paths [Windows]

  - Directories whose pathnames include spaces

11.2.2 Backing Up the Admin Server

This section explains how to back up the Systemwalker Software Configuration Manager admin server.

Note that Systemwalker Software Configuration Manager must be stopped before performing backup.

For details on how to start and stop Systemwalker Software Configuration Manager, refer to "Chapter 10 Starting and Stopping Systemwalker Software Configuration Manager".
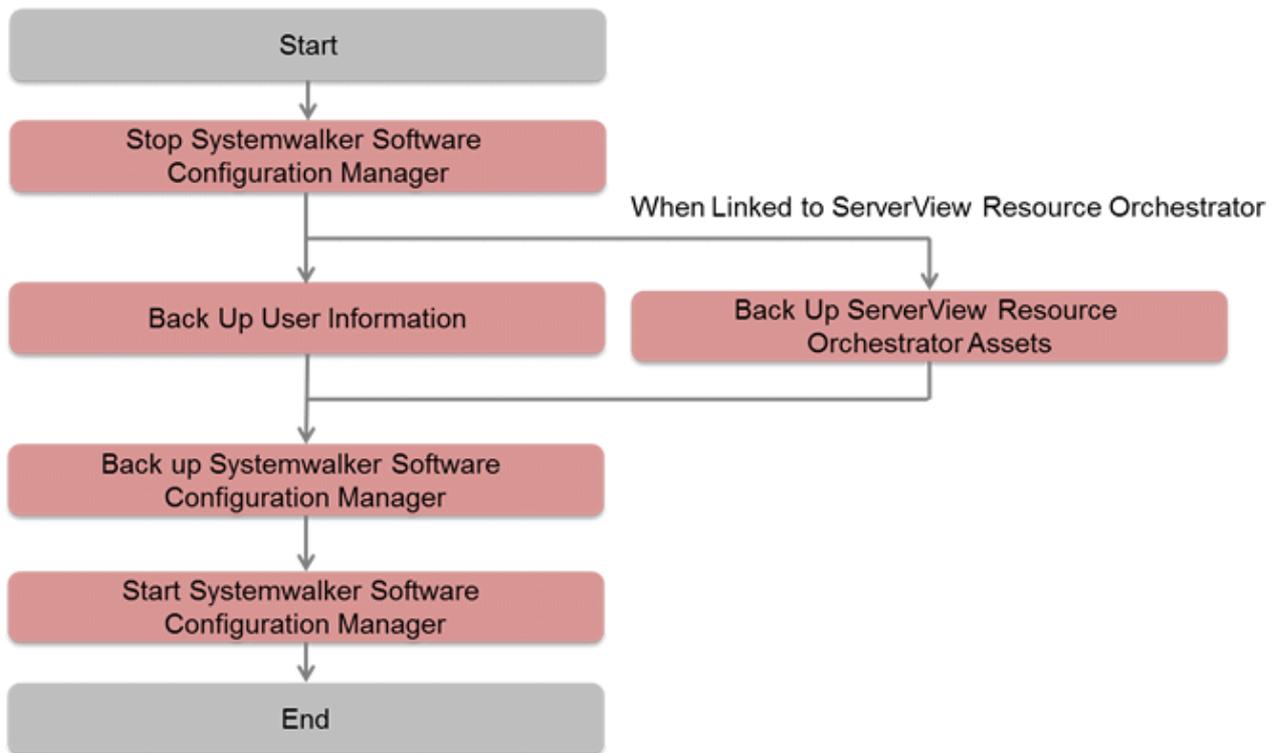
- 11.2.2.2 Backing Up User Information

- 11.2.2.3 Backing Up ServerView Resource Orchestrator Assets (when Linked to ServerView Resource Orchestrator)

- 11.2.2.4 Backup of Systemwalker Software Configuration Manager

11.2.2.1 Required Disk Space for Backup

Before backing up Systemwalker Software Configuration Manager, estimate the amount of disk space required for each asset, as explained below:

Asset	Required disk space
Systemwalker Software Configuration Manager	**[Windows]** ``` Required disk space = + Size of <media library directory> (*1) + Size of <database directory of CMDB manager>\FJSVcmdbm\Shunsaku\directorData (*2) + Size of <database directory of CMDB manager>\FJSVcmdbm\fcmdb\file (*2) + Size of <Systemwalker Software Configuration Manager installation directory> \SWCFMGM\SWCFMGDB + 100 MB ``` **[Linux]** ``` Required disk space = + Size of <media library directory> (*1) + Size of <database directory of CMDB manager>/FJSVcmdbm/Shunsaku/directorData (*2) + Size of <database directory of CMDB manager>/FJSVcmdbm/fcmdb/file (*2) + Size of /var/opt/FJSVcfmgm/SWCFMGDB + 100 MB ``` *1: When using Systemwalker Software Configuration Manager Express, set 0 for the size. *2: Size specified for the "CMDB Manager database directory" during setup.

Asset	Required disk space
ServerView Resource Orchestrator	Refer to "Mechanism of Backup and Restoration" in the *ServerView Resource Orchestrator Cloud Edition Operation Guide* for details.

11.2.2.2 Backing Up User Information

User information is backed up when the directory service is backed up. Refer to the relevant ServerView Operations Manager manual below for information on how to back up the directory service. If linked to ServerView Resource Orchestrator, then use it to back up user information.

[Windows]

- "Backing up and restoring OpenDJ data on Windows systems" in *User Management in ServerView*

[Linux]

- "Backing up and restoring OpenDJ data on Linux systems" in *User Management in ServerView*

11.2.2.3 Backing Up ServerView Resource Orchestrator Assets (when Linked to ServerView Resource Orchestrator)

Use offline backup to back up the ServerView Resource Orchestrator assets. CMDB assets are not backed up by online backups. Refer to "Offline Backup of the Admin Server" in the *ServerView Resource Orchestrator Cloud Edition Operation Guide* for details.

11.2.2.4 Backup of Systemwalker Software Configuration Manager

Execute the following command from the command prompt to execute backup of Systemwalker Software Configuration Manager. Refer to the *Reference Guide* for information on commands.

Command name	Overview
swcfmg_backup	This command backs up user assets.

Note

- User assets must be backed up using OS administrator privileges (administrator or root).

- For the backup destination, specify a directory with sufficient disk space.

- If the disk runs out of space during the backup, all of the data at the backup destination will be deleted.

11.2.3 Restoring the Admin Server

This section explains how to restore the Systemwalker Software Configuration Manager admin server.

Note that Systemwalker Software Configuration Manager must be stopped before restoring Note that after restoration, it is necessary to start Systemwalker Software Configuration Manager before updating to the latest configuration information.For details on how to start and stop Systemwalker Software Configuration Manager, refer to "Chapter 10 Starting and Stopping Systemwalker Software Configuration Manager".
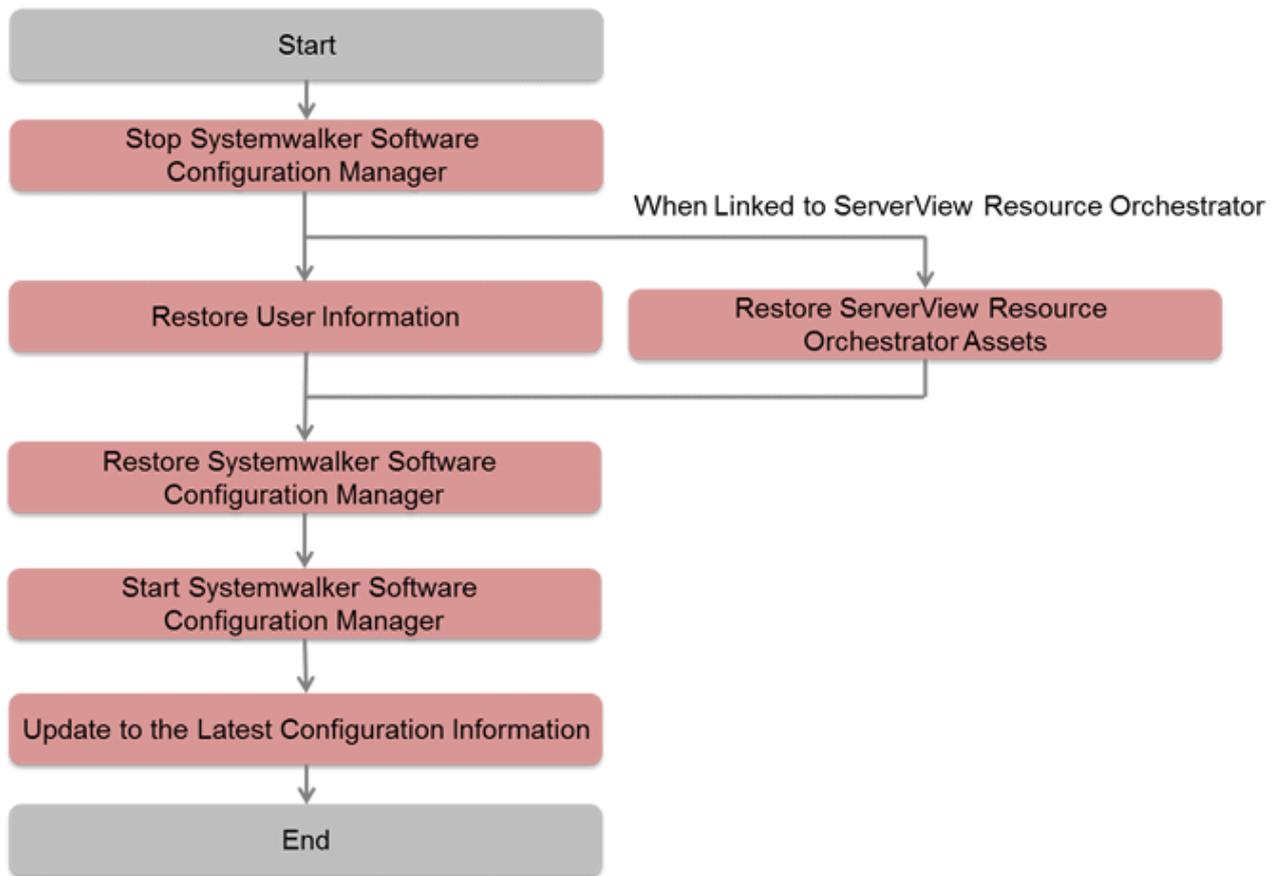
- 11.2.3.1 Restoring User Information

- 11.2.3.2 Restoring ServerView Resource Orchestrator Assets (when Linked to ServerView Resource Orchestrator)

- 11.2.3.3 Restoration of Systemwalker Software Configuration Manager

- 11.2.3.4 Updating to the Latest Configuration Information

11.2.3.1 Restoring User Information

Restore user information that was backed up at "Backing Up User Information" (refer to the relevant ServerView Operations Manager manual below for details). If linked to ServerView Resource Orchestrator, then use it to restore user information.

[Windows]

- "Backing up and restoring OpenDJ data on Windows systems" in *User Management in ServerView*

[Linux]

- "Backing up and restoring OpenDJ data on Linux systems" in *User Management in ServerView*

11.2.3.2 Restoring ServerView Resource Orchestrator Assets (when Linked to ServerView Resource Orchestrator)

Restore ServerView Resource Orchestrator assets backed up at "Backing Up ServerView Resource Orchestrator Assets (when Linked to ServerView Resource Orchestrator)" (refer to "Restoring the Admin Server" in the *ServerView Resource Orchestrator Cloud Edition Operation Guide* for details).

11.2.3.3 Restoration of Systemwalker Software Configuration Manager

Restore the assets collected in "Backup of Systemwalker Software Configuration Manager". Execute the following command from the command prompt to restore Systemwalker Software Configuration Manager. Refer to the *Reference Guide* for information on commands.

Command name	Overview
swcfmg_restore	This command restores user assets.

📌 **Note**

. . . .

User assets must be restored using OS administrator privileges (administrator or root).

. . . .

11.2.3.4 Updating to the Latest Configuration Information

After restoring Systemwalker Software Configuration Manager, start Systemwalker Software Configuration Manager and then update to the latest configuration information.

The procedure for updating to the latest configuration information is described below:

1. Execute cmdbrefresh to update the CMDB information:

   [Windows]

   ```
   %SWCMDBINSTALLPATH%\CMDB\FJSVcmdbm\bin\cmdbrefresh.exe -a -q-
   ```

   [Linux]

   ```
   /opt/FJSVcfmgm/CMDB/FJSVcmdbm/bin/cmdbrefresh.sh -a -q
   ```

11.3 Changing the Systemwalker Software Configuration Manager Environment

11.3.1 Changing Passwords of Users who Use this Product

This section explains how to change the passwords of users of the following directory services used with this product:

- User for process control

- LDAP administrator

11.3.1.1 Changing the Password of a User for Process Control

The procedure for changing the password of a user for process control is described below:

1. Stop Systemwalker Software Configuration Manager.

   Refer to "10.2 Stopping Systemwalker Software Configuration Manager" for details.

2. Change the password of the user for process control Execute the following command:

   [Windows]

   ```
   <Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_environment -set -key
   job.process.controller.password -value <new password>
   ```

   [Linux]

   ```
   /opt/FJSVcfmgm/bin/swcfmg_environment -set -key job.process.controller.password -value <new password>
   ```

3. Restart Systemwalker Software Configuration Manager.

   Refer to "10.1 Starting Systemwalker Software Configuration Manager" for details.

11.3.1.2 Changing the Password of an LDAP Administrator DN

The procedure for changing the password of an LDAP administrator DN is described below

When coordinating with ServerView Resource Orchestrator, also change the password registered in ServerView Resource Orchestrator.

1. Stop Systemwalker Software Configuration Manager.

   Refer to "10.2 Stopping Systemwalker Software Configuration Manager" for details.

2. Change the LDAP administrator DN password. Change the password of svuser referring to manuals of ServerView Operations Manager.

   - "Defining / changing the password of svuser" in "User Management in ServerView"

3. When coordinating with ServerView Resource Orchestrator, configure the new password in ServerView Resource Orchestrator. - Refer to "Reconfiguring Single Sign-On" in the ServerView Resource Orchestrator Cloud Edition Operation Guide for details.

4. Execute the following command in the command prompt to set the new password for Systemwalker Software Configuration Manager:

   [Windows]

   <Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_environment -set -key user.ldap.administrator.password -value <new password>

   [Linux]

   /opt/FJSVcfmgm/bin/swcfmg_environment -set -key user.ldap.administrator.password -value <new password>

5. Restart Systemwalker Software Configuration Manager. Refer to "10.1 Starting Systemwalker Software Configuration Manager" for details.

11.3.2 Changing Passwords of Operating System Users who Use this Product

The procedure for changing the passwords of the following users of operating systems used with this product is described below:

- swcfmgdb

11.3.2.1 Changing the Password for swcfmgdb

The procedure for changing the password for swcfmgdb is described below:

1. Stop Systemwalker Software Configuration Manager.

   Refer to "10.2 Stopping Systemwalker Software Configuration Manager" for details.

2. Change the password.

   If using Windows, execute the command below:

   net user swcfmgdb <new password>

3. If using Windows, change the password of the service startup account.

   The service below will be changed:

   - Systemwalker Software Configuration Manager DataBase Service

4. Set a new password for Systemwalker Software Configuration Manager. Execute the following command: For the new password, set the same value as the password specified in steps 2 and 3.

   [Windows]

   <Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_environment -set -key database.user.password -value <new password>

[Linux]

```
/opt/FJSVcfmgm/bin/swcfmg_environment -set -key database.user.password -value <new password>
```

5. Restart Systemwalker Software Configuration Manager.

   Refer to "10.1 Starting Systemwalker Software Configuration Manager" for details.

11.3.3 Displaying the Maintenance Window

This section explains how to enable display of the **Maintenance** window on the management console.

1. Stop Systemwalker Software Configuration Manager. Refer to "10.2 Stopping Systemwalker Software Configuration Manager" for details.

2. Execute the following command to configure the setting to display the **Maintenance** window. To hide the **Maintenance** window, specify "false" for the -value option. This option is set to "false" by default at the time of installation of this product.

   [Windows]

```
Systemwalker Software Configuration Manager installation directory\SWCFMGM\bin
\swcfmg_environment -set -key managementconsole.maintenance.show -value true
```

   [Linux]

```
/opt/FJSVcfmgm/bin/swcfmg_environment -set -key managementconsole.maintenance.show -value true
```

3. Restart Systemwalker Software Configuration Manager. Refer to "10.1 Starting Systemwalker Software Configuration Manager" for details.

11.4 Installing Updates on Systemwalker Software Configuration Manager

For stable and continuous operation of Systemwalker Software Configuration Manager, periodically check update information released by Fujitsu, and install released updates as soon as possible.

This section explains how to check update information for Systemwalker Software Configuration Manager, and how to install updates.

11.4.1 Installing Updates on the Admin Server

This section explains how to install updates on the admin server.

The procedure for installing updates is described below:

1. Stop Systemwalker Software Configuration Manager

   Execute the following command on the admin server:

   [Windows]

   Execute the command as a user with administrator privileges.

```
<Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_stop
```

   [Linux]

   Execute the command as a superuser.

```
/opt/FJSVcfmgm/bin/swcfmg_stop
```

   If Systemwalker Software Configuration Manager stops successfully, a stop completion message will be output.

```
Stop processing for Systemwalker Software Configuration Manager will start.
Stop processing for Systemwalker Software Configuration Manager has completed normally.
```

2. Install the updates

    Install the updates according to the explanations for the updates to be installed.

3. Start Systemwalker Software Configuration Manager

    Execute the following command on the admin server:

    [Windows]

    Execute the command as a user with administrator privileges.

    <pre><Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_start</pre>

    [Linux]

    Execute the command as a superuser.

    <pre>/opt/FJSVcfmgm/bin/swcfmg_start</pre>

    If Systemwalker Software Configuration Manager starts successfully, a startup completion message will be output.

    ```
    Start processing for Systemwalker Software Configuration Manager will start.
    Start processing for Systemwalker Software Configuration Manager has completed normally.
    ```

Part 4   Management

Chapter 12 Management Console

Systemwalker Software Configuration Manager provides a management console as a GUI for managing hardware (chassis and servers) and virtual environments (VM hosts and VM guests).

12.1 Overview of the Management Console

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

- Resource management

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

Setting up the web browser

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

- Configure settings to accept cookies.

- Enable JavaScript.

- Configure settings to use TLS 1.0.

- Configure settings to save the encrypted page to disk.

- Depending on the security level of the browser, the management console may not be displayed even after login. In this case, register the URL of the management console in **Trusted sites**.

- Use Internet Explorer in standard mode when logging in to the management console.

  The procedure for configuring standard mode is as follows:

  1. **Press the "Alt" key on the keyboard to display the menu bar.**

  2. **Click Tools > Compatibility View settings.**

  3. **Remove the check from Display intranet sites in Compatibility View.**

12.2 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 12.1 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.
Resources	Hardware	Chassis list	Y	Y	-	-	Moves from the link to the chassis name to the chassis details.
		Chassis details	Y	Y	-	-	Moves from the link to the server blade name to the physical server details.

Function	Window	Information displayed/ button	Infrastructure administrator	Dual-role administrator	Tenant administrator	Tenant user	Remarks
		Physical server list	Y	Y	-	-	Moves from the link to the physical server name and chassis name to the details.
		Physical server details	Y	Y	-	-	Displays the details of the physical server and a list of related VM guests.
		OS list	Y	Y	-	-	Displays the list of servers on which the OS is installed.
		Map view	Y	Y	-	-	Displays relationships between chassis, physical servers, servers, L-Platforms, and tenants.

Y: Can be used.

-: 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 "12.3 Login Users" for information on roles.

12.3 Login Users

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

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

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

ServerView Resource Orchestrator		Systemwalker Software Configuration Manager	
Role category	Role or basic role	Role	Viewing of Hardware Configuration Information Viewing of Virtual Environment Configuration Information
Infrastructure Administrative Role	Infrastructure administrator	Infrastructure administrator	A
	Infrastructure operator		A
	Infrastructure monitor		A
Tenant Management Roles	Tenant administrator	Tenant administrator	-
	Tenant operator		-
	Tenant monitor		-
Tenant Use Roles	Tenant user	Tenant user	-
Multiple Roles	Administrator	Dual-role administrator	A
	Operator		A

A: All operations can be performed.

S: Some operations can be performed.

-: No operations can be performed.

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

📕 Note

. . . .

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

Refer to "4.2 Managing User Information for information on requirements to use this product.

. . . .

12.4 Login and Logout

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

12.4.1 Login

Use the following methods to open the management console:

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

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

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

Figure 12.1 Login window
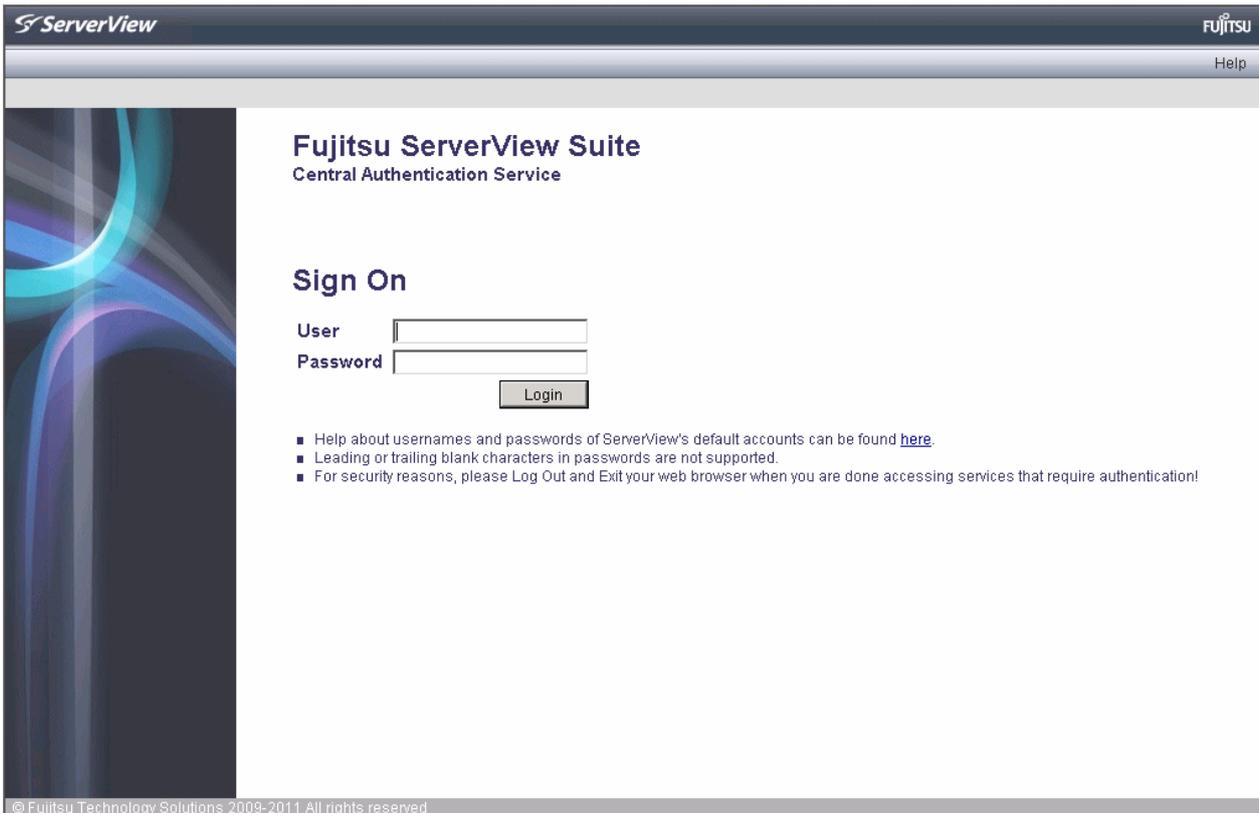
For the user name and password, log in using an account registered in the directory service.

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

Note

Confirming Licenses

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

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

  Register the license key provided with the licensed product.

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

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

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

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

12.4.2 Logout

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

2. Close the browser after logging out.

12.5 Home

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

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

Function list

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

Resources

- **Hardware**

  The Hardware window is displayed.

Notifications

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

Refer to the "9.3 Notification Settings in the Management Console" for information on how to edit notifications.

Chapter 13 Resources

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

- Hardware

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

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

Information

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

13.1 Hardware

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

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

13.1.1 Chassis list

Display method

1. Log in to the management console.

2. Use either of the following methods.

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

   b. b.Click the link to **Hardware** in the Home window.

Systemwalker Software Configuration Manager   👤 cfmgadmin ▾   FUJITSU

| Home | Resources |

Hardware

| Chassis list | Physical server list | OS list | Map view | Items: 6 ⟳ |

Name	Vendor name	Product name	Admin IP address	Mounted server···
🖳 chassis-488	Fujitsu	BX900 S1	192.168.20.233	6
🖳 chassis-588	Fujitsu	BX900 S2	192.168.20.78	6
🖳 chassis-688	Fujitsu	BX900 S2	192.168.20.178	6
🖳 chassis-788	Fujitsu	BX900 S1	192.168.20.23	6
🖳 chassis-888	Fujitsu	BX400 S1	192.168.20.123	6
🖳 chassis-988	Fujitsu	BX900 S1	192.168.20.223	6

Display item

Displays the list of blade server chassis.

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

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

13.1.1.1 Chassis details

Display method

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

Display item

Chassis details

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

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

Server blade list

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

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

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

13.1.2 Physical Server List

Display method

1. Log in to the management console.

2. Use either of the following methods to display the **Hardware** window.

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

   b. Click the link to **Hardware** in the **Home** window.

3. Click the **Physical server list** tab in the **Hardware** window.

Operation method

Filter search

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

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

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

Display item

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

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

13.1.2.1 Physical Server Details

Display method

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

Systemwalker Software Configuration Manager		cfmgadmin ▾	FUJITSU
Home	**Resources**		

Hardware

Physical server list / Physical server details

Name	physical_server-490
Vendor name	Fujitsu
Product name	BX920 S3
Admin IP address	192.168.40.235
OS	Red Hat Enterprise Linux
OS IP address	192.168.30.235
Memo	-
Asset number	AS0039A0490
Serial number	ST0039A0490
Firmware version	490

Display item

Physical server details

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

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

Server list

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

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

13.1.3 OS List

Display method

1. Log in to the management console.

2. Use either of the following methods to display the **Hardware** window.

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

    b. Click the link to **Hardware** in the **Home** window.

3. Click the **OS list** tab in the **Hardware** window.

Operation method

Filter search

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

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

Display item

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

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

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

13.1.4 Map view

Display method

1. Log in to the management console.

2. Use either of the following methods to display the **Hardware** window.

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

   b. Click the link to **Hardware** in the **Home** window.

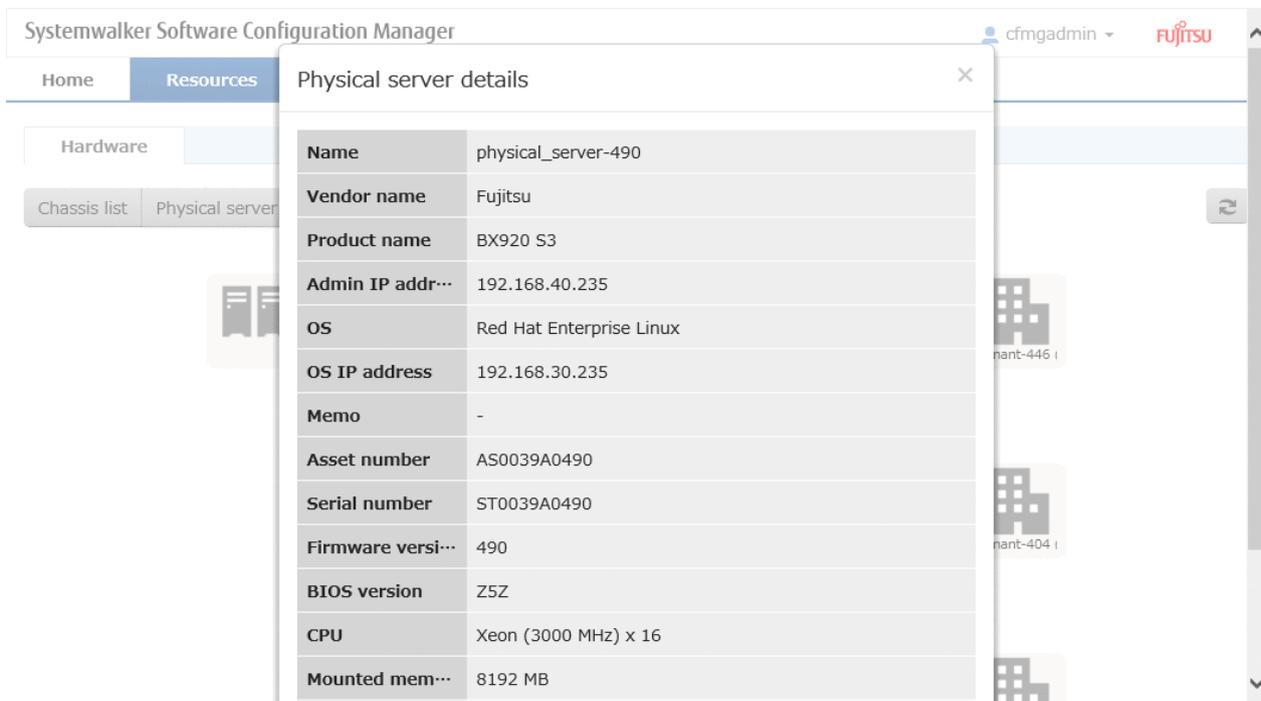3. Click the **Map view** tab in the **Hardware** window.
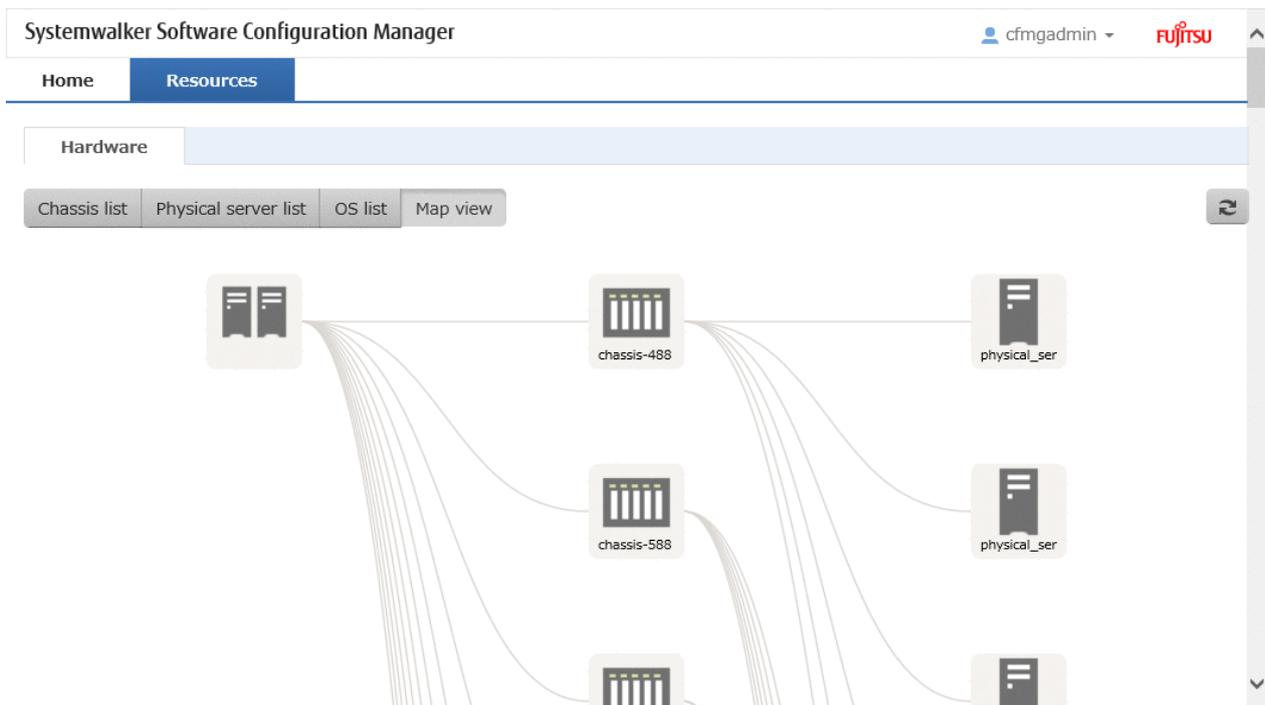
Display item

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

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

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

13.1.4.1 Displaying Details

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

Display item

When a chassis is selected

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

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

When a physical server is selected

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

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

Appendix A Port Number List

After being installed, Systemwalker Software Configuration Manager uses the communication paths described in this appendix.

Port numbers must be unique within the network. If any of the port numbers listed in the "A.1 Port Number List" are already being used, the following action is required:

- Port numbers where the "Changeable?" column is "Yes".

  Change the port number by following the "A.2 Procedure for Changing Ports".

- Port numbers where the "Changeable?" column is "No".

  Change the port number for the software that is currently using the port.

Check the usage status of port numbers by executing the following command:

[Windows]

```
netstat -an
```

[Linux]

```
netstat -an
```

A.1 Port Number List

Admin server

Port numbers for which communications from external servers must be allowed

Function	Port number/protocol	Changeable
Web server	31500/tcp 31600/tcp	Only during setup
For the SSO authentication server	3169/tcp 3170/tcp	No
File transfer infrastructure	9764/tcp	Yes

Port numbers used internally

Function	Port number/protocol	Changeable
For the CMDB	13305/tcp 13306/tcp 13310/tcp 13311/tcp 13312/tcp 13313/tcp	Only during setup
	13321/tcp 13322/tcp 13323/tcp 13324/tcp 13325/tcp 13326/tcp 13327/tcp 13328/tcp 13331/tcp	No

Function	Port number/protocol	Changeable
	13332/tcp 13333/tcp	
IJServer cluster	11080/tcp 27571/tcp 27573/tcp 27574/tcp 27575/tcp 27576/tcp 27577/tcp 27579/tcp	Only during setup
Database	9658/tcp	Only during setup
Web server for internal linkage	31501/tcp 31502/tcp 31601/tcp	Only during setup
syslog	514/udp (*1)	Yes
HTTP listener for operation management	12031/tcp	Only during setup
HTTP listener	28081/tcp	Only during setup
IIOP	23603/tcp	Only during setup
IIOP_SSL	23604/tcp	Only during setup
IIOP_MUTUALAUTH	23605/tcp	Only during setup
JMX_ADMIN	8689/tcp	Only during setup
Message broker	7681/tcp 21020/tcp 21021/tcp 21022/tcp 21023/tcp 21024/tcp 21025/tcp 21026/tcp 21027/tcp	Only during setup
Workflow	27551/tcp 27552/tcp 27553/tcp 27554/tcp 27555/tcp 27556/tcp 27557/tcp 27559/tcp 27561/tcp 27562/tcp 27563/tcp 27564/tcp 27565/tcp 27566/tcp 27567/tcp 27569/tcp	Only during setup
Automated operation process group	21028/tcp 21029/tcp 21030/tcp 21031/tcp	

Function	Port number/protocol	Changeable
	21032/tcp 21033/tcp 21034/tcp 21035/tcp 21036/tcp 21037/tcp 21038/tcp 21039/tcp 21040/tcp 21041/tcp 21042/tcp 21043/tcp	

*1: Only used by Linux.

A.2 Procedure for Changing Ports

This section explains the procedure for changing ports.

A.2.1 When the Port Number for syslog is Changed [Linux]

If the port number for syslog has been changed, modify the following files:

File names

- manager_base_log4j.xml

- manager_discovery_fjmw_log4j.xml

- manager_discovery_log4j.xml

- manager_discovery_wsus_log4j.xml

- manager_discovery_yum_log4j.xml

- manager_log4j.xml

File location

/etc/opt/FJSVcfmgm/config

How to modify the files

Add the port number to "SyslogHost" under SyslogAppender(appender name="cfmgevent"). Add the port number after the colon (":").

localhost:<*Port number*>

Example: Changing the port number to "415"

<appender name="cfmgevent" class="org.apache.log4j.net.SyslogAppender">

<param name="SyslogHost" value="localhost**:415**" />

. . .(omitted) . . .

</appender>

After the files have been modified, there is no need to restart Systemwalker Software Configuration Manager.

Appendix B Corrective Actions If the Site Certificate has Expired

This appendix explains the corrective actions to take when the site certificate that was created during setup has expired.

B.1 Updating the Expiration Date of a Site Certificate

When the created site certificate expires, you are no longer able to log in to Systemwalker Software Configuration Manager. Use the following procedure to update the expired site certificate.

1. Stop Systemwalker Software Configuration Manager.

   [Windows]

   ```
   <Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_stop
   ```

   [Linux]

   ```
   /opt/FJSVcfmgm/bin/swcfmg_stop
   ```

2. Create SSL Server Certificates.

   Follow the procedure explained in "6.2.1.4.1 Creating SSL Server Certificates" to create an SSL server certificate.

3. Update an SSL Communication Environment.

   Use the following command to update an SSL communication environment.

   [Windows]

   ```
   <Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin
   \swcfmg_sslcert_update
   ```

   [Linux]

   ```
   /opt/FJSVcfmgm/bin/swcfmg_sslcert_update
   ```

4. Start the Systemwalker Software Configuration Manager Admin Server.

   [Windows]

   ```
   <Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_start
   ```

   [Linux]

   ```
   /opt/FJSVcfmgm/bin/swcfmg_start
   ```