FUJITSU

FUJITSU Software Systemwalker Software Configuration Manager

Installation Guide

Windows/Linux

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Preface

Purpose of this Document

This document explains how to install and uninstall Systemwalker Software Configuration Manager.

Intended Readers

This document is intended for those who want to install or uninstall Systemwalker Software Configuration Manager.

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

- Basic knowledge of the operating system being used

Structure of this Document

The structure of this document is as follows:

Chapter 1 Operation Design

This chapter explains the operation design of Systemwalker Software Configuration Manager.

Chapter 2 Installation

This chapter explains the installation procedure for Systemwalker Software Configuration Manager.

Chapter 3 Setup

This chapter explains the setup procedure for Systemwalker Software Configuration Manager.

Chapter 4 Setup Cancellation

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

Chapter 5 Uninstallation

This chapter explains the uninstallation procedure for Systemwalker Software Configuration Manager.

Appendix A Port Number List

This section provides a list of the port numbers used with Systemwalker Software Configuration Manager.

Appendix B Settings for Using Business Servers/Linkage Servers Using Systemwalker Software Configuration Manager V15.4.0 or Earlier

This appendix explains the usage procedure for the business server and linkage server of Systemwalker Software Configuration Manager V15.4.0 or earlier.

Appendix C Corrective Actions If the Site Certificate has Expired

This section explains the configuration procedure when the site certificate created for setup has expired.

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

Official name	Abbreviation	
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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Chapter 1 Operation Design

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

1.1 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.

1.2 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

Attribute name	Value	Remarks
		- Tenant administrator: tenant_admin - Tenant user: tenant_user

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
  - tenant_admin
  - tenant_user

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

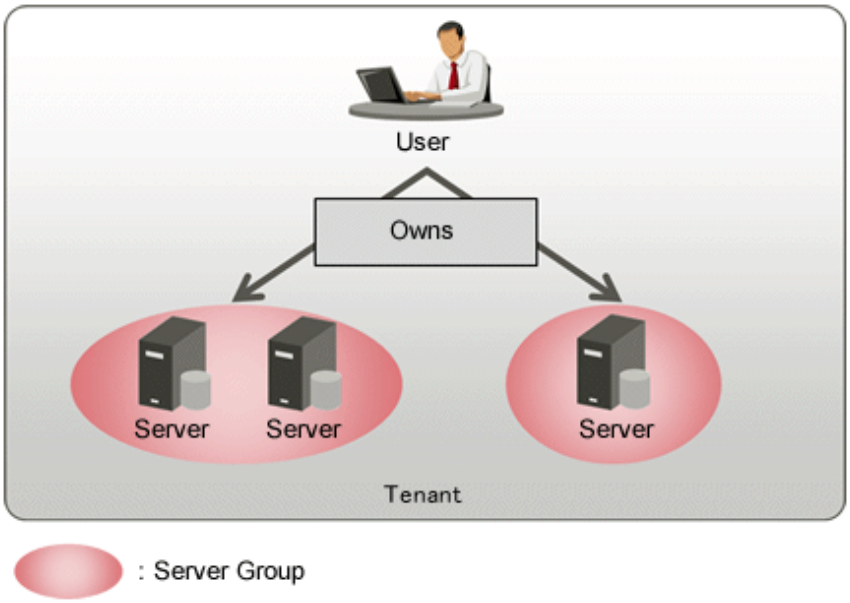
If linked to ServerView Resource Orchestrator, then use it to manage user information - refer to the following manual for details.

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

1.3 Designing Tenants, Users, Server Groups and Servers

This section explains how to design tenants, users, server groups, and servers.

Figure 1.1 Tenant/user/server group/server configuration



A tenant is a unit of management for segmenting and isolating the management and operation of resources, based on an organization or business.

Tenants are comprised of the following three resources:

- Server
- Server group
- User (tenant administrator, tenant user)

Servers in a tenant are grouped according to the system operated by the business using the server group. Users belonging to a tenant are managed collectively on the server for each server group. Tenant users can manage servers within the server group to which they belong.

Decide on the configuration of tenants and server groups according to the following:

Points to note when deciding on the configuration of tenants

- Zero or more users (tenant users or tenant administrators) can belong to a tenant, but each user (tenant user or tenant administrator) can belong to only one tenant.
- Multiple server groups can belong to a tenant, but each server group can belong to only one tenant.

Points to note when deciding on the configuration of server groups

- Multiple servers can belong to a server group, but each server can belong to only one server group.
- A server group cannot belong to multiple tenants.
- Select one user from the tenant administrators or tenant users as the server group owner. A user can own multiple server groups.

1.3.1 Linking to Server Management Software

Systemwalker Software Configuration Manager can manage the following resources managed by ServerView Resource Orchestrator or OpenStack server management software as server groups or servers by operating in coordination with the server management software. This enables management of patches, software parameters, and software configuration information for servers managed by server management software. For the procedure for linking to server management software, refer to "3.10 Setting up Related Software".

Server management software	Server group	Server
ServerView Resource Orchestrator	L-Platform	L-Server

Server management software	Server group	Server
OpenStack	Stack	Instance

In Systemwalker Software Configuration Manager, the scope of the server groups and servers that are managed by the same server management software is called a site. It is possible to manage server groups and servers in the following three sites:

- ServerView Resource Orchestrator

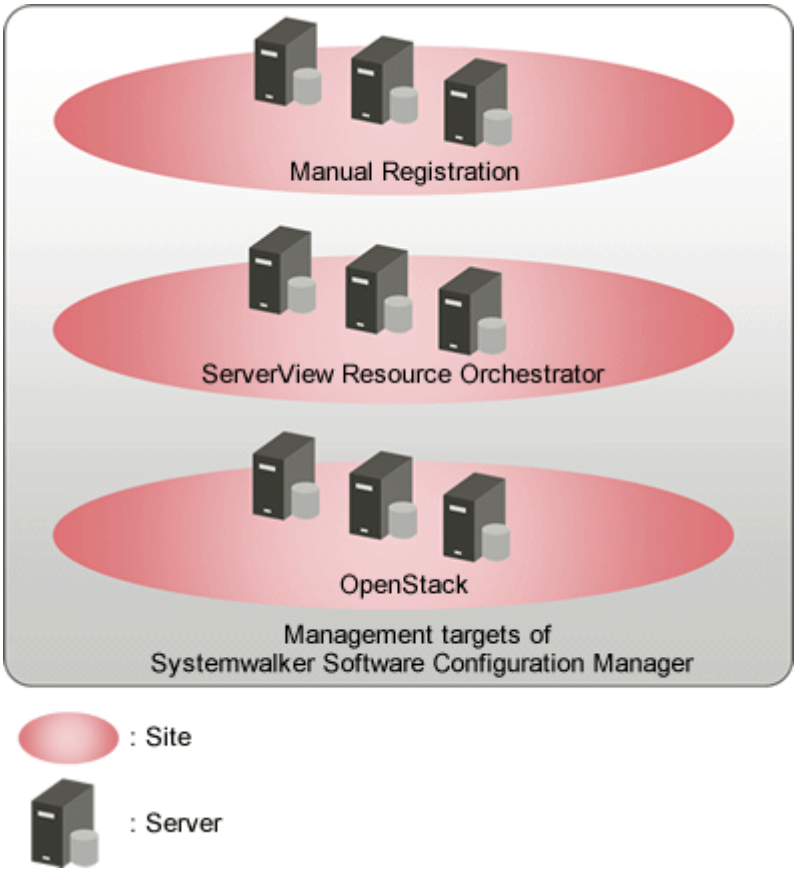
  Server groups and servers managed using ServerView Resource Orchestrator

- OpenStack

  Server groups and servers managed using OpenStack

- Manual registration

  Server groups and servers that are not managed using ServerView Resource Orchestrator or OpenStack. They are registered using the command for defining environments for this product.



Servers group/server categories

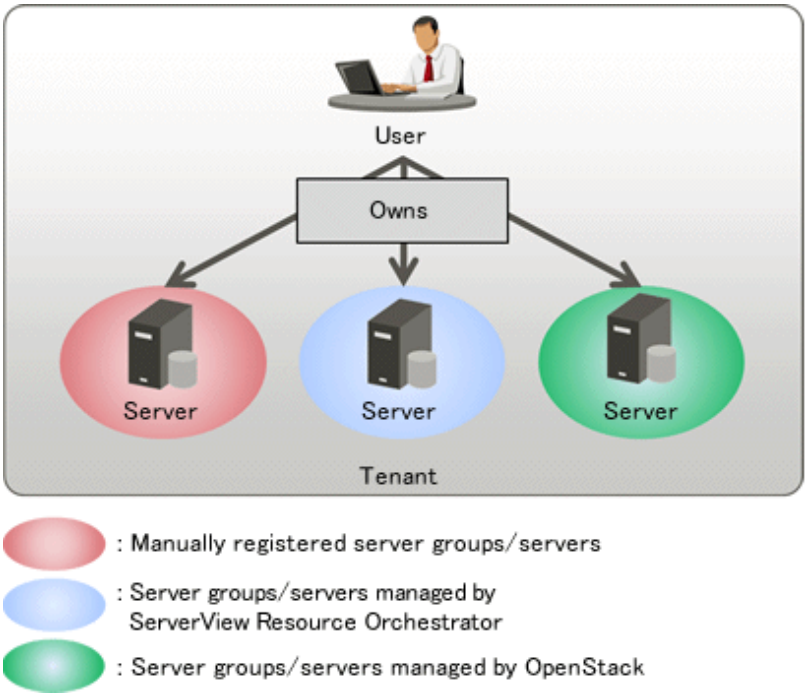
The server groups and servers of Systemwalker Software Configuration Manager managed by each site are categorized into the following types. For how to manage the server groups and servers in each site, refer to "Server Group Management" and "Server Management" in the Operation Guide.

- Manually registered server groups/servers
- Server groups and servers managed using ServerView Resource Orchestrator
- OpenStack server groups/servers

Decide the configuration of tenants, server groups, and servers keeping the following points in mind.

- Server groups and servers in different sites can be managed in the same tenant.
- The same user can own server groups in different sites.

- A server group and all servers that belong to that server group must be in the same site.



1.3.1.1 Designing when Linked to ServerView Resource Orchestrator

This section explains design when the management target for this product is servers deployed on ServerView Resource Orchestrator, and this product is linked to ServerView Resource Orchestrator.

To link to ServerView Resource Orchestrator, install the admin server of this product on the same server as the admin server of ServerView Resource Orchestrator.

1.3.1.2 Design when Linking to OpenStack

This section explains design when the management target for this product is servers deployed on OpenStack, and this product is linked to OpenStack.

To link to OpenStack, first install the admin server of this product separately from the admin server of OpenStack, and then configure the network that allows communication between OpenStack admin server and the deployed admin server.

Network configuration

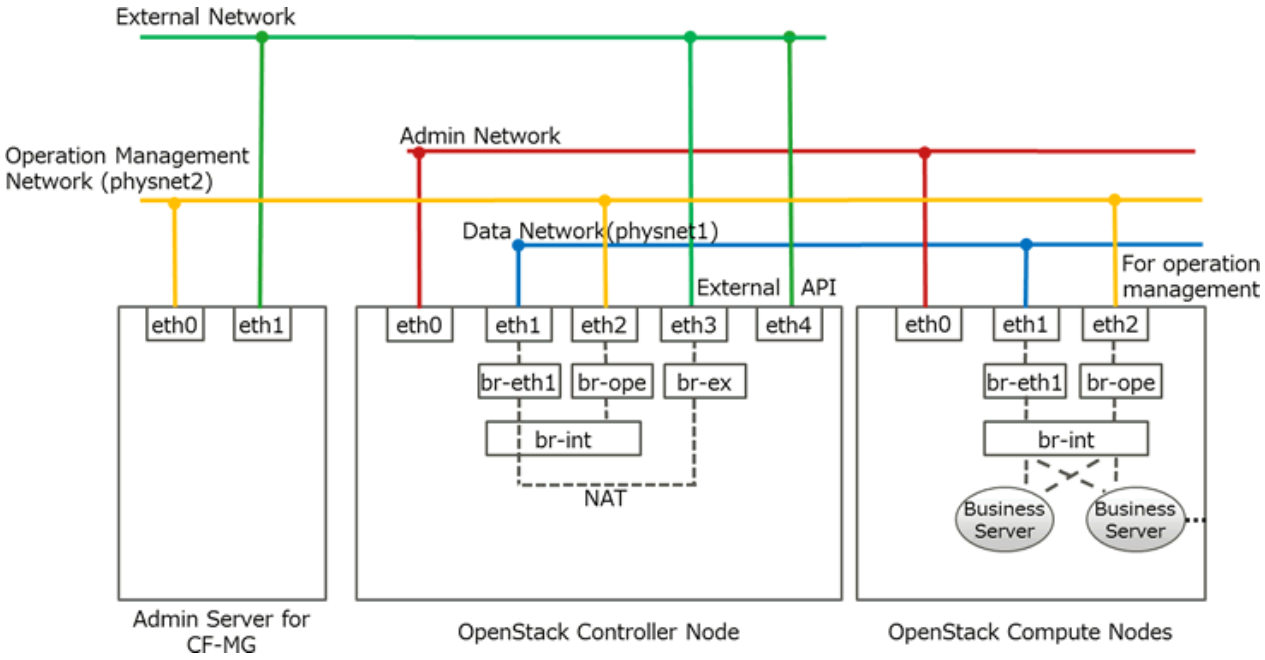
In order to make OpenStack server groups and servers the management target of this product, an environment for performing communications with following OpenStack API services is necessary.

- Keystone service
- Nova service
- Heat service

Connect the admin server of this product to the external OpenStack network so that the admin server of this product can communicate with the above API services.

In addition, to make the servers deployed on OpenStack the target of patch management, parameter management, and configuration management, install the business server of this product on the deployed servers, and then configure the environment so that the admin server and business servers of this product can communicate. Install the NIC for operation management on the controller node and the computing node and then connect it to the operation management network so the admin server and business servers of this product can communicate. On the controller node and the computing node, set a virtual switch for communication between the admin server and business servers of this product.

An example of the network configuration with an admin network and an operation management network configured is shown below.



In this configuration, one NIC is connected to the external network of OpenStack so the admin server of this product can communicate with OpenStack API services. In addition, the NIC for operation management is installed on the controller node and the computing node, and connected to the operation management network so the admin server of this product can communicate with the business servers. On the controller node and the computing node, Open vSwitch is configured for enabling communication with business servers.

Note

- Separate the network for communication between the admin server and business servers of this product from external networks and data networks in order to avoid affecting business traffic.
- For security, configure the firewall correctly to prevent the business servers of this product from being accessed from external networks and data networks.

Chapter 2 Installation

This chapter explains how to install Systemwalker Software Configuration Manager.

2.1 Pre-installation Notes

Perform the following tasks before installing this product.

2.1.1 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.

2.1.2 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.

2.1.3 Creating Linkage Servers (Repository Servers)

To manage OS patches, create repository servers.

Refer to the operating system manuals for information on how to install and set up repository servers.

- Managing Windows patches
  - Windows Server Update Services (WSUS)
- Managing Linux patches
  - Yellowdog Updater Modified (yum) repository

2.1.4 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 $ \ " = | [ ] : * ; + , < > ? /.

2.1.5 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.

2.2 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.

2.2.1 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

Checking the required software and settings

The single sign-on environment must have been built - refer to "2.1.4 Building a Single Sign-On Environment" for details.

To collect patch management and software information on the admin server, the following software and settings are required on the admin server:

- Register the admin server with Windows Server Update Services (WSUS)

  Refer to "3.10.1 Settings for Linking to ServerView Resource Orchestrator" for details.

- Linux patch management
  - Set up the Yellowdog Updater Modified (yum) repository to be looked up

    Refer to the yum manuals for details.

- Collecting patch management and software information for Fujitsu middleware
  - Install the UpdateAdvisor (middleware)

    Refer to the UpdateAdvisor (middleware) manuals for information on the installation method.

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]

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", "ja_JP.SJIS" or "ja_JP.WINDOWS-31J". These character codes are not supported.

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]

Install the following software which attached operating system.

Install them referring to operating system manuals.

- elfutils package

  Red Hat Enterprise Linux 5.2 or earlier

  elfutils-libelf-0.125-3.el5.i386.rpm (*1)

  Red Hat Enterprise Linux 5.3 or later

  elfutils-libelf-0.137-3.el5.i386.rpm (*1)

  Red Hat Enterprise Linux 6.0 or later

  elfutils-libelf-0.148-1.el6.i686.rpm (*1)

  *1: Install 32-bit version of elfutils package even if Linux operating system is 64-bit version.

For Red Hat Enterprise Linux 5, also install the software listed below, which is distributed with the operating system (refer to the operating system manual before installing).

Red Hat Enterprise Linux 5 (for x86)

- apr package (32-bit version)
- apr-util package (32-bit version)
- glibc package (32-bit version)
- libtermcap package (32-bit version)
- libxml2 package (32-bit version)
- libXp package (32-bit version)
- libxslt package (32-bit version)
- net-snmp package (32-bit version)

- net-snmp-utils package (32-bit version)
- postgresql-libs package (32-bit version)
- readline package (32-bit version)
- redhat-lsb package (32-bit version)
- sysstat package (32-bit version)
- zlib package (32-bit version)

Red Hat Enterprise Linux 5 (for Intel64)

- apr package (32-bit version)
- apr-util package (32-bit version)
- glibc package (32-bit version)
- libtermcap package (32-bit version)
- libxml2 package (32-bit version)
- libXp package (32-bit version)
- libxslt package (32-bit version)
- net-snmp package (64-bit version)
- net-snmp-utils package (64-bit version)
- postgresql-libs package (32-bit version)
- readline package (32-bit version)
- redhat-lsb package (64-bit version)
- sysstat package (64-bit version)
- zlib package (32-bit version)

For Red Hat Enterprise Linux 6.0 or later, also install the software listed below, which is distributed with the operating system (refer to the operating system manual before installing).

Red Hat Enterprise Linux 6.0 or later (for x86)

- alsa-lib package (32-bit version)
- apr package (32-bit version)
- apr-util package (32-bit version)
- cloog-ppl package (32-bit version)
- compat-expat1 package (32-bit version)
- compat-readline5 package (32-bit version)
- compat-libtermcap package (32-bit version)
- compat-openldap package (32-bit version)
- cpp package (32-bit version)
- cyrus-sasl-lib package (32-bit version)
- db4 package (32-bit version)
- expat package (32-bit version)
- file package (32-bit version)

- gcc package (32-bit version)
- gcc-c++ package (32-bit version)
- gdb package (32-bit version)
- glibc-devel package (32-bit version)
- glibc-headers package (32-bit version)
- glibc package (32-bit version)
- kernel-headers package (32-bit version)
- keyutils-libs package (32-bit version)
- krb5-libs package (32-bit version)
- libattr package (32-bit version)
- libcap package (32-bit version)
- libcom_err package (32-bit version)
- libgcc package (32-bit version)
- libICE package (32-bit version)
- libselinux package (32-bit version)
- libSM package (32-bit version)
- libX11 package (32-bit version)
- libX11-common package
- libXau package (32-bit version)
- libXext package (32-bit version)
- libXi package (32-bit version)
- libXp package (32-bit version)
- libXrender package (32-bit version)
- libXt package (32-bit version)
- libXtst package (32-bit version)
- libgomp package (32-bit version)
- libstdc++-devel package (32-bit version)
- libstdc++ package (32-bit version)
- libtool-ltdl package (32-bit version)
- libuuid package (32-bit version)
- libxcb package (32-bit version)
- lksctp-tools package (32-bit version)
- make package (32-bit version)
- mpfr package (32-bit version)
- net-snmp package (32-bit version)
- net-snmp-utils package (32-bit version)
- nspr package (32-bit version)
- nss package (32-bit version)

- nss-softokn-freebl package (32-bit version)
- nss-util package (32-bit version)
- openssl package (32-bit version)
- openssl098e package (32-bit version)
- perl package (32-bit version)
- perl-Module-Pluggable package (32-bit version)
- perl-Pod-Escapes package (32-bit version)
- perl-Pod-Simple package (32-bit version)
- perl-libs package (32-bit version)
- perl-version package (32-bit version)
- ppl package (32-bit version)
- redhat-lsb package (32-bit version)
- sqlite package (32-bit version)
- strace package (32-bit version)
- sysstat package (32-bit version)
- tcsh package (32-bit version)
- unixODBC package (32-bit version)
- zlib package (32-bit version)

Red Hat Enterprise Linux 6.0 or later (for Intel64)

- alsa-lib package (32-bit version)
- apr package (32-bit version)
- apr-util package (32-bit version)
- audit-libs package (32-bit version)
- cloog-ppl package (64-bit version)
- compat-expat1 package (32-bit version)
- compat-readline5 package (32-bit version)
- compat-libtermcap package (32-bit version)
- compat-openldap package (32-bit version)
- cpp package (64-bit version)
- cracklib package (32-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)
- glibc package (32-bit version)
- glibc-devel package (32-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 (32-bit version)
- libSM package (32-bit version)
- libX11 package (32-bit version)
- libX11-common package
- libXau package (32-bit version)
- libXext package (32-bit version)
- libXi package (32-bit version)
- libXp package (32-bit version)
- libXrender package (32-bit version)
- libXt package (32-bit version)
- libXtst package (32-bit version)
- libattr package (32-bit version)
- libcap package (32-bit version)
- libcom_err 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 (32-bit version)
- libuuid package (32-bit version)
- libxcb package (32-bit version)
- lksctp-tools package (32-bit version)
- make package (64-bit version)
- mpfr package (64-bit version)
- ncurses-libs package (32-bit version)
- net-snmp package (64-bit version)
- net-snmp-utils package (64-bit version)
- nspr package (64-bit version)
- nss package (64-bit version)
- nss-softokn-freebl package (32-bit version)
- nss-util package (64-bit version)
- openssl package (32-bit version)
- openssl098e package (32-bit version)

- pam 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)
- readline package (32-bit version)
- redhat-lsb package (64-bit version)
- sqlite package (32-bit version)
- sysstat package (64-bit version)
- tcsh package (64-bit version)
- unixODBC package (32-bit version)
- zlib package (32-bit version)

2.2.2 Tasks Required before Installing on the Admin Server

2.2.2.1 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\rcxmgrctlstop
```

[Linux]

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

2.2.2.2 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
```

2.2.2.3 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	1578	Addition

Settings dependent on the parameter type

Set the parameters as below, depending on the "Type" shown in the table 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 above 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 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 /etc/sysctl.conf file. Edit the file as shown in the following example:

Example

```
kernel.sem = 512 47933 50 2399
kernel.msgmnb = 114432
kernel.msgmni = 1594
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:

```
# /bin/cat /etc/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.

```
# /sbin/sysctl -p /etc/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 = 1594
kernel.msgmax = 16384
kernel.shmmax = 2684354560
kernel.shmall = 16777216
kernel.shmmni = 4209
...
  (omitted)
...
```

2.2.2.4 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 syslog.conf or 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 syslog.conf or rsyslog.conf has already been edited, add the following settings to syslog.conf or rsyslog.conf.

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

- "/etc/syslog.conf" (for RHEL5)

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

- "/etc/rsyslog.conf" (for RHEL6)

  <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/sysconfig/syslog" (for RHEL5)

  Add the "-r" option to SYSLOGD_OPTIONS.

  Example:

  ```
  SYSLOGD_OPTIONS="-r -m 0"
  ```

- "/etc/rsyslog.conf" (for RHEL6)

  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 syslogd or rsyslogd

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

Refer to the syslogd manuals for information on syslogd. Refer to the rsyslogd manuals for information on rsyslogd.

- "syslogd" (for RHEL5)

  ```
  >/etc/init.d/syslog stop
  >/etc/init.d/syslog start
  ```

- "rsyslogd" (for RHEL6)

  ```
  >/etc/init.d/rsyslog stop
  >/etc/init.d/rsyslog start
  ```

2.2.3 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.

2.2.3.1 Installation in Windows

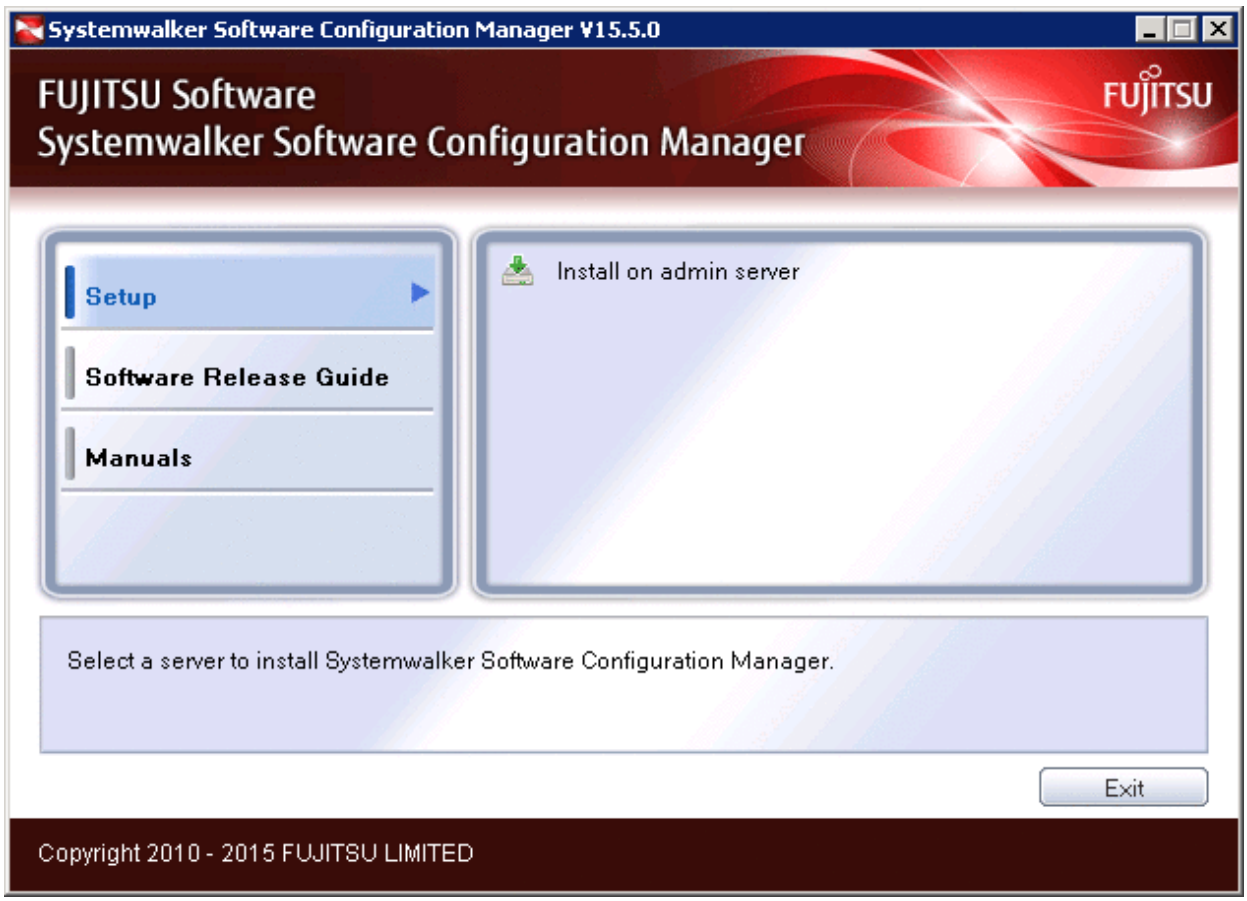
This section explains how to install Systemwalker Software Configuration Manager on a Windows admin server.

Setting value	Meaning of the setting value	Default value
Installation directory	Installation directory for Systemwalker Software Configuration Manager	C:\Program Files (x86)\Fujitsu\SWCFMG

1. Log in with administrator privileges.
2. Insert the DVD-ROM labeled "Systemwalker Software Configuration Manager Media Pack V15.5.0 DISC1 (Admin Servers Program)" in the DVD-ROM drive.

   The following window will be displayed:

Select **Install on admin server**.

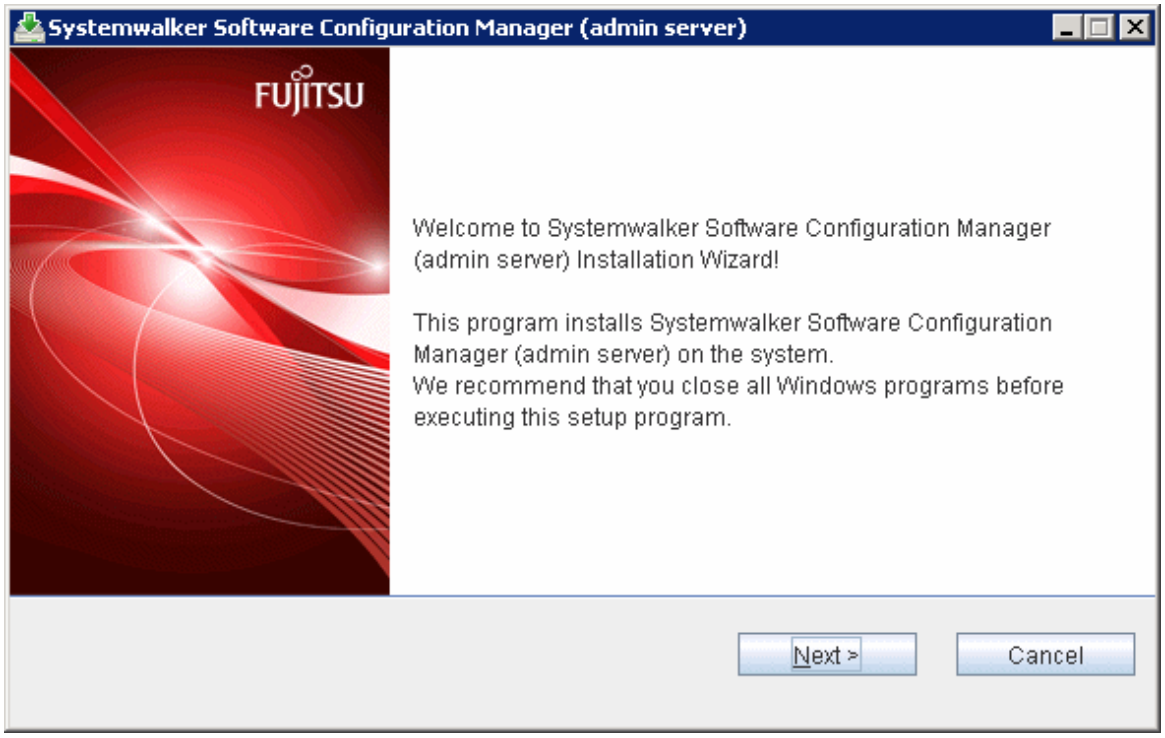


Note

- If this window is not displayed automatically, start the installer manually by executing "swsetup.exe" on the DVD-ROM.
- When using Windows Server 2008 or later, run this command as an administrator.

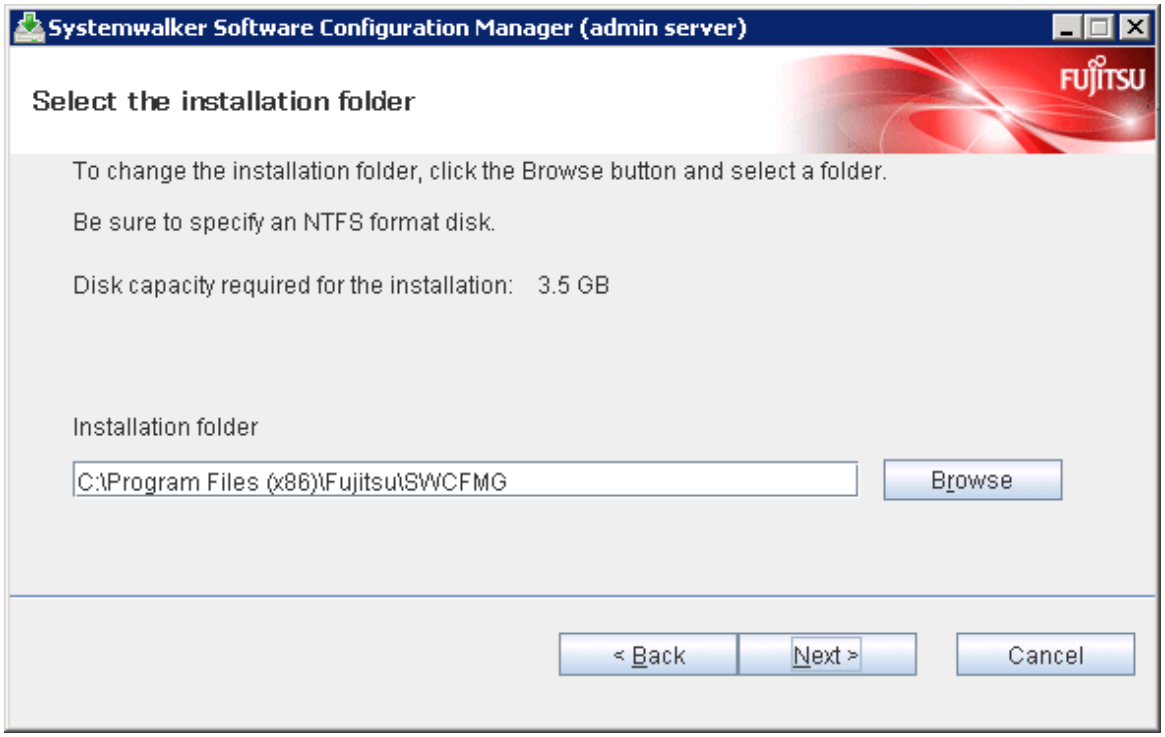
3. A welcome window will be displayed.

   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 ("_").

  You can specify a directory under *<system drive>*\Program Files or *<system drive>*\Program Files (x86).
- 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

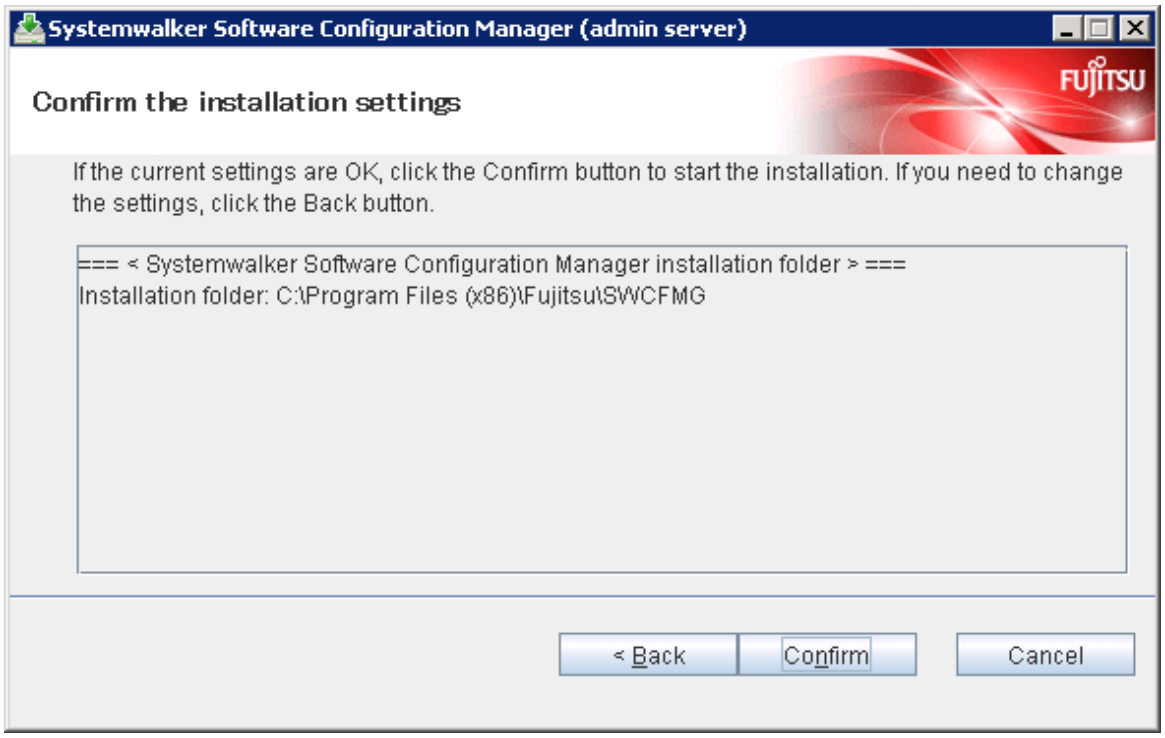
    <*Specified installation directory*>\APS

    <*Specified installation directory*>\CMDB

    <*Specified installation directory*>\ PGSQL

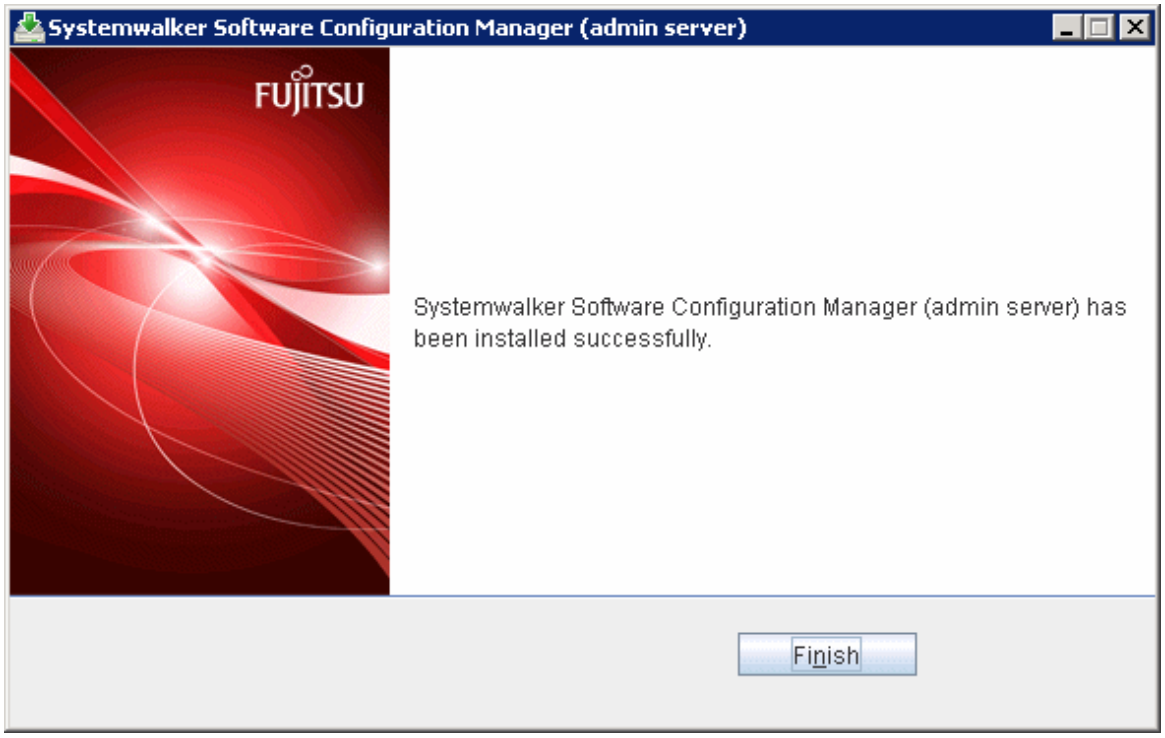
5. The **Confirm the installation settings** window will be displayed.

   Check the settings, and then click the **Confirm** button to start the installation.



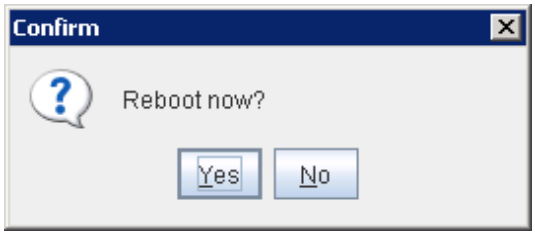
6. Upon completion, the window below will be displayed.

   Click the **Finish** button.



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

   Click the Yes button to restart the system.



2.2.3.2 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 V15.5.0 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
```

Note

If the DVD-ROM has been mounted automatically by the automatic mounting daemon (autofs), the swsetup command will fail to execute because the mount options will be set to "noexec".

In this case, use the "mount" command to remount the DVD-ROM appropriately before executing the installation.

The mount options for the DVD-ROM that has been mounted can be checked by executing the "mount" command without any parameters.

4. Start installation.

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

```
================================================================================
               Systemwalker Software Configuration Manager Setup
                                 V15.5.0
                       Copyright 2010-2015 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
                                 V15.5.0
                       Copyright 2010-2015 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.
```

2.2.4 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]

- Character encoding

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

2.3 Installing on Business Servers

This section explains how to install the product on business servers.

2.3.1 Points to Note before Installing on Business Servers

This section explains points to note before installing the product on business servers.

Checking the required software and settings

The following software and settings are required on business servers separately for each function used:

- Windows patch management
  - Register the business server with Windows Server Update Services (WSUS)

  Refer to "3.10.1 Settings for Linking to ServerView Resource Orchestrator" for information on the registration method.
- Linux patch management
  - Set up the Yellowdog Updater Modified (yum) repository to be looked up

    Refer to the yum manuals for information on the setup method.
- Collecting patch management and software information for Fujitsu middleware
  - Install the UpdateAdvisor (middleware)

    Refer to the UpdateAdvisor (middleware) manuals for information on the installation method.

Point

Managing a server deployed using ServerView Resource Orchestrator

To collect patch management information for Linux operating systems, or patch management and software information for Fujitsu middleware, it is recommended that the installations and settings above be performed on the L-Server for the infrastructure administrator before deployment.

Mandatory software for Linux

Install the software shown below, which is provided with the operating system (refer to the operating system manual before installing it).

- redhat-lsb packages
- unzip package

For Red Hat Enterprise Linux 6 (for Intel64) or Red Hat Enterprise Linux 7 (for Intel64), install the 32-bit versions of the software listed below, which is distributed with the operating system. Refer to the operating system manual for the installation procedure.

- expat package
- glibc package
- libattr package
- libcap package
- libgcc package
- libstdc++ package
- nss-softokn-freebl package
- zlib package

The functions installed

The following functions are installed as a result of installing a Systemwalker Software Configuration Manager agent:

- File transfer infrastructure

2.3.2 Tasks Required before Installing on Business Servers

This section explains the tasks that need to be performed before installation.

2.3.2.1 Tuning System Parameters [Linux] [Solaris]

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 and Solaris manuals and other documents for details.

2.3.2.1.1 Setting Procedure for Linux

Tuning values for system parameters

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

- 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	1	Maximum
para2	Number of semaphores for the entire system	2	Addition
para3	Maximum number of operators per semaphore call	1	Maximum
para4	Number of semaphore operators for the entire system	2	Addition

- Message queues

Parameter	Description	Value	Type
kernel.msgmnb	Maximum number of messages that can be held in a single message queue	106496	Maximum
kernel.msgmni	Maximum number of message queue IDs	1024	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
. . .
  (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 5/6]

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

[Red Hat Enterprise Linux 7]

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

Example

```
kernel.sem = 250 32002 32 130
kernel.msgmnb = 106496
kernel.msgmni = 1040
```

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

   [Red Hat Enterprise Linux 5/6]

   ```
   # /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 5/6]

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

     [Red Hat Enterprise Linux 7]

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

     *: 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 = 250 32002 32 130
   . . .
   kernel.msgmnb = 106496
   kernel.msgmni = 1040
   . . .
     (omitted)
   . . .
   ```

2.3.2.1.2 Setting Procedure for Solaris

Start Systemwalker Software Configuration Manager under the following projects:

- system project

  A project on which the daemon with the OS initial settings is operating

- user.root project

  A project on which there is a process operating using the root privileges

Tuning values for system parameters

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

- Semaphores

Parameter	Description	Value	Type	Privileges
project.max-sem-ids	Number of emaphore identifiers	1024	Addition	Privilege level

- Message queues

Parameter	Description	Value	Type	Privileges
process.max-msg-qbytes	Maximum bytes of queues	106496	Maximum	Privilege level
project.max-msg-ids	Number of message queue identifiers	1024	Addition	Privilege level
process.max-msg-messages	Maximum number of messages in a message queue	10650	Addition	Privilege level

- File descriptor

Parameter	Description	Value	Type	Privileges
process.max-file-descriptor	Maximum number of file descriptors	2816	Maximum	Privilege level

Note

For the privilege level, specify "privileged" for /etc/project.

Tuning procedure

Use the following procedure to perform tuning tasks:

1. Referring to the following example, check the current settings for the system parameters shown in the table above.

   #### Example

```
# projects -l
system
projid : 0
comment: ""
users : (none)
groups : (none)
attribs:
user.root
projid : 1
comment: ""
users : root
```

```
groups : root
attribs:
noproject
projid : 2
comment: ""
users : (none)
groups : (none)
attribs:
default
projid : 3
comment: ""
users : (none)
groups : (none)
attribs: <-Check the project for which there is no entry in "attribs"
# newtask -p default
# prctl $$
process: 1000: sh
NAME PRIVILEGE VALUE FLAG ACTION RECIPIENT
.
(omitted)
.
process.max-msg-messages
privileged 8.19K - deny -
system 4.29G max deny -
process.max-msg-qbytes
privileged 64.0KB - deny -
system 16.0EB max deny -
process.max-file-descriptor
basic 256 - deny 1000
privileged 65.5K - deny -
system 2.15G max deny -
project.max-msg-ids
privileged 128 - deny -
system 16.8M max deny -
project.max-sem-ids
privileged 128 - deny -
system 16.8M max deny -
.
(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 /etc/project. Edit the file as shown in the following example:

Example

```
system:0::::project.max-sem-ids=(privileged,640,deny)
;process.max-msg-qbytes=(privileged,106496,deny)
;project.max-msg-ids=(privileged,640,deny)
;process.max-msg-messages=(privileged,19032,deny)
user.root:1:::: project.max-sem-ids=(privileged,640,deny)
;process.max-msg-qbytes=(privileged,106496,deny)
;project.max-msg-ids=(privileged,640,deny)
;process.max-msg-messages=(privileged,19032,deny)
```

Note

- Enter the specified value for each project in a single line.

- Configure the parameter settings for the system and the superuser.

4. To enable the settings above, restart the system.

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

```
# projects -l
```

Example

```
# projects -l
system
        projid : 0
        comment: ""
        users : (none)
        groups : (none)
        attribs: project.max-sem-ids=(privileged,640,deny)
                 process.max-msg-qbytes=(privileged,106496,deny)
                 project.max-msg-ids=(privileged,640,deny)
                 process.max-msg-messages=(privileged,19032,deny)
user.root
        projid : 1
        comment: ""
        users : root
        groups : root
        attribs: project.max-sem-ids=(privileged,640,deny)
                 process.max-msg-qbytes=(privileged,106496,deny)
                 project.max-msg-ids=(privileged,640,deny)
                 process.max-msg-messages=(privileged,19032,deny)
noproject
        projid : 2
        comment: ""
        users : (none)
        groups : (none)
        attribs:
default
        projid : 3
        comment: ""
        users : (none)
        groups : (none)
        attribs:
```

2.3.3 Installing Systemwalker Software Configuration Manager

This section explains how to install the product on business servers.

If necessary, install the product on a Windows, Linux, or Solaris machine.

[Windows]

1. Log in with administrator privileges.

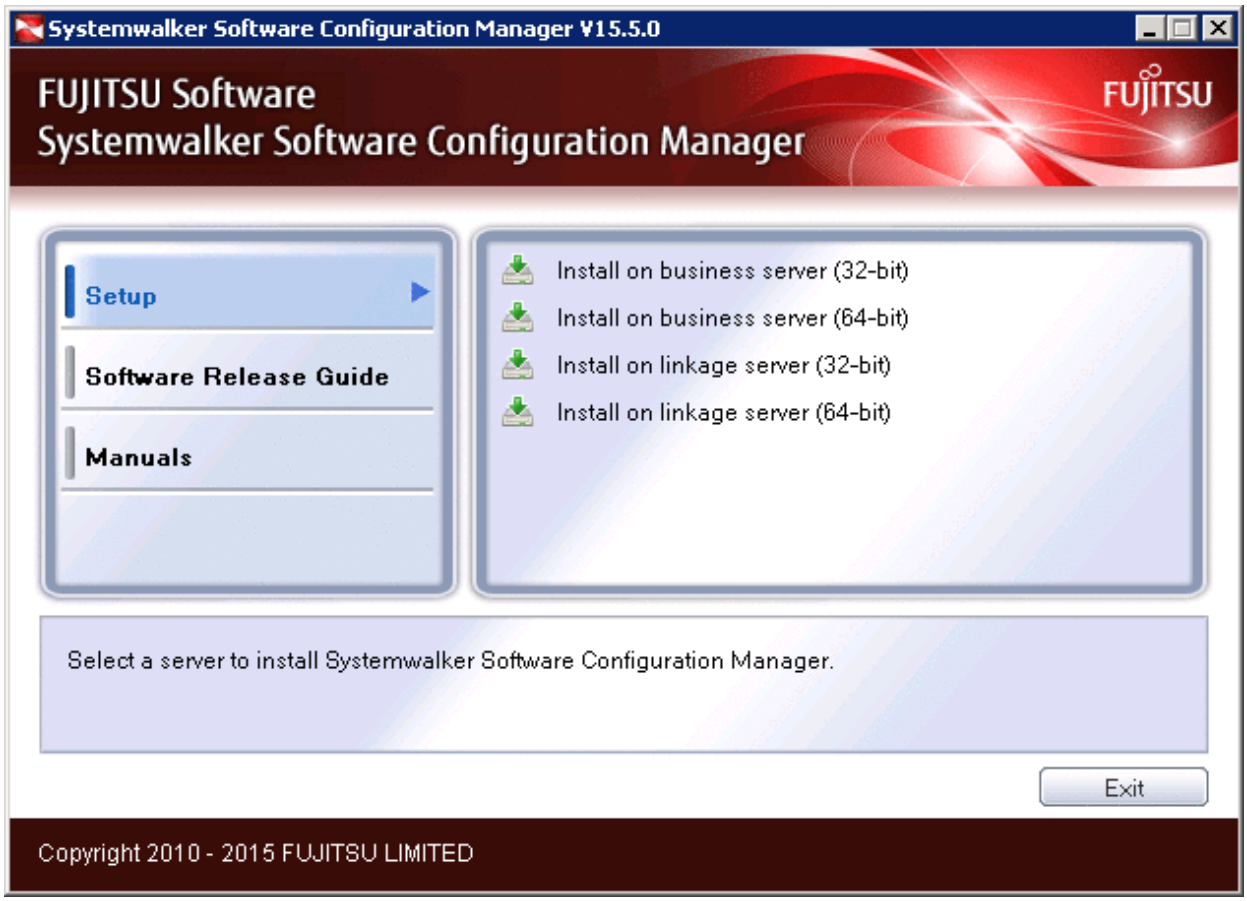
2. Insert the DVD-ROM.

   Insert the DVD-ROM labeled "Systemwalker Software Configuration Manager Media Pack V15.5.0 DISC2 (Linkage Servers/ Business Servers Program)" in the DVD-ROM drive.

   The window below will be displayed

   Select either **Install on business server (32-bit)** or **Install on business server (64-bit)**.

Select either the 32-bit version or the 64-bit version depending on the CPU architecture of the server where the product is to be installed.

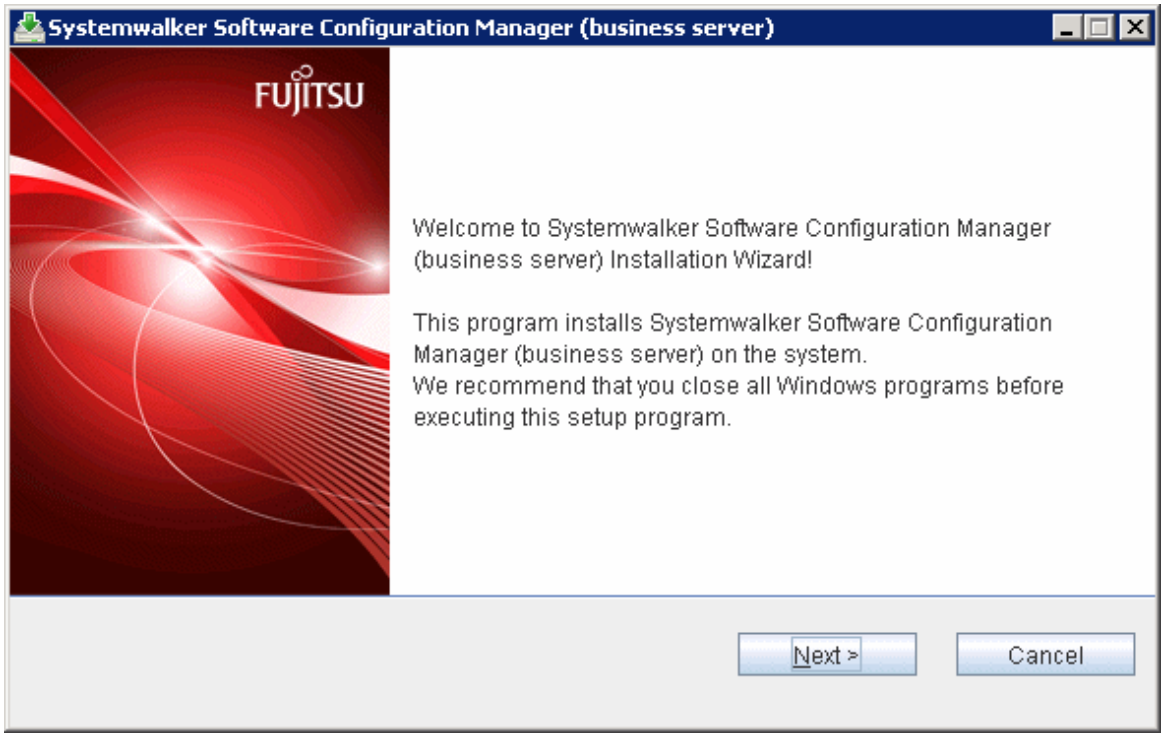


Note

- If this window is not displayed automatically, start the installer manually by executing "swsetup.exe" on the DVD-ROM.
- When using Windows Server 2008 or later, run this command as an administrator.

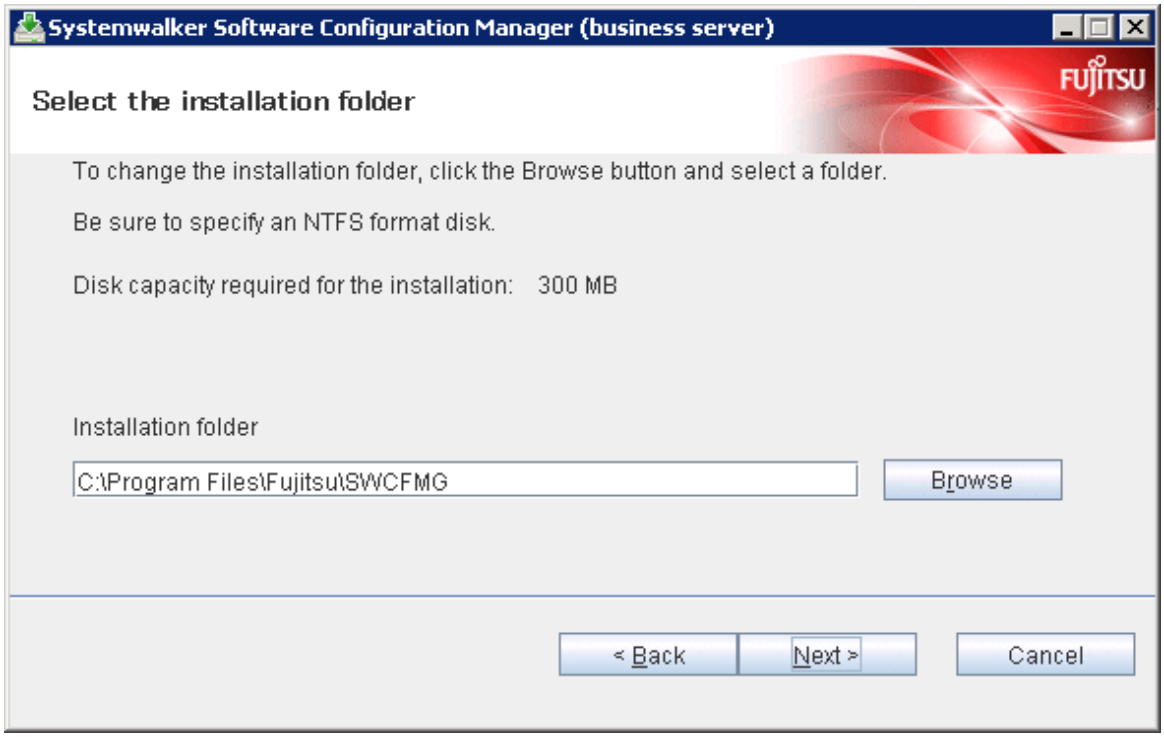
3. A welcome window will be displayed.

   Click the **Next** button.



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

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



Note

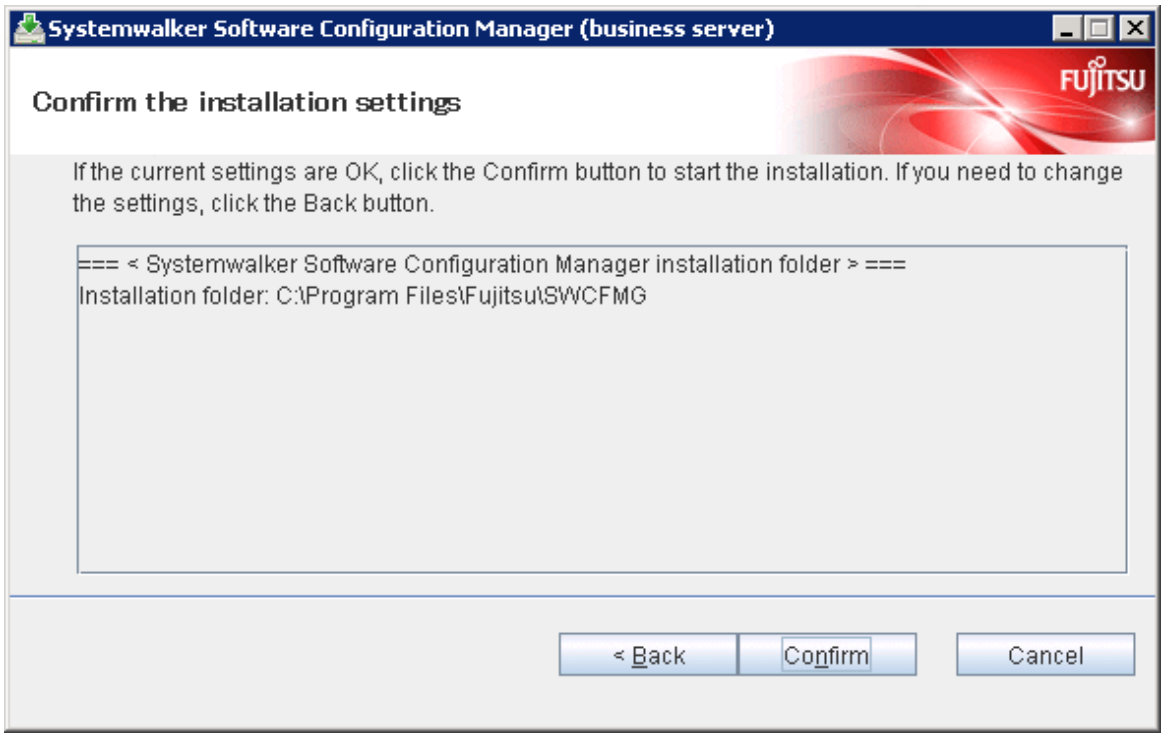
- Specify an NTFS format disk for the installation folder.

- The maximum length of the path to the installation directory is 51 characters.
- Be sure to specify a new folder.
- Relative paths and paths that start with "\\" cannot be specified.
- Only the following characters can be used for the folder name: alphanumeric characters, spaces, hyphens (-), and underscores (_).

  A standard directory under "<System Drive>:\Program Files" or "<System Drive>:\Program Files (x86)" can also be specified.

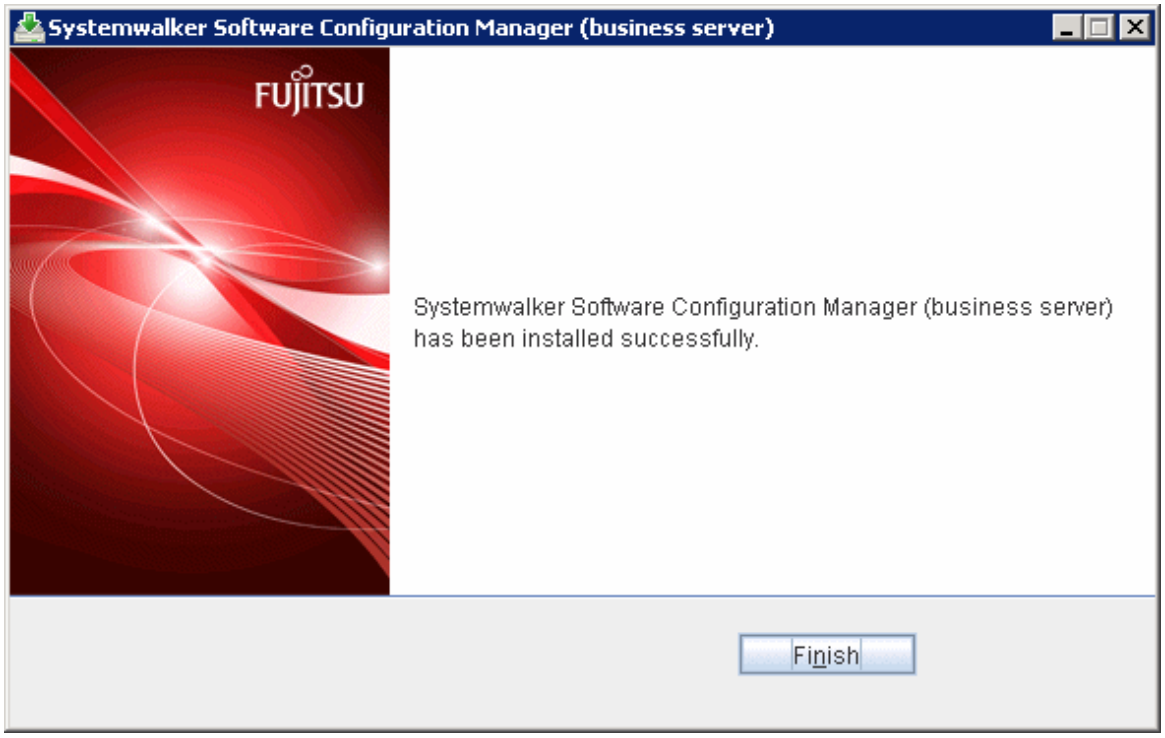
5. The **Confirm the installation settings** window will be displayed.

   Check the settings, and then click the **Confirm** button to start the installation.



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

   Click the **Finish** button.



[Linux]

1. Log in as a superuser on the system.
2. Insert the DVD-ROM.

   Insert the DVD-ROM labeled "Systemwalker Software Configuration Manager Media Pack V15.5.0 DISC2 (Linkage Servers/ Business 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 <DVD-ROM mount point>
# ./swsetup
```

   Note

   If the DVD-ROM has been mounted automatically by the automatic mounting daemon (autofs), the swsetup command will fail to execute because the mount options will be set to "noexec".

   In that case, remount the DVD using the mount command and then perform installation again.

   The mount options for the DVD-ROM that has been mounted can be checked by executing the "mount" command without any parameters.

4. Start installation.

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

```
================================================================================
               Systemwalker Software Configuration Manager Setup
                                V15.5.0
                      Copyright 2010-2015 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.

   Enter "1" or "2", depending on the CPU architecture of the server where the product is to be installed.

```
================================================================================
               Systemwalker Software Configuration Manager Setup
                                V15.5.0
                      Copyright 2010-2015 FUJITSU LIMITED
================================================================================

<< Select the installation target >>

1. Install on business server (32-bit)
2. Install on business server (64-bit)

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

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

```
Preparing installation.
Please wait for a while.
Systemwalker Software Configuration Manager (business server)
Do you want to start install?
[y,n]
=>
```

7. Check the installation directory. The storage directory cannot be changed, so enter "y".

```
=== < Installation directory > ===
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]
=>
```

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 (business server) install completed.
```

[Solaris]

1. Log in to the system as a superuser.

2. Insert the DVD-ROM.

   Insert the DVD-ROM labeled "Systemwalker Software Configuration Manager Media Pack V15.5.0 DISC2 (Linkage Servers/ Business Servers Program)" in the DVD-ROM drive.
   If the DVD-ROM has not been mounted, mount the DVD-ROM by executing the following command:

   Execute the following command to mount the DVD-ROM:

```
# mount -F hsfs -r <DVD-ROM device> <DVD-ROM mount point>
```

3. Start the common installer.

   Run the installation command (swsetup).

```
# cd <DVD-ROM mount point>
# /bin/sh ./swsetup
```

Note

When the DVD-ROM is mounted using the UDF file system, the privileges to execute executable files may be disabled. When the DVD-ROM is mounted using the auto-mounting function or using the mount command without specifying the file system option, the DVD-ROM is mounted using the UDF file system and installation will fail.

In this case, use the "mount" command to remount the DVD-ROM appropriately before executing the installation.

The mount option used for the mounted DVD-ROM can be checked by executing the mount command with the "-v" argument specified.

4. Start installation.

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

```
================================================================================
            Systemwalker Software Configuration Manager Setup
                                V15.5.0
                     Copyright 2010-2015 FUJITSU LIMITED
================================================================================

Welcome to Systemwalker Setup!!
Install Systemwalker Software Configuration Manager for setup.

Press ENTER.
```

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

   Select "Installing on Business Servers". Enter "1".

```
================================================================================
            Systemwalker Software Configuration Manager Setup
                                V15.5.0
                     Copyright 2010-2015 FUJITSU LIMITED
================================================================================

<< Select the installation target >>

1. Install it on the business server

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

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

```
Preparing installation.
Please wait for a while.
Systemwalker Software Configuration Manager (business server)
Do you want to start install?
[y,n]
=>
```

7. Check the destination to install.

```
=== <Installation directory> ===
Enter the program location.
[Enter:/opt]
=>

=== <Installation directory> ===
Enter the configuration file location.
[Enter:/etc/opt]
=>

=== <Installation directory> ===
Enter the work file location.
[Enter:/var/opt]
=>
```

8. Check the installation directory. If the entered value is correct, enter "y". To correct the installation information, enter the number of the item you want to correct.

```
=== < Installation directory > ===
1. Program location:/opt
2. Configuration file location: /etc/opt
3. Work file location: /var/opt
Install the product using these settings? When performing reconfiguration, enter the item
numbers.
[y,q]
=>
```

9. Start installation.

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

```
installing...
```

10. The installation will complete.

    Upon successful completion, the following message will be displayed:

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

2.4 Installing on Linkage Servers

This section explains how to install the product on linkage servers.

2.4.1 Points to Note before Installing on Linkage Servers

This section explains points to note before installing the product on linkage servers.

Conditions required for installing the product on a linkage server

[Windows]

Install a Systemwalker Software Configuration Manager agent on the linkage server (WSUS server).

[Linux]

It is not necessary to install a Systemwalker Software Configuration Manager agent on linkage servers (yum servers), unless you want to use the following function:

- Patch management and collection of software information targeted at linkage servers (yum servers)

Checking the required software and settings

To collect patch management and software information on the linkage server, the following software and settings are required on the linkage server:

- Register the linkage server with Windows Server Update Services (WSUS)

  Refer to "3.10.1 Settings for Linking to ServerView Resource Orchestrator" for details.

- Linux patch management
  - Set up the Yellowdog Updater Modified (yum) repository to be looked up

    Refer to the yum manuals for information on the setup method.

- Collecting patch management and software information for Fujitsu Middleware
  - Install the UpdateAdvisor (middleware)

    Refer to the UpdateAdvisor (middleware) manuals for details.

Mandatory software for Linux

Install the following software distributed with the operating system (refer to the operating system manual before installing):

- redhat-lsb packages

For Red Hat Enterprise Linux 6 (for Intel64), install the 32-bit versions of the software listed below, which is distributed with the operating system (refer to the operating system manual before installing):

- expat package
- glibc package
- libattr package
- libcap package
- libgcc package
- libstdc++ package
- nss-softokn-freebl package
- zlib package

The functions installed

The following functions are installed as a result of installing a Systemwalker Software Configuration Manager agent:

- File transfer infrastructure

2.4.2 Installing Systemwalker Software Configuration Manager

This section explains how to install the product on linkage servers.

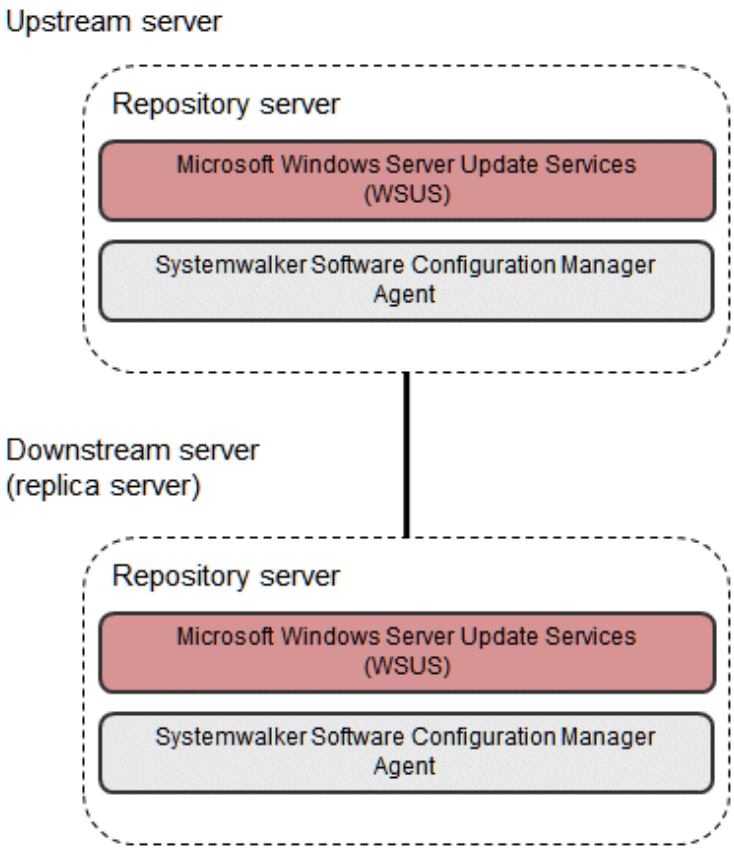
Point

Using multiple WSUS servers

Install a Systemwalker Software Configuration Manager agent on all WSUS servers.

- If WSUS servers have been chained (with upstream servers and downstream servers)

  Install Systemwalker Software Configuration Manager agents on both upstream and downstream servers.

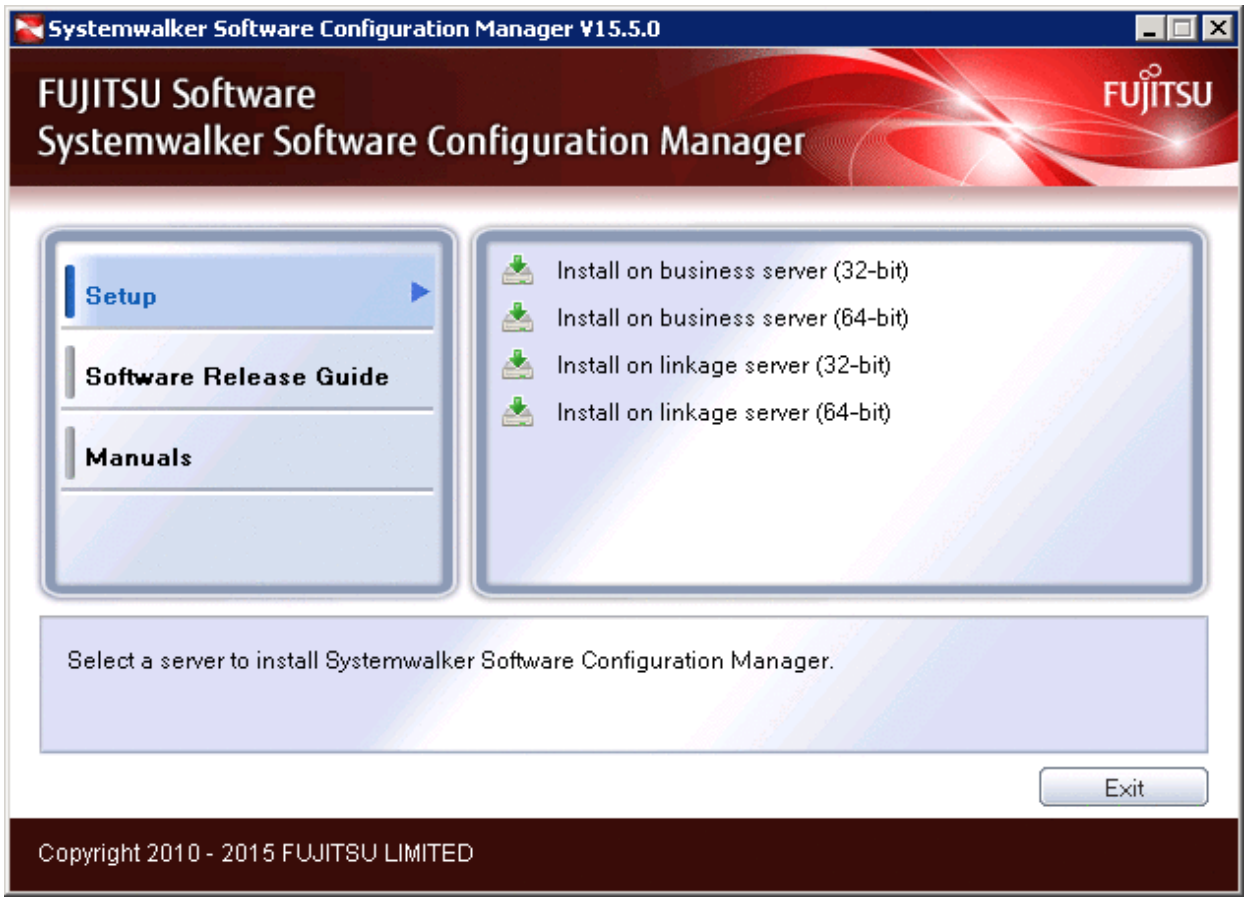


1. Log in with administrator privileges.
2. Insert the DVD-ROM labeled "Systemwalker Software Configuration Manager Media Pack V15.5.0 DISC2 (Linkage Servers/ Business Servers Program)" in the DVD-ROM drive.

   The following window will be displayed:

   Select either **Install on linkage server (32-bit)** or **Install on linkage server (64-bit)**.

Select either the 32-bit version or the 64-bit version depending on the CPU architecture of the server where the product is to be installed.

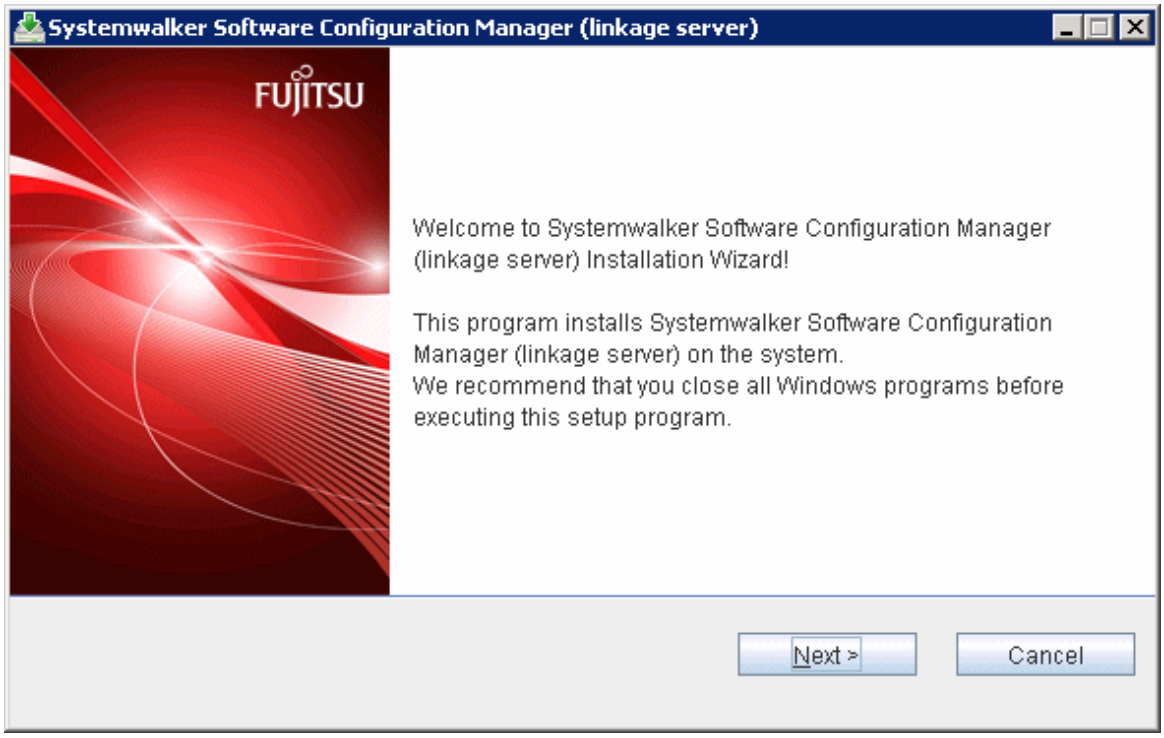


Note

- If this window is not displayed automatically, start the installer manually by executing "swsetup.exe" on the DVD-ROM.
- When using Windows Server 2008 or later, run this command as an administrator.

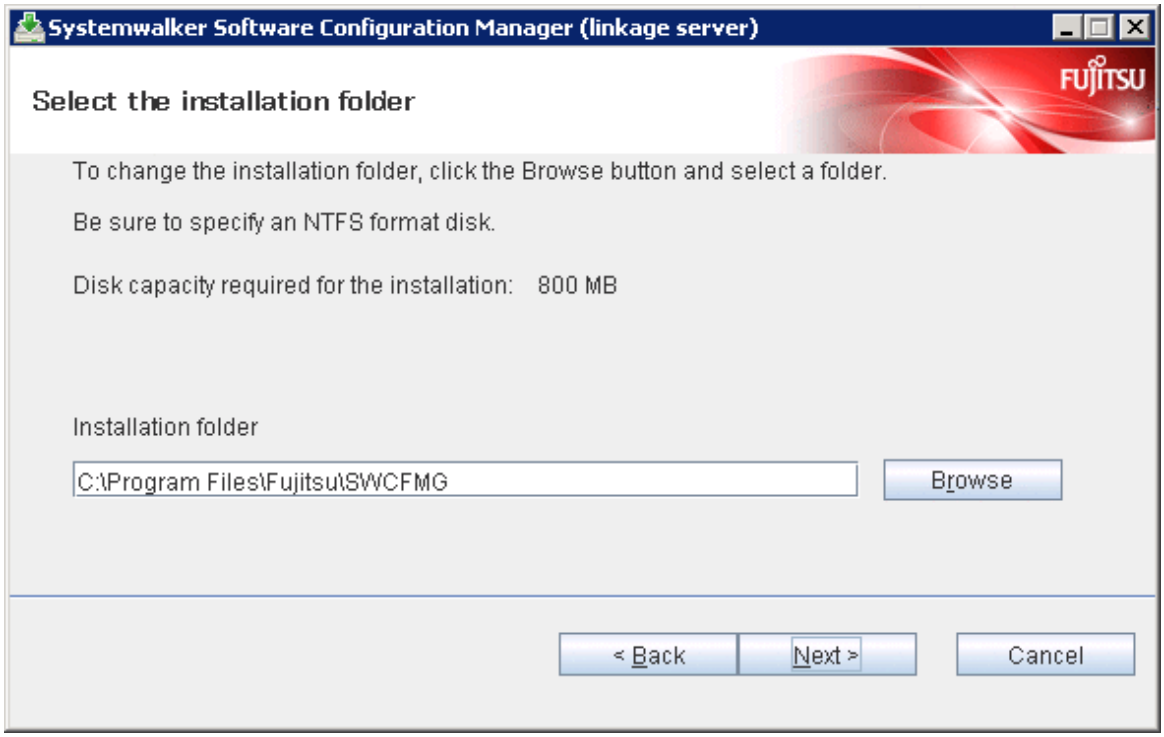
3. A welcome window will be displayed.

   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

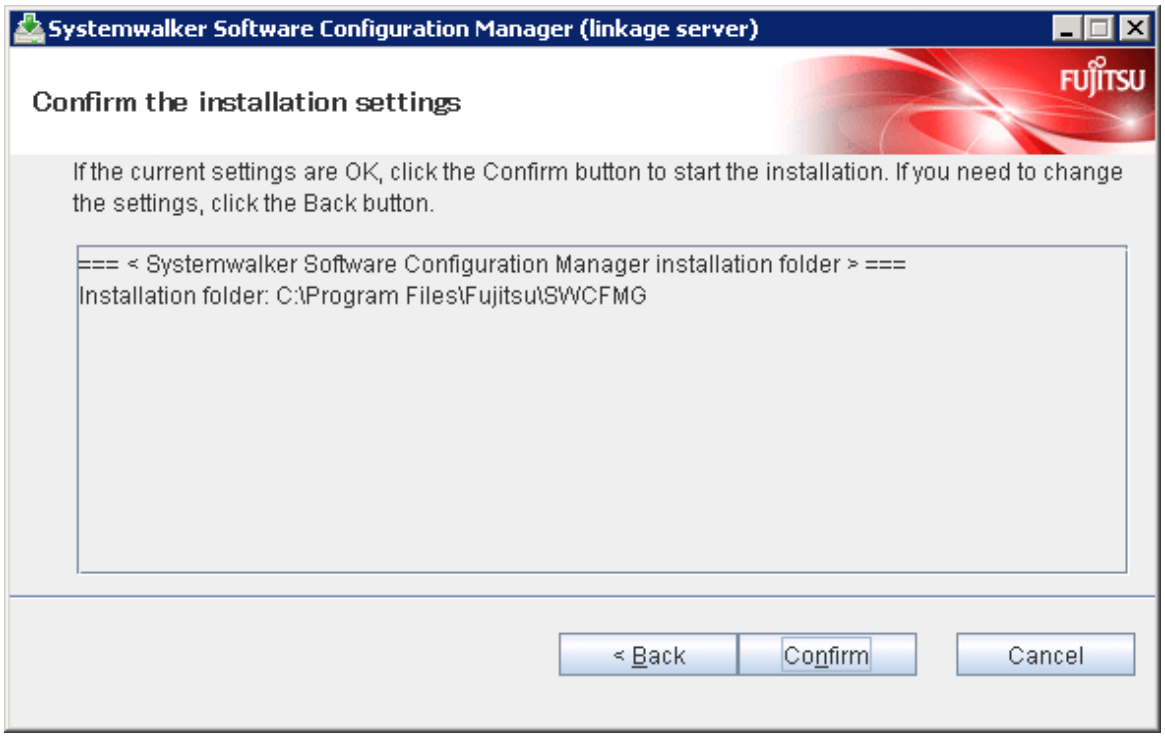
- Specify an NTFS format disk for the installation folder.

- The maximum length of the path to the installation directory is 51 characters.
- Be sure to specify a new folder.
- Relative paths and paths that start with "\\" cannot be specified.
- Only the following characters can be used for the folder name: alphanumeric characters, spaces, hyphens (-), and underscores (_).

  A standard directory under "<System Drive>:\Program Files" or "<System Drive>:\Program Files (x86)" can also be specified.

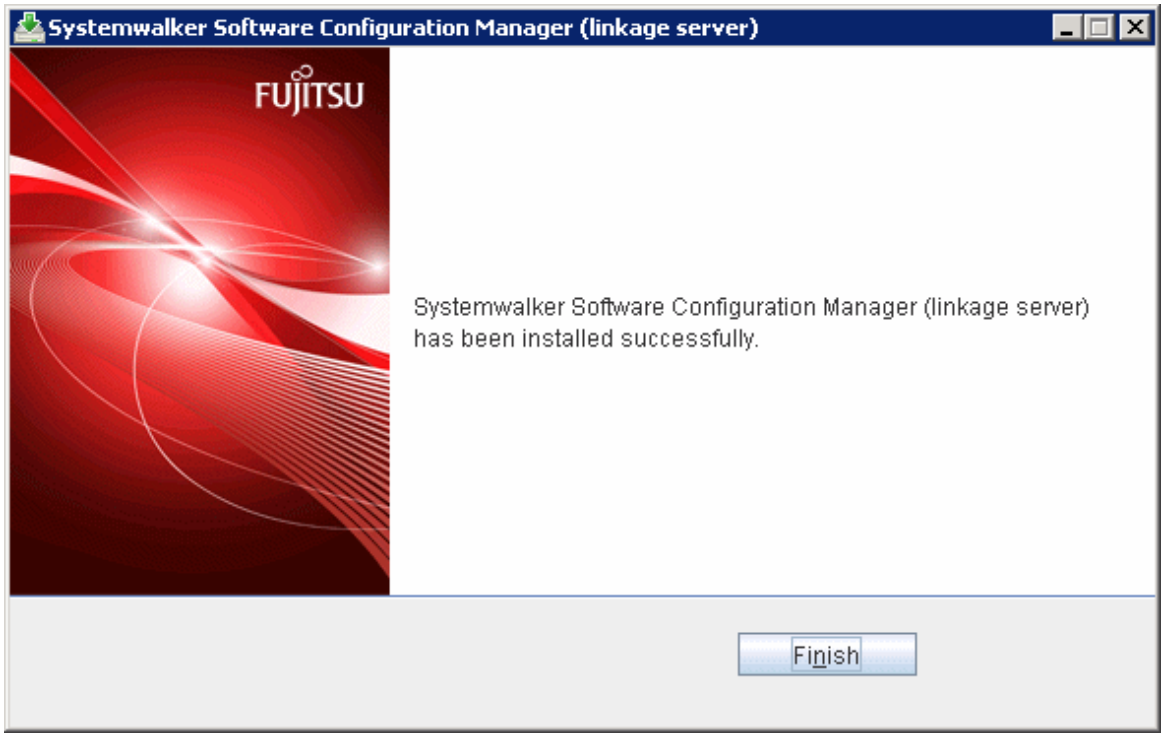
5. The **Confirm the installation settings** window will be displayed.

   Check the settings, and then click the **Confirm** button to start the installation.



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

   Click the **Finish** button.



[Linux]

Refer to "2.3 Installing on Business Servers" for the procedure on installing Systemwalker Software Configuration Manager.

2.5 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 3 Setup

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

3.1 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.

3.1.1 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"
   ```

3.2 Setting up the Admin Server

This section explains how to set up the admin server.

3.2.1 Pre-setup Tasks for the Admin Server

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

3.2.1.1 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
```

3.2.1.2 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
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

Setting value	Meaning of the setting value	Default value
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
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

Setting value	Meaning of the setting value	Default value
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

3.2.1.3 Building the SSL Communication Environment for Management Console

Use SSL communication to access 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.

3.2.1.3.1 Creating SSL Server Certificates

1. Start the command prompt on the admin server.
2. Execute the following command to move to the installation folder.

   [Windows]

   ```
   cd "%SWCFMGM_HOME%\SWCFMGX\Manager\sys\apache\conf"
   ```

   [Linux]

   ```
   cd /etc/opt/FJSVcfmgm/SWCFMGX/sys/apache/conf
   ```

3. Back up the current Apache certificate.

   [Windows]

   ```
   copy ssl.crt\server.crt ssl.crt\server.crt.org
   copy ssl.key\server.key ssl.key\server.key.org
   ```

   [Linux]

   ```
   cp ssl.crt/server.crt ssl.crt/server.crt.org
   cp ssl.key/server.key ssl.key/server.key.org
   ```

4. Create a new Apache certificate.

   [Windows]

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

   [Linux]

   ```
   openssl req -new -x509 -sha256 -newkey rsa:2048 -nodes -out ssl.crt/server.crt -keyout ssl.key/
   server.key -days 5479 -config /opt/FJSVcfmgm/SWCFMGX/sys/apache/ssl/openssl.cnf
   ```

Example

[Windows]

```
>cd "%SWCFMGM_HOME%\SWCFMGX\Manager\sys\apache\conf" <RETURN>
>copy ssl.crt\server.crt ssl.crt\server.crt.org <RETURN>
>copy ssl.key\server.key ssl.key\server.key.org <RETURN>
>set OPENSSL_CONF=%SWCFMGM_HOME%\SWCFMGX\Manager\sys\apache\conf\openssl.cnf <RETURN>
>"%SWCFMGM_HOME%\SWCFMGX\Manager\sys\apache\bin\openssl.exe" req -new -x509 -sha256 -newkey rsa:2048
-nodes -out ssl.crt\server.crt -keyout ssl.key\server.key -days 5479 <RETURN>
Loading 'screen' into random state - done
Generating a 2048 bit RSA private key
................+++
.........................+++
writing new private key to 'ssl.key\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) [localhost]:Host name of the Admin Server (FQDN) (*) <RETURN>
Email Address []: <RETURN>

>
```

[Linux]

```
# cd /etc/opt/FJSVcfmgm/SWCFMGX/sys/apache/conf <RETURN>
# cp ssl.crt/server.crt ssl.crt/server.crt.org <RETURN>
# cp ssl.key/server.key ssl.key/server.key.org <RETURN>
# openssl req -new -x509 -sha256 -newkey rsa:2048 -nodes -out ssl.crt/server.crt -keyout ssl.key/
server.key -days 5479 -config /opt/FJSVcfmgm/SWCFMGX/sys/apache/ssl/openssl.cnf <RETURN>
Generating a 2048 bit RSA private key
.........+++
.............................................+++
writing new private key to 'ssl.key/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) [AU]: <RETURN>
State or Province Name (full name) [Some-State]: <RETURN>
Locality Name (eg, city) []: <RETURN>
Organization Name (eg, company) [Internet Widgits Pty Ltd]: <RETURN>
Organizational Unit Name (eg, section) []: <RETURN>
Common Name (eg, YOUR name) []: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

Point

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 C Corrective Actions If the Site Certificate has Expired".

3.2.2 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.

"3.2.1 Pre-setup Tasks for the Admin Server"

3.2.2.1 Execution of Setup

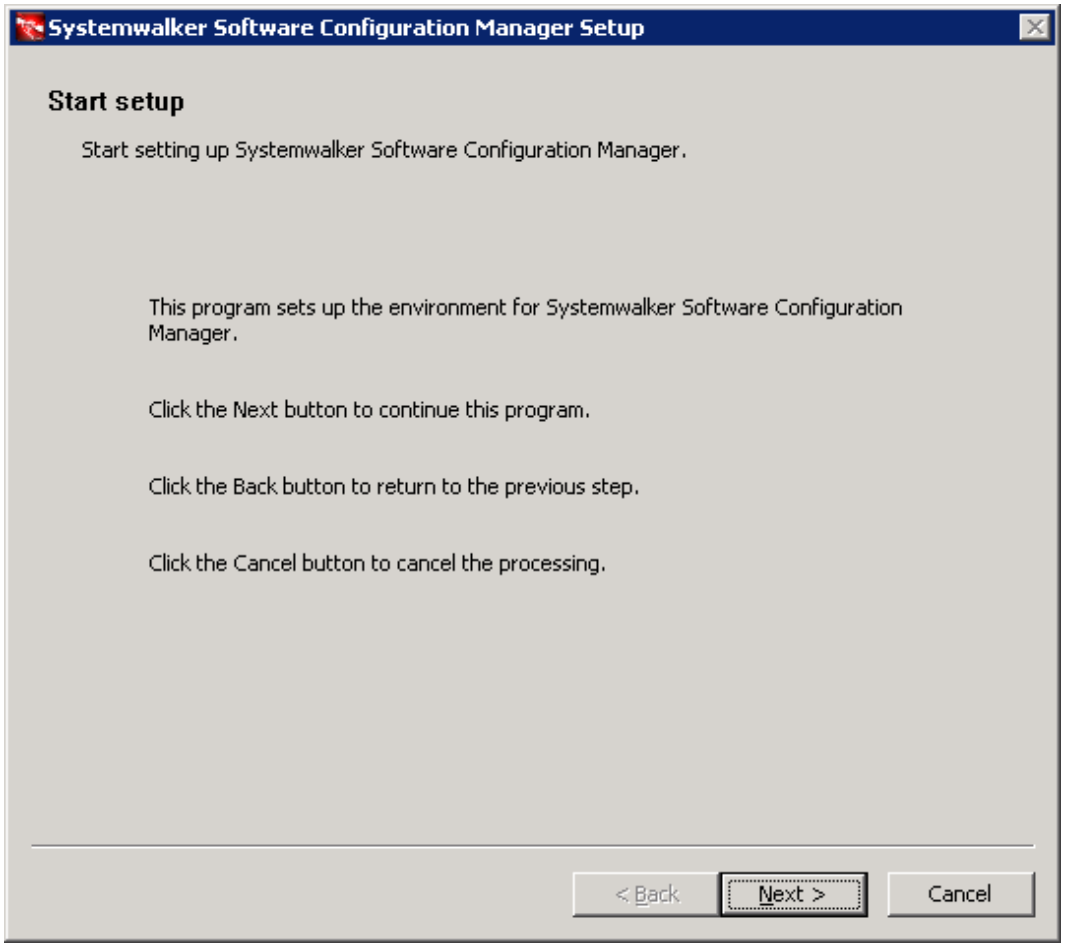
[Windows]

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

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

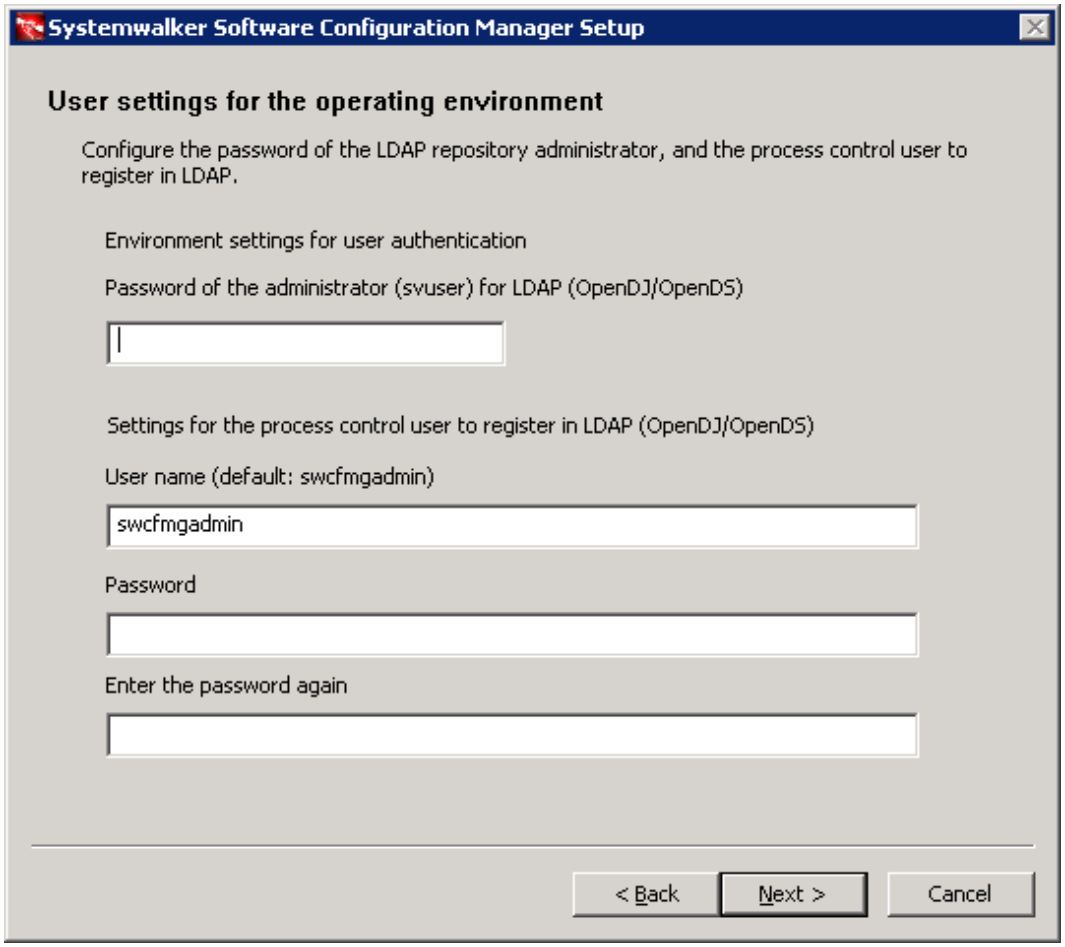
1. The setup start window will be displayed.

   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.

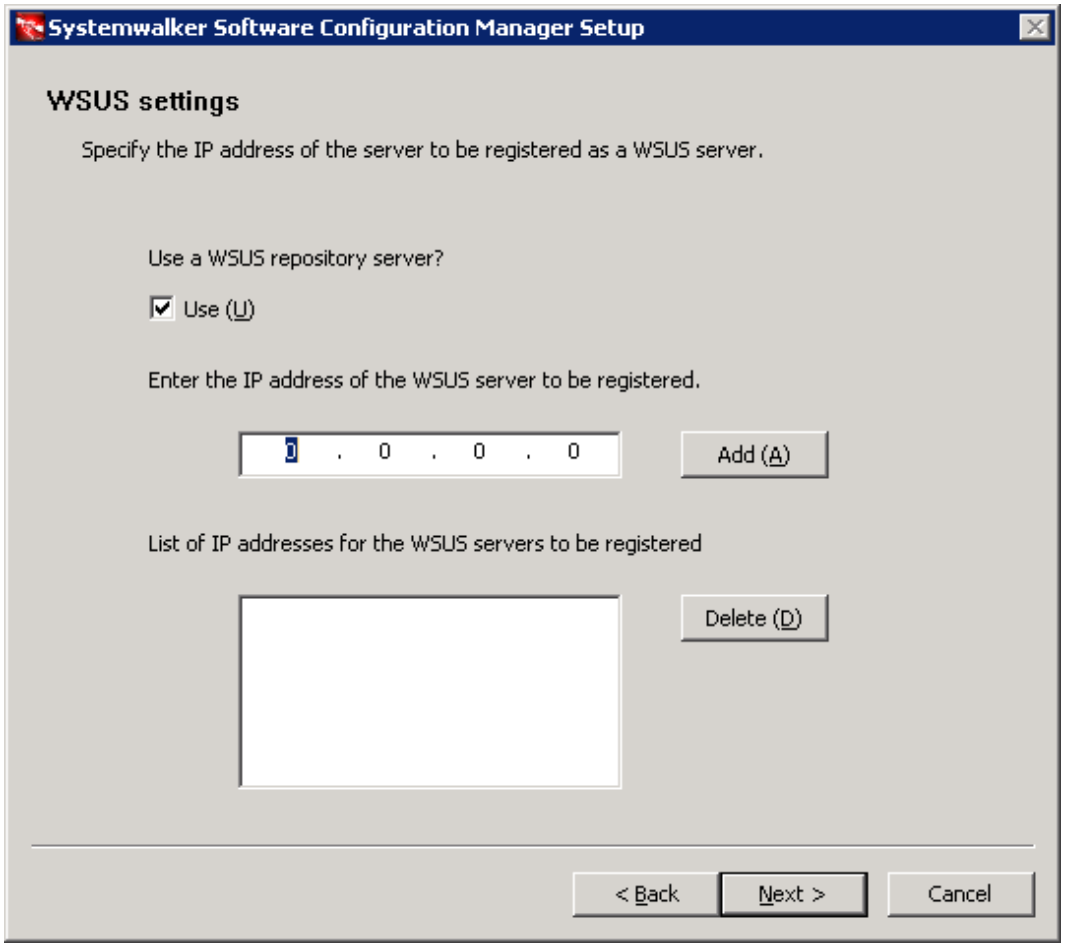


Input parameter	Input value (default)
Password for administrator (svuser)	Specify the password for the repository administrator (svuser) of LDAP (OpenDJ/OpenDS). (*1)
Name of the process control user	Specify the name of the process control user to be registered in LDAP using up to 32 characters.(*1)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

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



   a. To use a WSUS server, perform the following operations:

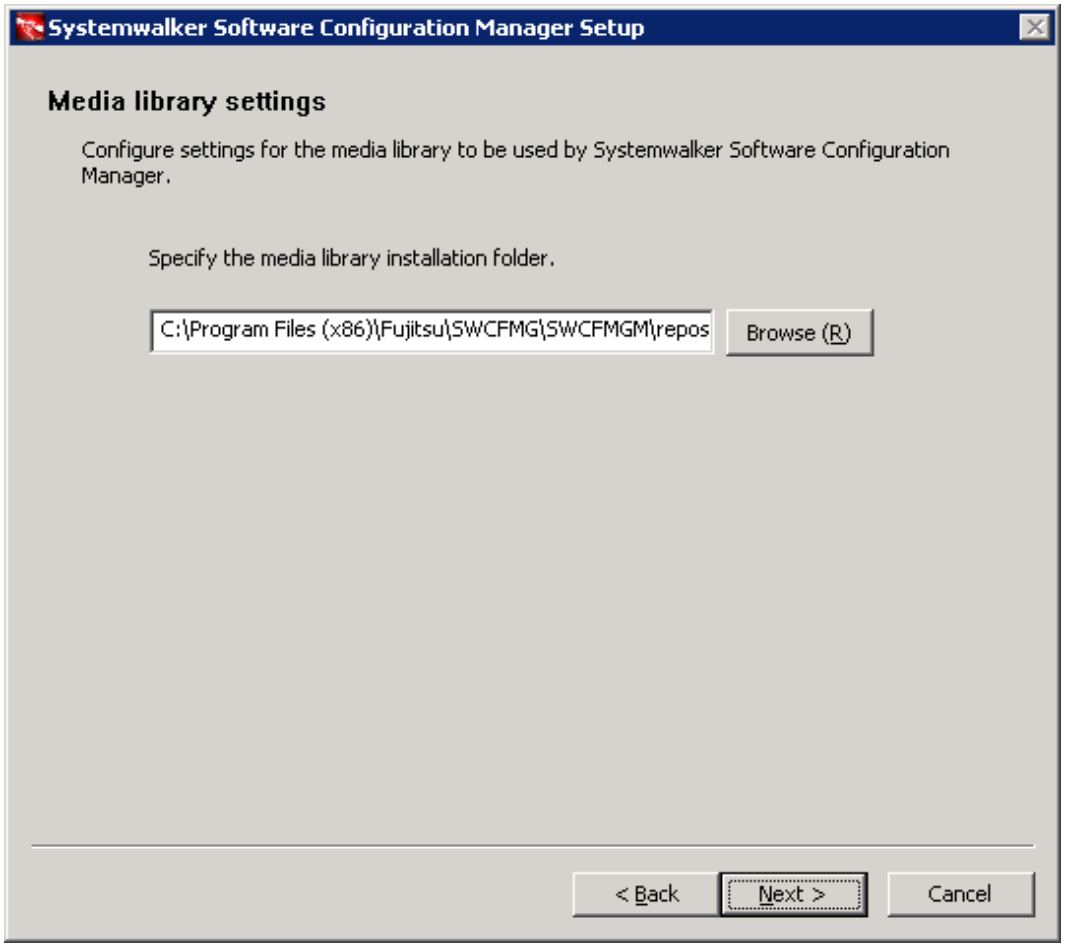
      Specify the IP address of the WSUS server, and then click the **Add** button. Add the IP addresses for all the servers to be registered as WSUS servers. Up to 10 WSUS servers can be linked to this product.

      To remove an IP addresses that has been added, select the IP address in the list, and then click the **Delete** button.

   b. If no WSUS servers are to be used, clear the **Use** checkbox.

4. The **Media library settings** window will be displayed.

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

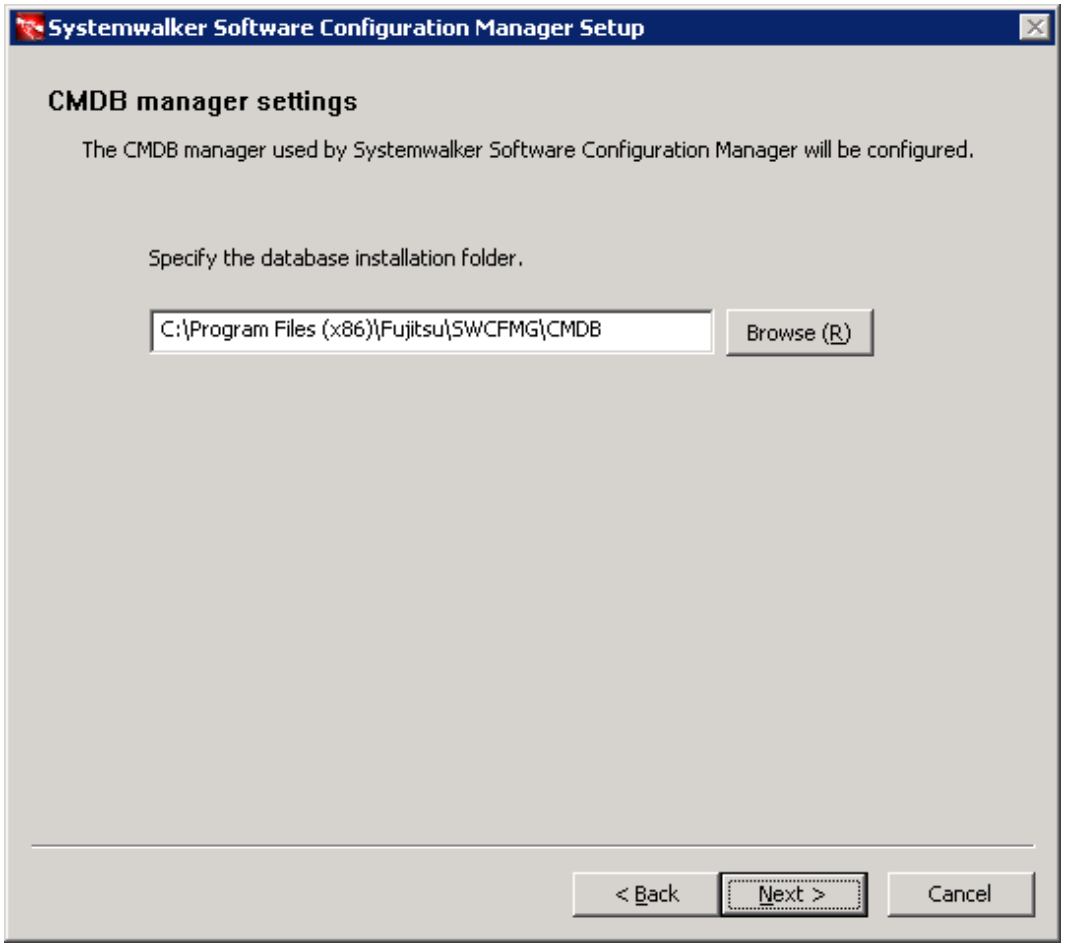


   Perform the media library settings.:

Input item	Default value
Media library installation folder	<*Systemwalker Software Configuration Manager installation directory*>\SWCFMGM\repository

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

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



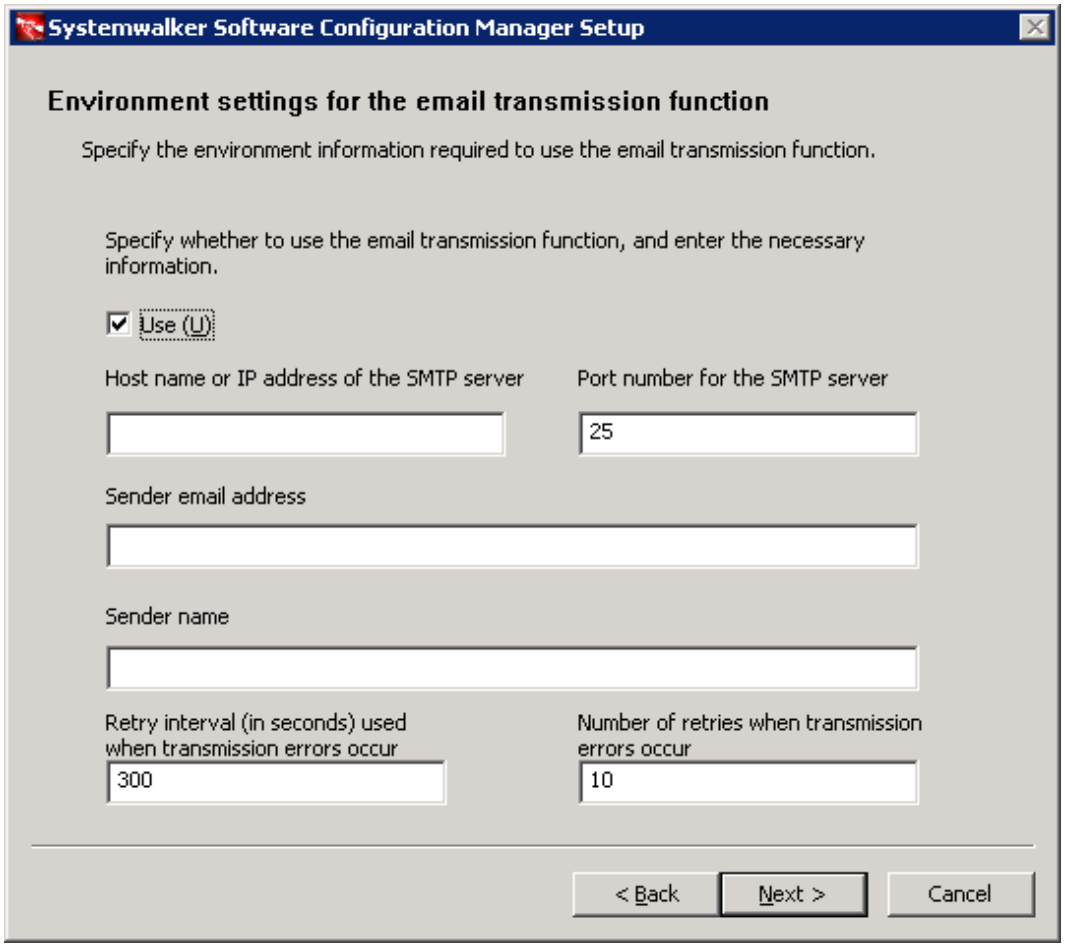
   Set up the database for CCMDB Manager. Enter the following item:

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.

6. The Environment settings for the email transmission function window will be displayed.

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



   a. To use the email transmission function, set the following items:

Input item	Default value
Host name or IP address of the SMTP server	None
Port number for the SMTP server	25
Sender email address	None
Sender name	None
Retry interval (in seconds) used when transmission errors occur	300
Number of retries when transmission errors occur	10

Point

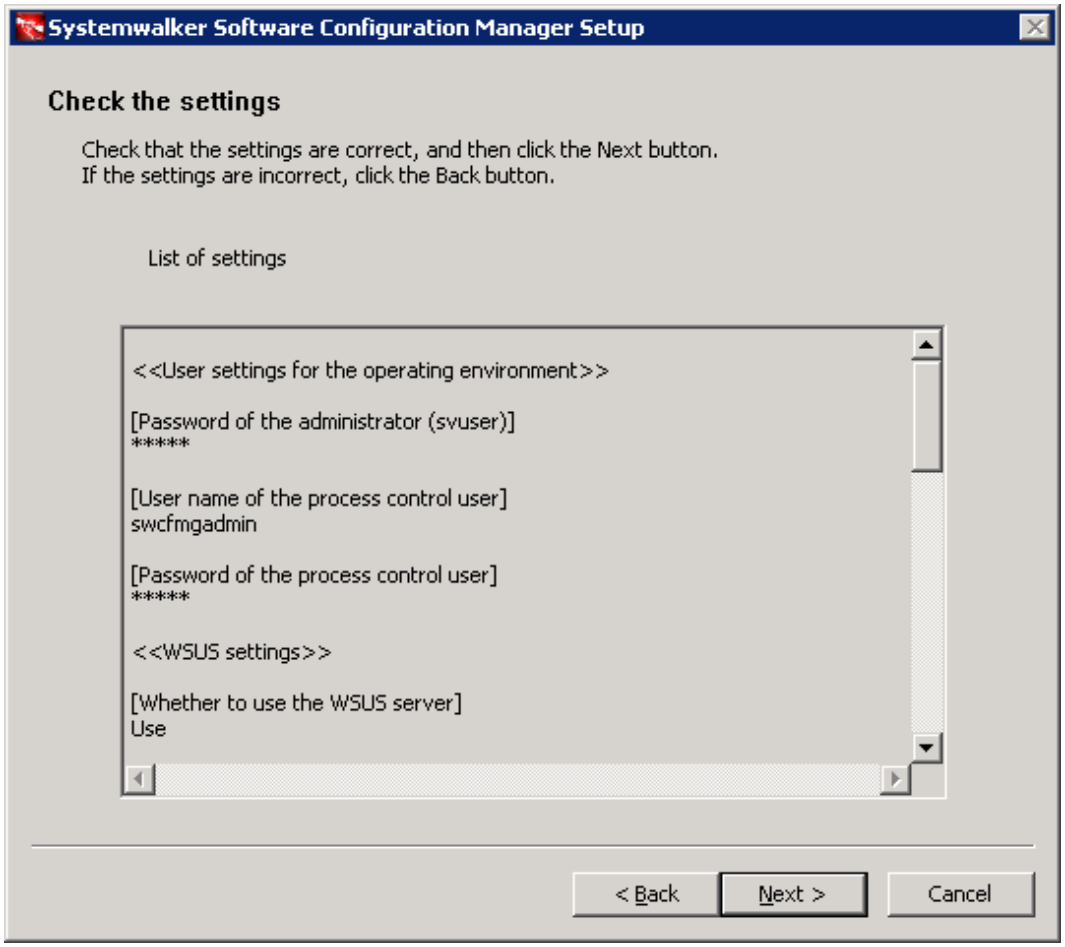
Set the **Retry interval (in seconds) used when transmission errors occur** and **Number of retries when transmission errors occur** items to match the operation policy, such as the target time for recovering from problems.

If there is no clear operation policy, use the default values.

   b. If the email transmission function is not to be used, clear the **Use** checkbox.

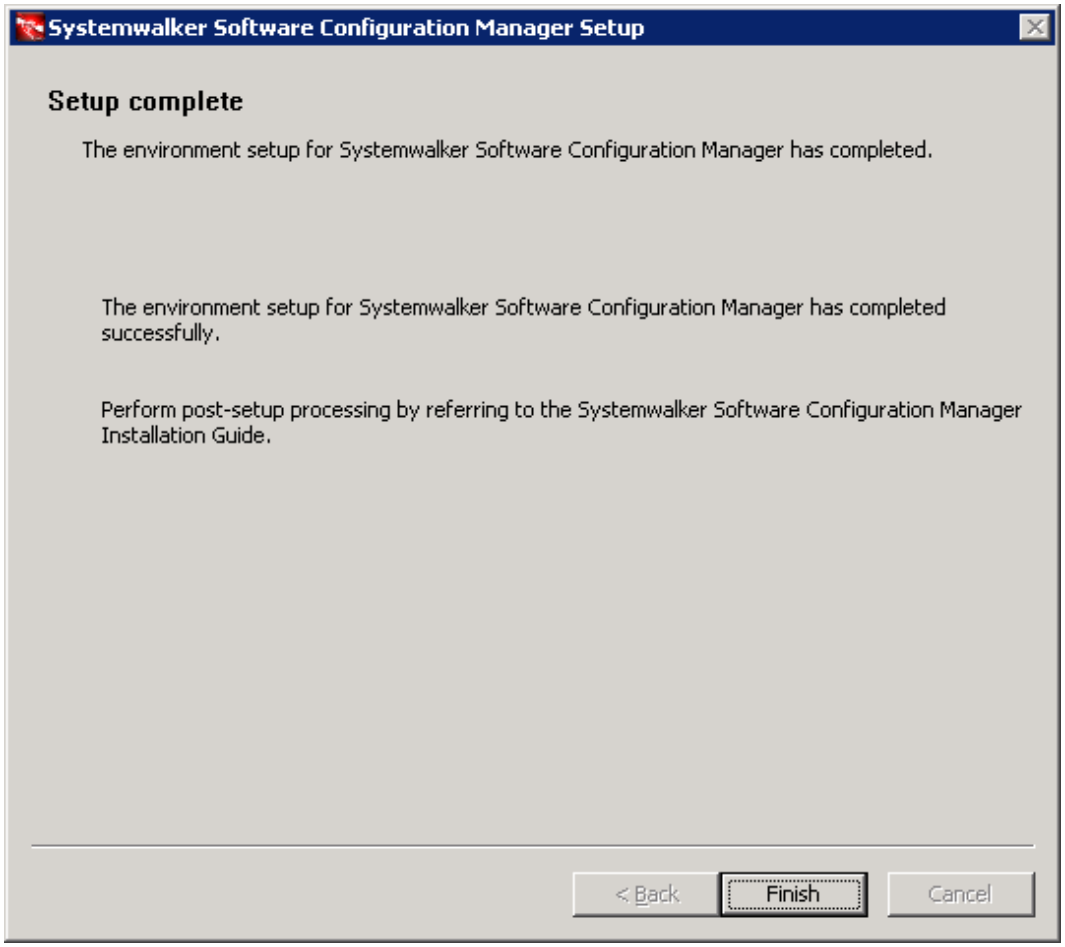
7. The **Check the settings** window will be displayed.

   Check the settings, and then click the **Next** button to start the setup.



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

   Click the **Finish** button.



[Linux]

Execute the following command to perform the setup:

```
/opt/FJSVcfmgm/bin/swcfmg_setup -s
```

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

```
================================================================================
               Systemwalker Software Configuration Manager Setup
                                  V15.5.0
                      Copyright 2010-2015 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
                                  V15.5.0
                      Copyright 2010-2015 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 **WSUS settings** window will be displayed. Specify whether to use WSUS server.

   ```
   << WSUS settings >>
   Specify the environment information required to use the WSUS server.
   ================================================================================

   Use a WSUS repository server?

   1. Use
   2. Do not use
   [number,q]
   =>
   ```

5. To use a WSUS server, enter the IP address of the WSUS server.

   ```
   << WSUS settings >>
   Specify the IP address of the server to be registered as a WSUS server.
   ================================================================================
   ```

```
Enter the IP address of the WSUS server to be registered.
=>
```

6. Enter either the IP address of the WSUS if continuing registration, or "e", if completing registration of multiple WSUS servers.

```
<< WSUS settings >>
Specify the IP address of the server to be registered as a WSUS server.
================================================================================

[List of IP addresses for the WSUS servers to be registered]
WSUS server 1:  192.168.10.10

Enter the IP address if continuing registration, or enter [e] if completing registration.
[IPAddress,e,q]
=>
```

7. The **Media library settings** window will be displayed.

   Specify the directory where the media library is to be installed.

```
<< Media library settings >>
Configure settings for the media library to be used by Systemwalker Software Configuration
Manager.
================================================================================

Specify the media library installation directory.
Installation directory (can be changed): /var/opt/FJSVcfmgm/repository

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

8. 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]
=>
```

9. The **Environment settings for the email transmission function** window will be displayed. Specify whether to use the function.

```
<< Environment settings for the email transmission function >>
Specify the environment information required to use the email transmission function.
================================================================================

Specify whether to use the email transmission function.

1. Use
2. Do not use
[number,q]
=>
```

10. To use the email transmission function, set up the email transmission function.

a. Enter the host name or IP address of the SMTP server.

```
<< Environment settings for the email transmission function >>
Specify the environment information required to use the email transmission function.
================================================================================

[Settings Information]
Email transmission function:  Use
Host name of the SMTP server:
Port number for the SMTP server:  25
Sender email address:
Sender name:
Retry interval (in seconds) used when transmission errors occur:  300
Number of retries when transmission errors occur:  10

Enter the host name or IP address of the SMTP server.
=>
```

b. Enter the port number for the SMTP server.

```
<< Environment settings for the email transmission function >>
Specify the environment information required to use the email transmission function.
================================================================================

[Settings Information]
Email transmission function:  Use
Host name of the SMTP server:  smtp-server.example.com
Port number for the SMTP server:  25
Sender email address:
Sender name:
Retry interval (in seconds) used when transmission errors occur:  300
Number of retries when transmission errors occur:  10

Enter the port number of the SMTP server.
If the return key is pressed without any input, [default:  25] will be set.
=>
```

c. Enter the email address of the sender.

```
<< Environment settings for the email transmission function >>
Specify the environment information required to use the email transmission function.
================================================================================

[Settings Information]
Email transmission function:  Use
Host name of the SMTP server:  smtp-server.example.com
Port number for the SMTP server:  25
Sender email address:
Sender name:
Retry interval (in seconds) used when transmission errors occur:  300
Number of retries when transmission errors occur:  10

Enter the sender's email address.
=>
```

d. Enter the name of the sender.

```
<< Environment settings for the email transmission function >>
Specify the environment information required to use the email transmission function.
================================================================================

[Settings Information]
```

```
Email transmission function:  Use
Host name of the SMTP server:  smtp-server.example.com
Port number for the SMTP server:  25
Sender email address:  smtp-server@example.com
Sender name:
Retry interval (in seconds) used when transmission errors occur:  300
Number of retries when transmission errors occur:  10

Enter the sender's name.
=>
```

e. Enter the retry interval to be used when transmission errors occur.

```
<< Environment settings for the email transmission function >>
Specify the environment information required to use the email transmission function.
================================================================================

[Settings Information]
Email transmission function:  Use
Host name of the SMTP server:  smtp-server.example.com
Port number for the SMTP server:  25
Sender email address:  smtp-server@example.com
Sender name:  Smtp Server
Retry interval (in seconds) used when transmission errors occur:  300
Number of retries when transmission errors occur:  10

Enter the retry interval (in seconds) used when transmission errors occur.
If the return key is pressed without any input, [default:  300] will be set.
=>
```

f. Enter the number of retries to be performed when transmission errors occur.

```
<< Environment settings for the email transmission function >>
Specify the environment information required to use the email transmission function.
================================================================================

[Settings Information]
Email transmission function:  Use
Host name of the SMTP server:  smtp-server.example.com
Port number for the SMTP server:  25
Sender email address:  smtp-server@example.com
Sender name:  Smtp Server
Retry interval (in seconds) used when transmission errors occur:  300
Number of retries when transmission errors occur:  10

Enter the number of retries when transmission errors occur.
If the return key is pressed without any input, [default:  10] will be set.
=>
```

g. Check the settings for the email transmission function, and then enter "y".

```
<< Environment settings for the email transmission function >>
Specify the environment information required to use the email transmission function.
================================================================================

[Settings Information]
Email transmission function:  Use
Host name of the SMTP server:  smtp-server.example.com
Port number for the SMTP server:  25
Sender email address:  smtp-server@example.com
Sender name:  Smtp Server
Retry interval (in seconds) used when transmission errors occur:  300
Number of retries when transmission errors occur:  10
```

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

Point

Set the **Retry interval (in seconds) used when transmission errors occur** and **Number of retries when transmission errors occur** items to match the operation policy, such as the target time for recovering from problems. If there is no clear operation policy, use the default values.

11. 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 setting of operational environment]
Password of DN for manager: *********
User's for process control name of user: swcfmgadmin
User's for process control password: *********


[WSUS settings]
WSUS servers: Use
List of IP addresses for the WSUS servers to be registered:
WSUS server 1: 192.168.10.10

[Media library settings]
Media library installation directory: /var/opt/FJSVcfmgm/repository

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

[Environment settings for the email transmission function]
Email transmission function: Use
Host name of the SMTP server: smtp-server.example.com
Port number for the SMTP server: 25
Sender email address: smtp-server@example.com
Sender name: Smtp Server
Retry interval (in seconds) used when transmission errors occur: 300
Number of retries when transmission errors occur: 10

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

12. 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.
```

3.2.3 Post-setup Tasks

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

3.2.3.1 Starting the Products

3.2.3.1.1 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
```

3.2.3.1.2 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
```

3.2.3.2 Registering Middleware Information

Register the following middleware definitions, which will be used for software parameter management by Systemwalker Software Configuration Manager:

- Definition of software information
- Definition of parameters to be set
- Definition of parameters to be collected

Execute the following command.

[Windows]

```
<Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_setup_mwinfo.bat
```

[Linux]

```
/opt/FJSVcfmgm/bin/swcfmg_setup_mwinfo
```

Note

If the operating system being used is Windows Server 2008 or later, execute the command above as an administrator.

It may take more than 15 minutes to complete execution of the command.

See

Refer to "Middleware List" in the *Parameter Reference* for information on the software and middleware for which information is to be registered.

3.3 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 "User Management" in the *Operation Guide* 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.

3.4 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.

3.5 Registering Managed Servers

Before performing discovery, it is necessary to register managed servers. Design the configuration of tenants, users, server groups, and servers, and then register them.

3.5.1 Designing Configurations of Tenants, Users, Server Groups, and Servers

Design the configuration of tenants, users, server groups, and servers. For details, refer to "1.3 Designing Tenants, Users, Server Groups and Servers**". The configurations of tenants, users, server groups, and servers can be changed later.**

3.5.2 Registering Tenants, Users, Server Groups, and Servers

Register tenants, users, server groups, and servers in the following order:

1. Register tenants

   Refer to "Registering a Tenant" in the *Operation Guide* for details.

2. Register users

   Refer to "Registering a User" in the *Operation Guide* for details.

3. Register server groups

   For details, refer to "Registering a Server Group" in the *Operation Guide*.

4. Register servers

   Refer to "Registering a Server" in the *Operation Guide* for details.

3.6 Performing the Connection Test

Perform the connection test for managed servers. Connection test must be performed for managed servers, to check if they are available to perform patch management, software parameter management, or software configuration information management. Ensure the connection test is performed for manually registered servers or OpenStack servers that are to manage Windows OS patches.

Refer to "swcfmg_connectiontest (Connection Test Command)" in the *Reference Guide* for details.

3.7 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.
- Discovering OpenStack information
  - An OpenStack service access user must be registered with this product. Register the service access user referring to "3.10.2 Settings for Linking to OpenStack".
  - Confirm that the manager of this product can communicate with the OpenStack API services.

  Information

  - Information of deployed stacks and instances is not collected.
  - In order to collect the information on the CPUs and memory of a server, the corresponding instance must be up and running.
  - Host name information cannot be collected.
- Discovering Windows patch information
  - Create linkage servers

    Refer to "2.1.3 Creating Linkage Servers (Repository Servers)" for details.
  - Set up business servers

    Refer to "3.10.1 Settings for Linking to ServerView Resource Orchestrator" for details.
- Discovering Linux patch information
  - Create linkage servers

    Refer to "2.1.3 Creating Linkage Servers (Repository Servers)" for details.

  - Set up business servers

    Refer to "3.10.4 Settings for Managing Linux Patches" for details.

- Discovering the Solaris OS patch information

  Not required.

- Discovering Fujitsu middleware patch information and Fujitsu middleware product information

  - Set up business servers

    Refer to "3.10.5 Settings for UpdateAdvisor (Middleware)" for details.

  - Configure settings on the admin server

    Register the update application management registry configuration file.

    Refer to Step 1-1 and Step 1-2 under "Fujitsu Middleware Patch Management" in "Operation Flow" in the *Operation Guide* for details.

    Note

    When performing upgrade or something that changes the version of the Fujitsu middleware installed on the discovery target server, uninstall the older version of the Fujitsu middleware and perform discovery, and then install the new version of Fujitsu middleware.

- Discovering parameter information

  - Configure settings on the admin server

    Collect software configuration information

    Refer to Step 1 under "Software Parameter Management" in "Operation Flow" in the *Operation Guide* for details.

    Register software information

    This step is not required if using the software definition in which this product is already registered.

    Refer to "Definition of Software Information" in "Definition of Software Information" in the *Developer's Guide* for details.

    Register installed software

    This step is not required if using software supported by UpdateAdvisor (middleware).

    Refer to "Definition of Installed Software Information" in "Definition of Software Information" in the *Developer's Guide* for details.

    Register parameters to be collected

    This step is not required if using the parameter collection definition in which this product is already registered.

    Refer to Step 4 under "Software Parameter Management" in "Operation Flow" in the *Operation Guide* for details.

    Associate the software and the parameter collection definition

    This step is not required if using the software definition in which this product is already registered.

    Refer to Step 5 under "Software Parameter Management" in "Operation Flow" in the *Operation Guide* for details.

Hardware Information

Perform the initial discovery for 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
```

OpenStack information

Perform the initial discovery for OpenStack information by executing the following command:

[Windows]

```
<Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_openstack_updateinfo.exe
```

[Linux]

```
/opt/FJSVcfmgm/bin/swcfmg_openstack_updateinfo
```

Patch information and Fujitsu middleware product information

Perform the initial discovery for patch information and Fujitsu middleware product information by executing the following command:

[Windows]

```
<Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_patch_updateinfo.exe -repository
```

[Linux]

```
/opt/FJSVcfmgm/bin/swcfmg_patch_updateinfo -repository
```

To discover only particular information, execute the following command:

- Windows patch information

  [Windows]

  ```
  <Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_patch_updateinfo.exe -t windows -repository
  ```

  [Linux]

  ```
  /opt/FJSVcfmgm/bin/swcfmg_patch_updateinfo -t windows -repository
  ```

- Linux patch information

  [Windows]

  ```
  <Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_patch_updateinfo.exe -t linux
  ```

  [Linux]

  ```
  /opt/FJSVcfmgm/bin/swcfmg_patch_updateinfo -t linux
  ```

- Solaris OS patch information

  [Windows]

  ```
  <Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_patch_updateinfo.exe -t solaris
  ```

  [Linux]

  ```
  /opt/FJSVcfmgm/bin/swcfmg_patch_updateinfo -t solaris
  ```

- Fujitsu middleware patch information and Fujitsu middleware product information

  [Windows]

```
<Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_patch_updateinfo.exe -t middleware
```

[Linux]

```
/opt/FJSVcfmgm/bin/swcfmg_patch_updateinfo -t middleware
```

Register newly released Fujitsu middleware patches after the initial discovery has been performed.

Refer to Step 2-1 to Step 2-4 under "Fujitsu Middleware Patch Management" in "Operation Flow" in the *Operation Guide* for information on how to register newly released Fujitsu middleware patches.

Parameter Information

Perform the initial discovery for parameter information by executing the following command: Discovery cannot be performed for parameter information of Solaris managed servers.

[Windows]

```
<Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin\swcfmg_param_updateinfo.exe
```

[Linux]

```
/opt/FJSVcfmgm/bin/swcfmg_param_updateinfo
```

Refer to "swcfmg_param_updateinfo (Parameter Information Update Command)" in the *Reference Guide* for information on the options that can be used in swcfmg_param_updateinfo.

Note

- Perform the procedure in "3.8 Registering Discovery Schedules" after the initial discovery is complete. The initial discovery can take quite a long time, so if the execution of a discovery registered using the procedure in "3.8 Registering Discovery Schedules" coincides with the execution of the initial discovery, then the regular discovery will fail to execute.
- Perform the procedure in "3.9 Registering a Configuration Baseline Creation Schedule" after the initial discovery is complete. The initial discovery can take quite a long time, so if a configuration baseline creation registered using the procedure in "3.9 Registering a Configuration Baseline Creation Schedule" coincides with the execution of the initial discovery, then the configuration baseline will not be created correctly.

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

- OpenStack information

Number of Virtual guests	Time required for the initial discovery
500	30 minutes or more
1,000	60 minutes or more
1,500	80 minutes or more

- Software configuration information
  - Windows patch information

Number of business servers	Number of WSUS servers (*1)	Time required for the initial discovery
500	1	240 minutes or more
1,000	2	330 minutes or more
1,500	3	420 minutes or more

*1: The "Number of WSUS servers" refers to the recommended number of WSUS servers when business servers are managed by distributing them to multiple WSUS servers in order to balance the load on WSUS servers. It is recommended that each WSUS server manage no more than 500 business servers.

  - Linux patch information

Number of business servers	Time required for the initial discovery
500	240 minutes or more
1,000	420 minutes or more
1,500	600 minutes or more

  - Solaris OS patch information

Number of business servers	Time required for the initial discovery
500	60 minutes or more
1,000	120 minutes or more
1,500	180 minutes or more

  - Fujitsu middleware patch information and Fujitsu middleware product information

Number of business servers	Time required for the initial discovery
500	90 minutes or more
1,000	120 minutes or more
1,500	150 minutes or more

  - All software configuration information

    To discover all software configuration information, estimate the time required for discovery based on the following conditions:

The time required for the initial discovery for all software configuration information is either of the following, whichever is longer:

- Time required for the initial discovery for Windows patch information
- Time required for the initial discovery for Linux patch information + time required for the initial discovery for Fujitsu middleware patch information and Fujitsu middleware product information
- Time required for the initial discovery for Solaris patch information + time required for the initial discovery for Fujitsu middleware patch information and Fujitsu middleware product information

Example:

To discover OS patch information and Fujitsu middleware patch information for 1,500 business servers (1,000 Windows business servers + 500 Linux business servers), the time required for the initial discovery is as follows:

- Time required for the initial discovery for Windows patch information (1,000 business servers): At least 330 minutes
- Time required for the initial discovery for Linux patch information (500 business servers): At least 240 minutes
- Time required for the initial discovery for Solaris patch information (500 business servers): At least 60 minutes
- Processing time for the initial discovery for Fujitsu middleware patch information and Fujitsu middleware product information (1,500 business servers): At least 150 minutes

The time required for the initial discovery will be at least 390 minutes (i.e., 240 + 150 minutes).

3.8 Registering Discovery Schedules

Register schedules for regular discoveries.

Hrdware 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

OpenStack information

For Windows, register the following program with the Task Scheduler:

For Linux, add the following program to cron. Refer to the cron manuals for information on cron.

- [Program]

  [Windows]

```
<Systemwalker Software Configuration Manager installation directory>\SWCFMGM\bin
\swcfmg_openstack_updateinfo.exe
```

  [Linux]

```
/opt/FJSVcfmgm/bin/swcfmg_openstack_updateinfo
```

- [Options]

  None.

Patch information and Fujitsu middleware product information

For Windows, register the following program with the Task Scheduler:

For Linux, add the following program to cron. Refer to the cron manuals for information on cron.

- [Program]

  [Windows]

  <*Systemwalker Software Configuration Manager installation directory*>\SWCFMGM\bin\swcfmg_patch_updateinfo.exe

  [Linux]

  /opt/FJSVcfmgm/bin/swcfmg_patch_updateinfo

- [Options]

  -repository

To perform regular discovery for only particular information, register the following program:

- Windows patch information
  - [Program]

    [Windows]

    <*Systemwalker Software Configuration Manager installation directory*>\SWCFMGM\bin
    \swcfmg_patch_updateinfo.exe

    [Linux]

    /opt/FJSVcfmgm/bin/swcfmg_patch_updateinfo

  - [Options]

    -t windows -repository

- Linux patch information
  - [Program]

    [Windows]

    <*Systemwalker Software Configuration Manager installation directory*>\SWCFMGM\bin
    \swcfmg_patch_updateinfo.exe

    [Linux]

    /opt/FJSVcfmgm/bin/swcfmg_patch_updateinfo

  - [Options]

    -t linux

- Solaris OS patch information
  - [Program]

    [Windows]

    <*Systemwalker Software Configuration Manager installation directory*>\SWCFMGM\bin\swcfmg_patch_updateinfo.exe

    [Linux]

    /opt/FJSVcfmgm/bin/swcfmg_patch_updateinfo

    [Options]

    -t solaris

- Fujitsu middleware patch information and Fujitsu middleware product information
  - [Program]

    [Windows]

    <*Systemwalker Software Configuration Manager installation directory*>\SWCFMGM\bin\swcfmg_patch_updateinfo.exe

    [Linux]

    /opt/FJSVcfmgm/bin/swcfmg_patch_updateinfo

  - [Options]

    -t middleware

Note

To perform regular discovery for only particular information, discovery for only the following combinations of information can be executed simultaneously:

Information collected by regular discovery	Windows patch information	Linux patch information	Solaris OS patch information	Fujitsu middleware patch information and Fujitsu middleware product information
Windows patch information	-	Y	Y	Y
Linux patch information	Y	-	Y	-
Solaris OS patch information	Y	Y	-	-
Fujitsu middleware patch information and Fujitsu middleware product information	Y	-	-	-

Y: Can be executed simultaneously

-: Cannot be executed simultaneously

Parameter information

For Windows, register the following program with the Task Scheduler:

For Linux, add the following program to cron. Refer to the cron manuals for information on cron.

- [Program]

  [Windows]

<*Systemwalker Software Configuration Manager installation directory*>\SWCFMGM\bin\swcfmg_param_updateinfo.exe

  [Linux]

/opt/FJSVcfmgm/bin/swcfmg_param_updateinfo

- [Options]

  Refer to "swcfmg_param_updateinfo (Parameter Information Update Command)" in the *Reference Guide* for information on the valid options.

  Discovery cannot be performed for parameter information of Solaris managed servers.

Discovery of "patch information and Fujitsu middleware product information" and discovery of "parameter information" cannot be executed concurrently.

Example setting procedures

[Windows]

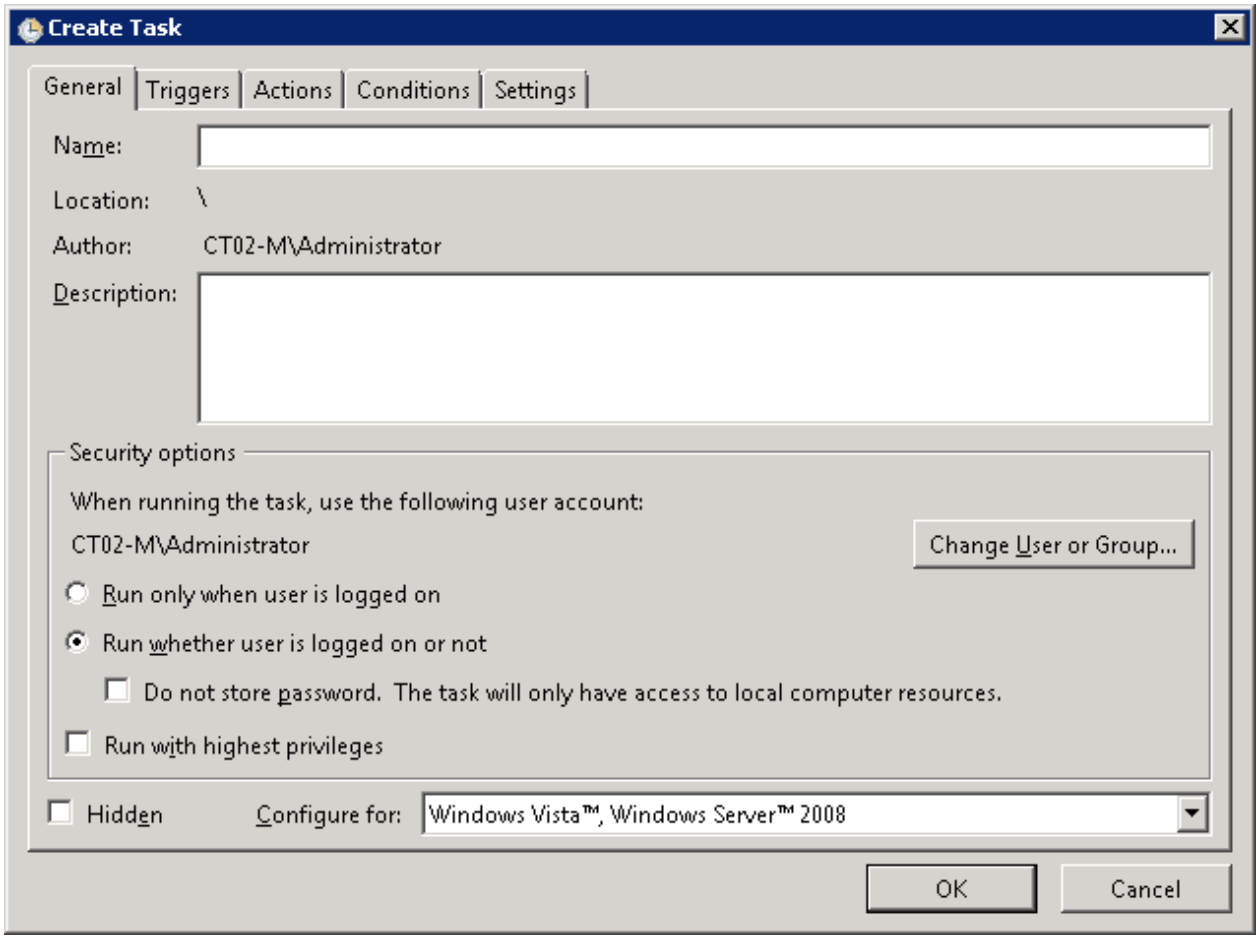
The following example shows how to register a schedule with the Task Scheduler. In this example, regular discovery is executed for all patch information.

1. Log in to Windows using an account that belongs to the Administrators group.
2. Select **Start** >> **Administrative Tools** >> **Task Scheduler**.

   The **Task Scheduler** window will be displayed.

3. Select **Action** >> **Create Task**.

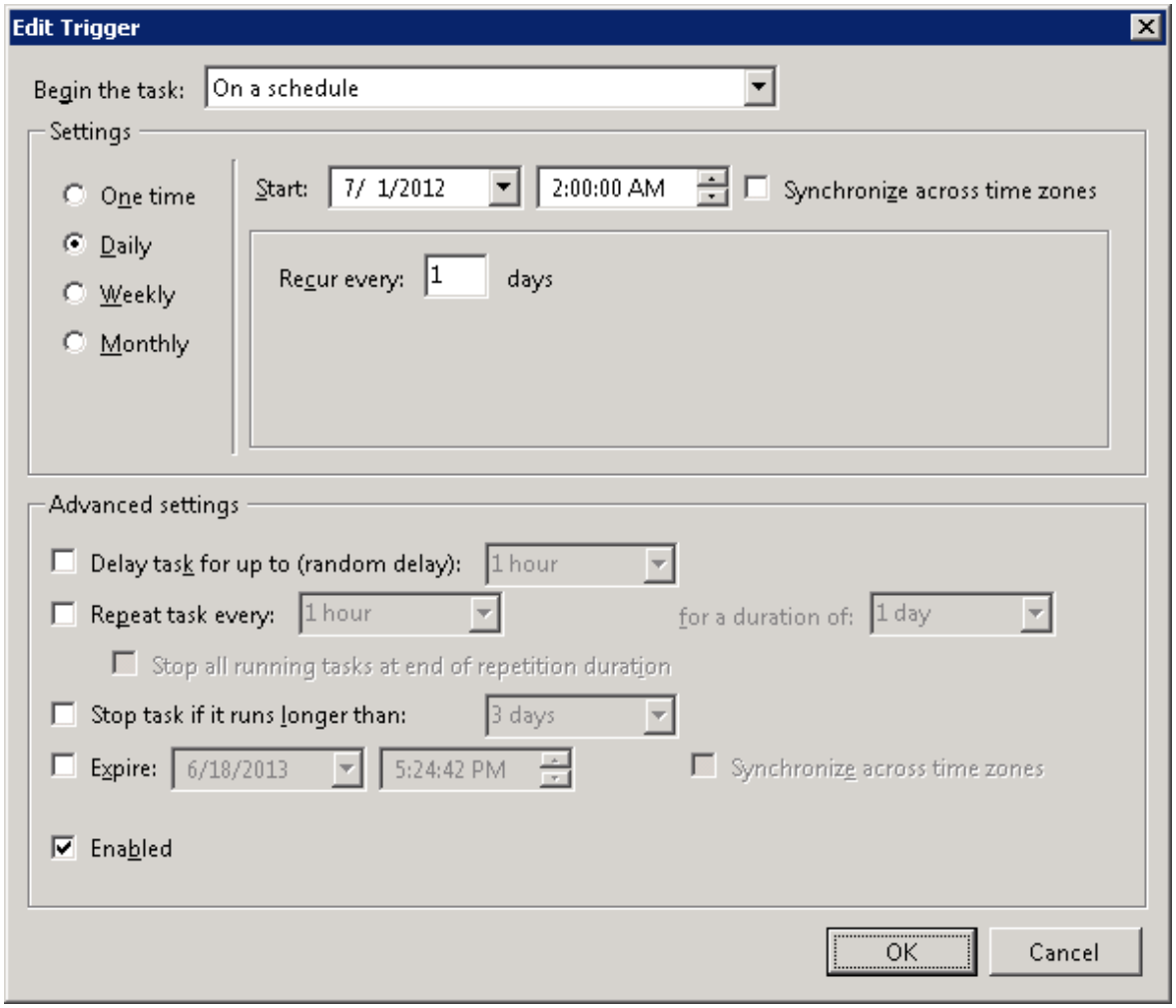
   The **Create New** window will be displayed.



   a. Enter a task name in the **Name** field in the **General** tab, and then select **Run whether user is logged on or not**.

b. Select the **Triggers** tab, and then click the **New** button.

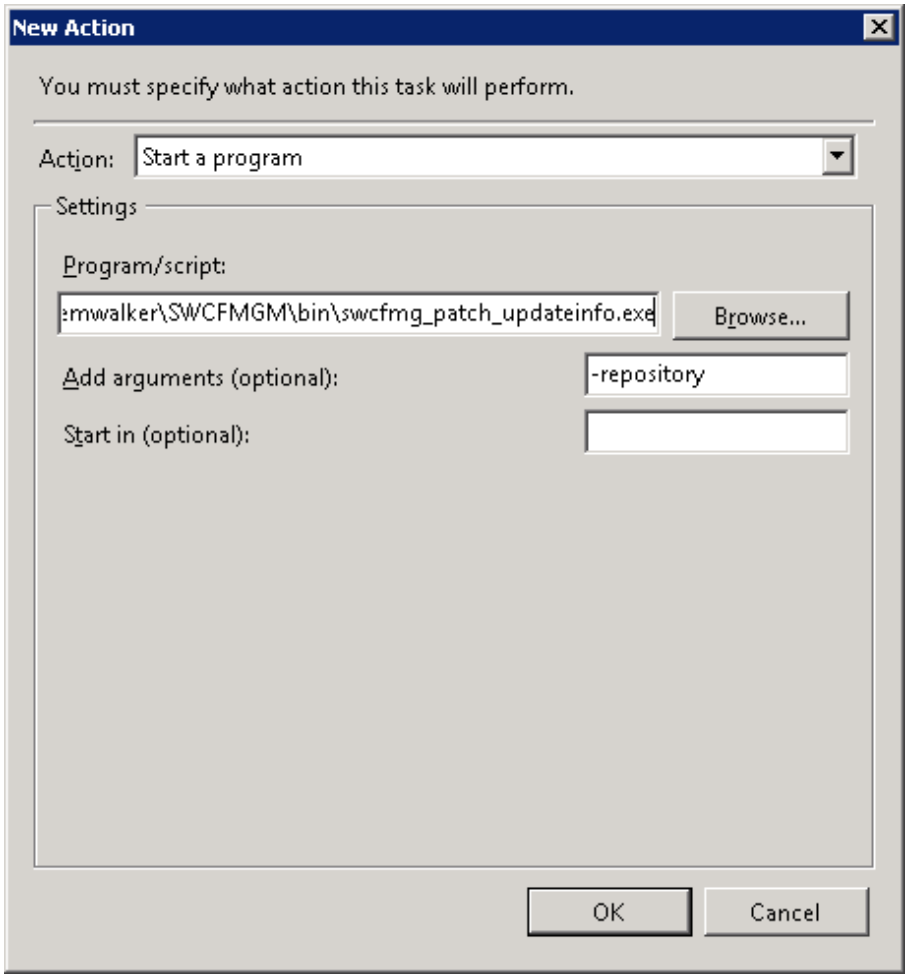
The **New Trigger** window will be displayed.



Register the discovery schedule.

c. Select the **Actions** tab, and then click the **New** button.

The **New Action** window will be displayed.



Configure the following settings:

- Select **Start a program** from the **Action** pull-down menu.
- Add the following command to the **Program/script** field:

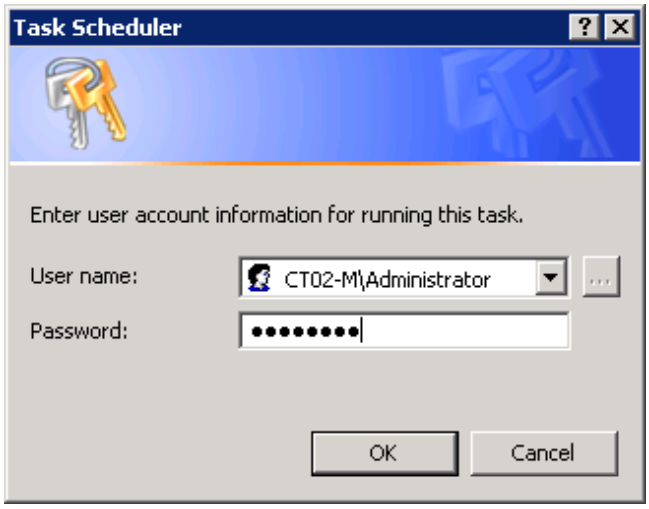
  <*Systemwalker Software Configuration Manager installation directory*>\SWCFMGM\bin\swcfmg_patch_updateinfo.exe

- Add the following argument to the **Add arguments (optional)** field:

  -repository

4. Click the **OK** button in the **Create Task** window.

   The following window will be displayed:



5. Enter the user name for an account belonging to the Administrators group and the corresponding password, and then click the **OK** button.

[Linux]

The following example shows how to register a schedule with cron. In this example, regular discovery is executed for all patch information.

Perform the following procedure as the root user:

1. Check that the cron service has started

```
>/etc/rc.d/init.d/crond status
crond (pid  xxx) is running...
```

2. If the cron service is not running, use the following command to start the cron service:

```
>/etc/rc.d/init.d/crond start
Starting crond:
```

Point

The cron service normally starts when the operating system starts.

By executing the following command, it is possible to check whether the cron service has been set to start when the operating system starts:

```
>chkconfig --list crond
crond           0:off   1:off   2:on    3:on    4:on    5:on    6:off
```

If the cron service has been set to start when the operating system starts, the numbers 2, 3, 4 and 5 above are set to "on" as shown above.

To set the cron service to start when the operating system starts, execute the following command:

```
>chkconfig --level 2345 crond on
```

3. Execute the following command to edit the schedule definitions:

```
>crontab -e
```

Executing the "crontab -e" command starts the vi editor. Refer to the vi editor manuals for information on the vi editor.

Example: Discovering all patch information every day at 2:00

```
0 2 * * * /opt/FJSVcfmgm/bin/swcfmg_patch_updateinfo -repository > /dev/null 2>&1
```

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

- OpenStack information

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

- Software configuration information
  - Windows patch information

Number of business servers	Number of WSUS servers (*1)	Execution interval
500	1	30 minutes or more
1,000	2	60 minutes or more
1,500	3	60 minutes or more

*1: The "Number of WSUS servers" refers to the recommended number of WSUS servers when business servers are managed by distributing them to multiple WSUS servers in order to balance the load on WSUS servers. It is recommended that each WSUS server manage no more than 500 business servers.

  - Linux patch information

Number of business servers	Execution interval
500	90 minutes or more
1,000	150 minutes or more
1,500	210 minutes or more

- Solaris OS patch information

Number of business servers	Execution interval
500	60 minutes or more
1,000	120 minutes or more
1,500	180 minutes or more

- Fujitsu middleware patch information and Fujitsu middleware product information

Number of business servers	Execution interval
500	60 minutes or more
1,000	90 minutes or more
1,500	120 minutes or more

- All software configuration information

  To perform regular discovery for all software configuration information, estimate the discovery execution interval based on the following conditions:

  The execution interval for regular discovery for all software configuration information is either of the following, whichever is longer:

  - Discovery execution interval for Windows patch information
  - Discovery execution interval for Linux patch information + discovery execution interval for Fujitsu middleware patch information and Fujitsu middleware product information
  - Discovery execution interval for Solaris patch information + discovery execution interval for Fujitsu middleware patch information and Fujitsu middleware product information

  Example:

  To discover OS patch information and Fujitsu middleware information for 1,500 business servers (1,000 Windows business servers + 500 Linux business servers), the discovery execution interval is as follows:

  - Discovery execution interval for Windows patch information (1,000 business servers): At least 60 minutes
  - Discovery execution interval for Linux patch information (500 business servers): At least 90 minutes
  - Discovery execution interval for Solaris patch information (500 business servers): At least 60 minutes
  - Discovery execution interval for Fujitsu middleware patch information and Fujitsu middleware product information (1,500 business servers): At least 120 minutes

  The execution interval for regular discovery will be at least 210 minutes (i.e., 90 + 120 minutes).

Note

If the system is stopped at the specified discovery start time (due to maintenance, for example), discovery will be performed at the next scheduled time.

3.9 Registering a Configuration Baseline Creation Schedule

Register the configuration baseline creation.schedule.

For Windows, register the following program with the Task Scheduler:

For Linux, add the following program to cron. Refer to the cron manuals for information on cron.

- [Program]

  [Windows]

  ```
  %SWCFMGM_INSTALL_PATH%\CMDB\FJSVcmdbm\bin\snapcreate.exe
  ```

  [Linux]

  ```
  /opt/FJSVcfmgm/CMDB/FJSVcmdbm/bin/snapcreate.sh
  ```

- [Options]

  ```
  -q
  ```

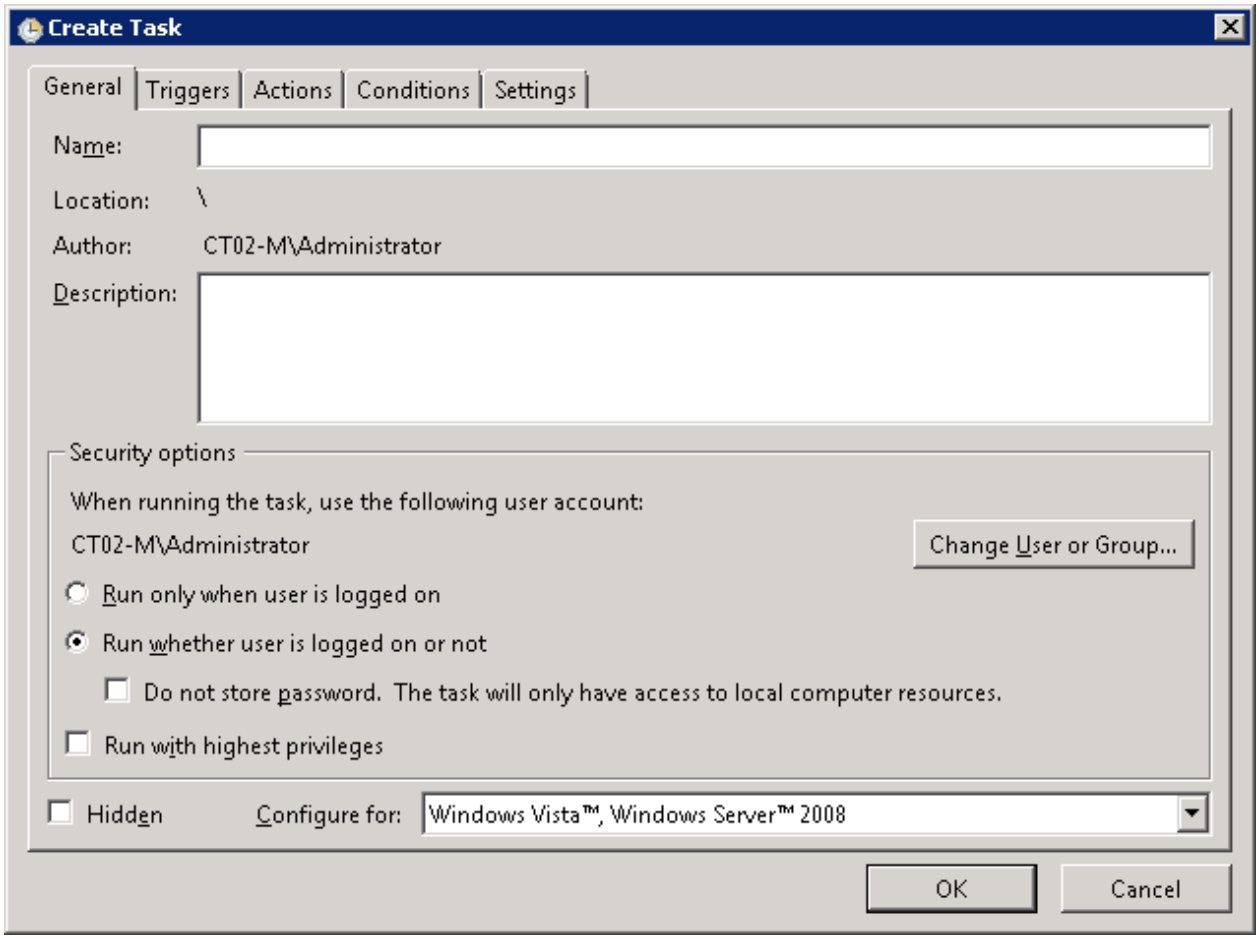
[Windows]

The following example shows how to register a schedule with the Task Scheduler:

1. Log in to Windows using an account that belongs to the Administrators group.
2. Select **Start** >> **Administrative Tools** >> **Task Scheduler**.

   The **Task Scheduler** window will be displayed.
3. Select **Action** >> **Create Task**.

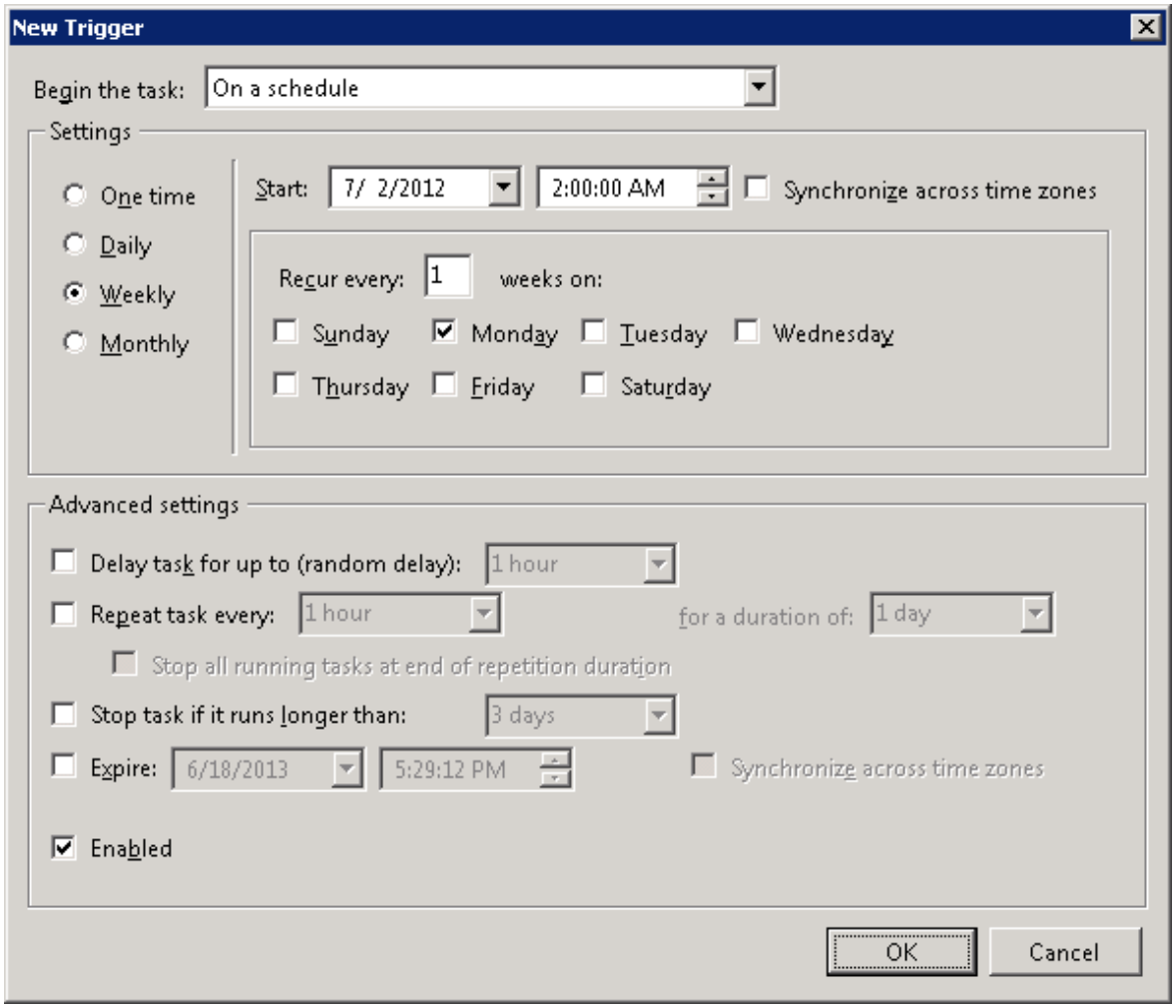
   The **Create New** window will be displayed.



   a. Enter a task name in the **Name** field in the **General** tab, and then select **Run whether user is logged on or not**.

b. Select the **Triggers** tab, and then click the **New** button.

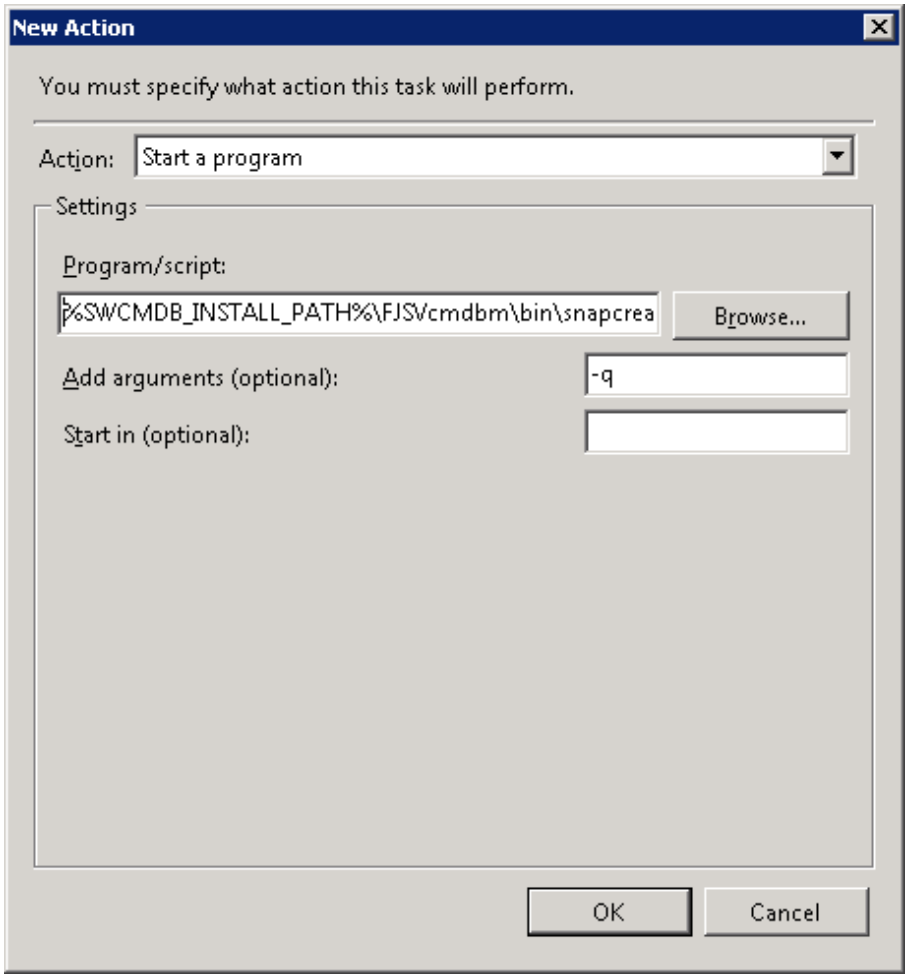
The **New Trigger** window will be displayed.



Register the configuration baseline creation schedule.

c. Select the **Actions** tab, and then click the **New** button.

The **New Action** window will be displayed.



Configure the following settings:

- Select **Start a program** from the **Action** pull-down menu.
- Add the following command to the **Program/script** field:

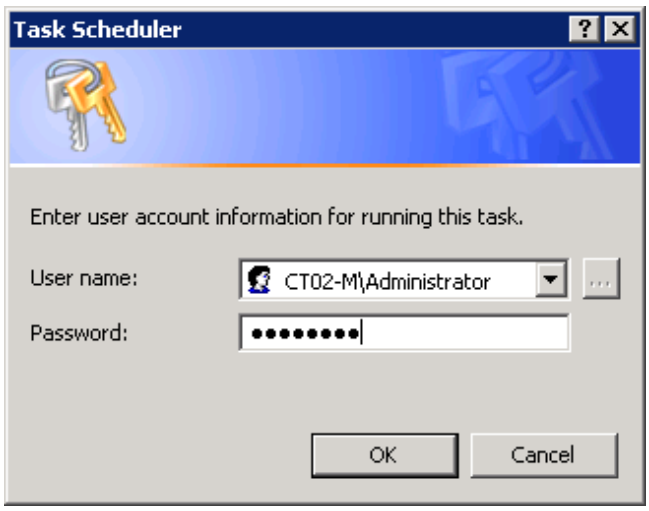
```
%SWCFMGM_INSTALL_PATH%\CMDB\FJSVcmdbm\bin\snapcreate.exe
```

- Add the following argument to the **Add arguments (optional)** field:

```
-q
```

4. Click the **OK** button in the **Create Task** window.

   The following window will be displayed:



5. Enter the user name for an account belonging to the Administrators group and the corresponding password, and then click the **OK** button.

[Linux]

The following example shows how to register the program with cron:

Perform the following procedure as the root user:

1. Check that the cron service has started

```
>/etc/rc.d/init.d/crond status
crond (pid  xxx) is running...
```

2. If the cron service is not running, use the following command to start the cron service:

```
>/etc/rc.d/init.d/crond start
Starting crond:
```

Point

The cron service normally starts when the operating system starts.

By executing the following command, it is possible to check whether the cron service has been set to start when the operating system starts:

```
>chkconfig --list crond
crond           0:off   1:off   2:on    3:on    4:on    5:on    6:off
```

If the cron service has been set to start when the operating system starts, the numbers 2, 3, 4 and 5 above are set to "on" as shown above.

To set the cron service to start when the operating system starts, execute the following command:

```
>chkconfig --level 2345 crond on
```

3. Execute the following command to edit the schedule definitions:

```
>crontab -e
```

Executing the "crontab -e" command starts the vi editor. Refer to the vi editor manuals for information on the vi editor.

Example: Creating a configuration baseline every Monday at 6:00

```
0 6 * * 1 /opt/FJSVcfmgm/CMDB/FJSVcmdbm/bin/snapcreate.sh -q > /dev/null 2>&1
```

Note

- Set up a schedule so that configuration baselines are created no more than once a week.
- Take care that the configuration baseline creation schedule does not conflict with the regular discovery schedule. If the creation of a configuration baseline conflicts with the execution of regular discovery, the configuration baseline will not be created correctly.

3.10 Setting up Related Software

This section explains how to set up related software.

3.10.1 Settings for Linking to ServerView Resource Orchestrator

In order to make OpenStack server groups and servers management targets of this product, ServerView Resource Orchestrator must be installed before this product is installed. For details, refer to "Chapter 2 Installation".

3.10.2 Settings for Linking to OpenStack

In order to make OpenStack server groups and servers management targets of this product, it is necessary to collect the information of OpenStack stacks and instances by performing discovery of OpenStack information. This section explains the settings necessary for collecting the information of OpenStack stacks and instances.

Settings in OpenStack

This section explains the settings necessary in OpenStack. When discovering OpenStack information, it is not necessary to install agents of this product on the servers where OpenStack is installed.

Creating a service access user

Discovery of OpenStack information is performed by accessing OpenStack services as a service access user registered with this product, and collecting information using the OpenStack API. This requires registration of a service access user with the following privileges for OpenStack beforehand.

- Admin privileges granted to all projects

Note

- If admin privileges are not granted to the main project, discovery of OpenStack information will fail.
- Information of stacks and instances in the project for which privileges have not been granted correctly is not collected. If the main project or the domain to which the main project belongs is disabled, discovery of OpenStack information will fail.
- Information of stacks and instances in disabled projects is not collected.

Project and user configuration

The tenant to which OpenStack server groups and servers belong and the server group owner are decided as follows:

- Stacks and instances are registered as the server group and servers belonging to the tenant that has the same name as the managed project.
- The user with the same ID as the OpenStack user who created the corresponding stack is assigned as the server group owner.

For this reason, it is necessary to match the project and user configuration of OpenStack and the tenant and user configuration of this product, in advance. When doing so, ensure the following information matches:

- The project name of the OpenStack project and the display name of the tenant of this product
- The user name of the OpenStack user and the user ID of the user of this product

If the tenant of this product corresponding to the OpenStack project is not found during discovery of OpenStack information, the stacks and instances in the project will be registered as the server groups and servers of the default tenant. If the user of this product corresponding to the OpenStack user is not found, the owner of the server group will not be configured.

Setting images

In order to collect the following OS information of the server, it is necessary to set the values for the custom attributes (metadata) of the image of the instance. Set the values for the following custom attributes (metadata) keys according to the information of the OpenStack site.

OS information	Key	Remarks
OS type	os_distro	When a character string containing "Windows" is specified, Windows is set for the OS type. Otherwise, Linux is set. This value is not case-sensitive.
OS name	- os_distro - os_version	- When the values for os_distro and os_version are not set, the OS name is not collected.
Architecture	architecture	-

Settings in Systemwalker Software Configuration Manager

This section explains the settings required by this product.

Registering a service access user

It is necessary to register a service access user with this product before performing discovery of OpenStack information. Set the information for the service access user in the discovery definition file. For details on discovery definition files, refer to "Discovery Definition File" in the Reference Guide.

Configuring the operation management network

Specify the subnet address of the operation management network in the "Hardware discovery definition file". For details on the "Hardware discovery definition file", refer to the Reference Guide.

3.10.3 Settings for Managing Windows Patches

To manage Windows patches, managed servers must be registered as the computers managed by WSUS.

There are the following two methods for registering managed servers as the computers managed by WSUS, as published by Microsoft. Refer to the information published by Microsoft for details.

- Modifying the registry
- Editing the group policy (gpedit.msc)

Information

Systemwalker Software Configuration Manager provides a connection destination repository server registration command (swcfmg_register_repsv) in order to simplify the task of registering managed servers as the computers managed by WSUS. Refer to the *Reference Guide* for information on the connection destination repository server registration command.

Note the following points when using the connection destination repository server registration command.

When creating a managed server

Either the tenant administrator or a tenant user should obtain the connection destination repository server registration command from the infrastructure administrator, and then execute the command by copying it to a directory on the managed server.

Registering an existing managed server as the computer managed by WSUS

Either the tenant administrator or a tenant user should obtain the connection destination repository server registration command from the infrastructure administrator, and then execute the command by copying it to an arbitrary directory on the business server.

3.10.4 Settings for Managing Linux Patches

To manage Linux patches, the Yellowdog Updater Modified (yum) repository server that managed servers refer to must be set up on the business servers. Refer to "2.3.1 Points to Note before Installing on Business Servers" for details.

3.10.5 Settings for UpdateAdvisor (Middleware)

To manage software information and patches for Fujitsu middleware, the latest version of the UpdateAdvisor (middleware) must be installed on managed servers. Refer to "2.3.1 Points to Note before Installing on Business Servers" for details.

Chapter 4 Setup Cancellation

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

4.1 Points to Note before Canceling the Setup

Note the following points when canceling the setup.

4.1.1 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 "Backing up the Admin Server" in the *Operation Guide* for information on the various assets to back up.

4.2 Canceling the Setup for the Admin Server

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

4.2.1 Tasks Required before Setup Cancellation

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

4.2.1.1 Deleting the Discovery Schedule

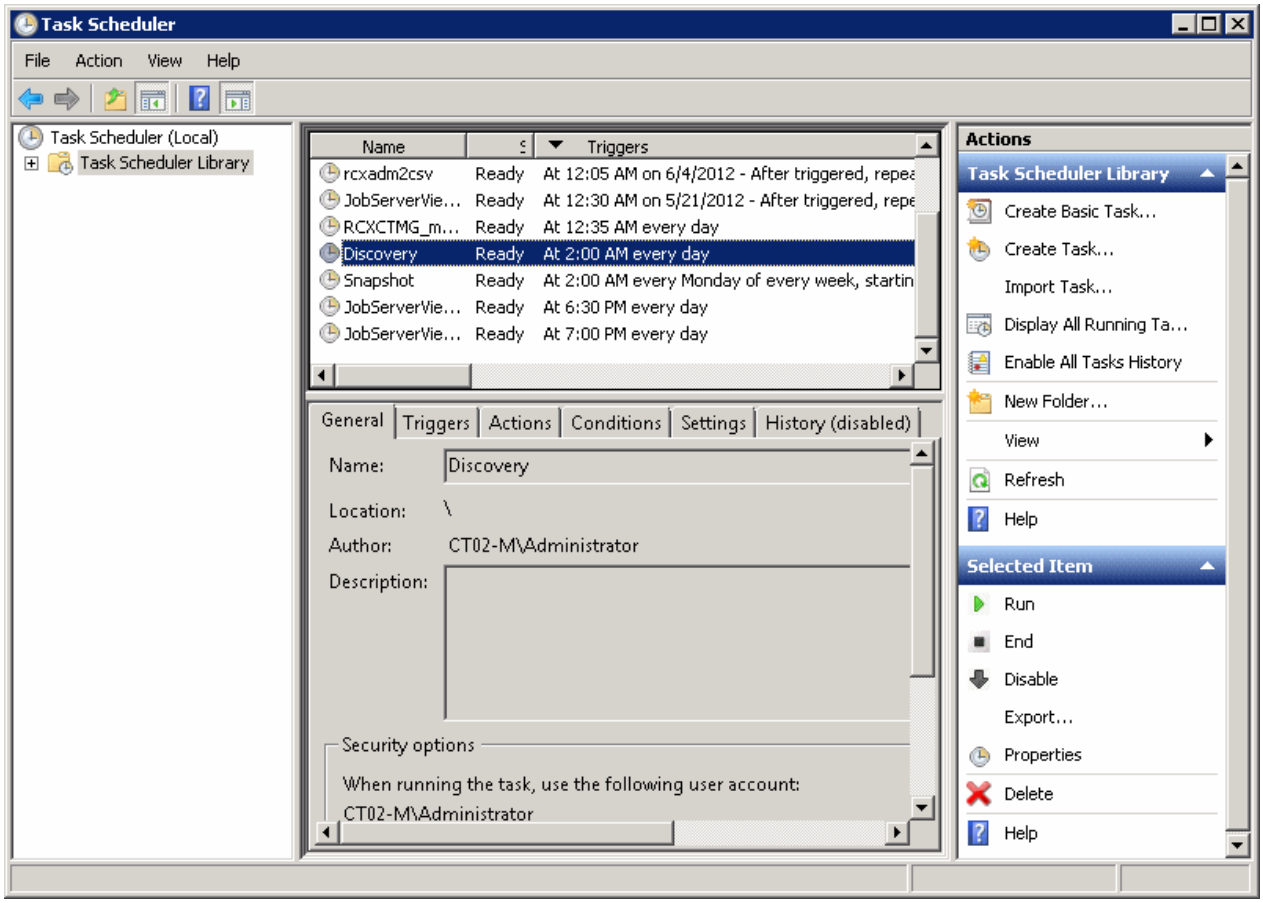
[Windows]

Delete the discovery schedule that has been registered with the Task Scheduler.

1. Log in to Windows using an account that belongs to the Administrators group.

2. Select **Start** >> **Administrative Tools** >> **Task Scheduler**.

   The **Task Scheduler** window will be displayed.



3. Select the task to be deleted.
4. Delete the task by selecting **Action** >> **Delete**.

[Linux]

Delete the discovery schedule that has been registered with cron.

Perform the following procedure as the root user:

1. Execute the following command to edit the schedule definitions:

```
>crontab -e
```

   Executing the "crontab -e" command starts the vi editor. Refer to the vi editor manuals for information on the vi editor.

   Example: Deleting the following discovery schedule:

```
0 2 * * * /opt/FJSVcfmgm/bin/swcfmg_patch_updateinfo -repository
```

4.2.1.2 Deleting the Configuration Baseline Creation Schedule

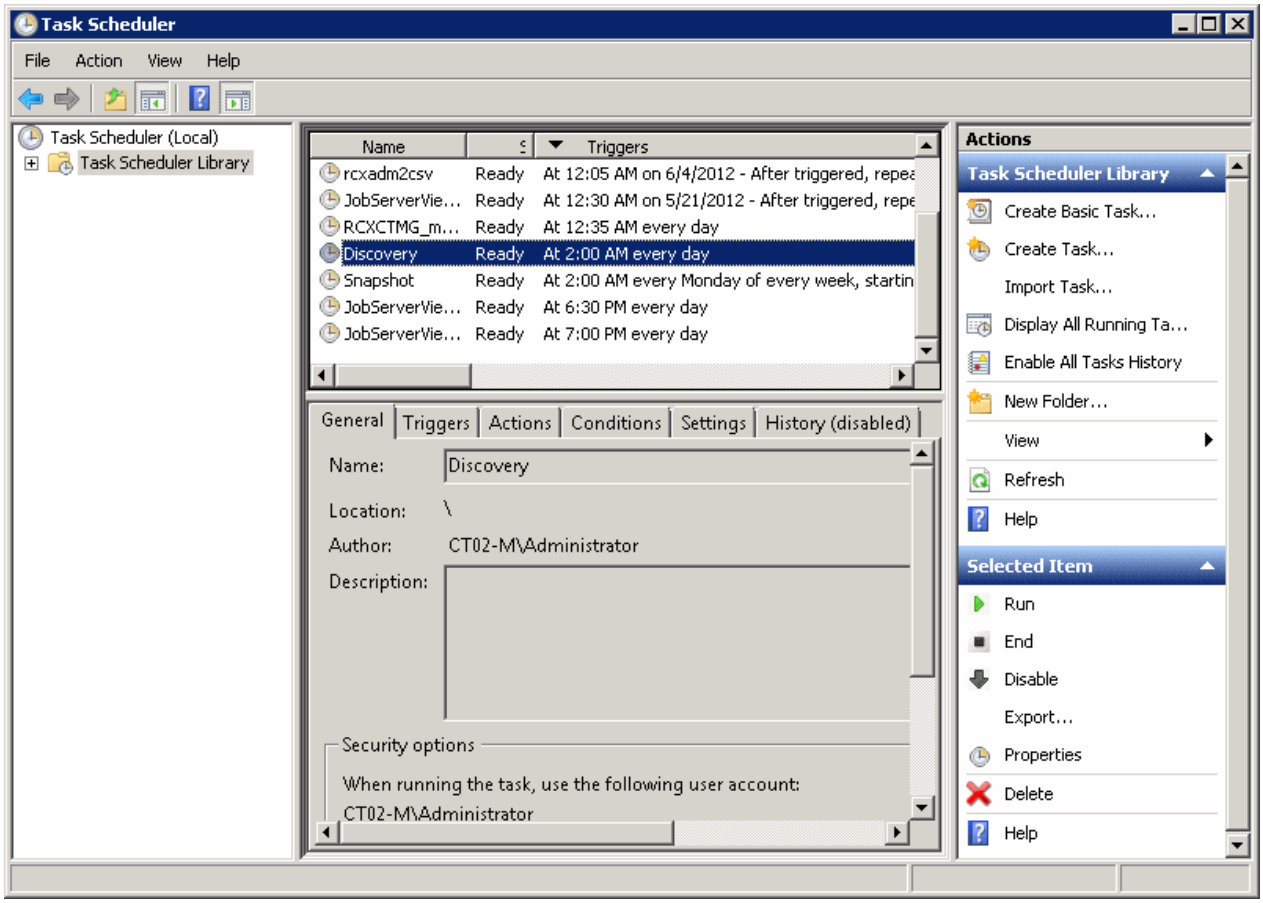
[Windows]

Delete the configuration baseline creation schedule that has been registered with the Task Scheduler.

1. Log in to Windows using an account that belongs to the Administrators group.

2. Select **Start** >> **Administrative Tools** >> **Task Scheduler**.

   The **Task Scheduler** window will be displayed.



3. Select the task to be deleted.
4. Delete the task by selecting **Action** >> **Delete**.

[Linux]

Delete the configuration baseline creation schedule that has been registered with cron.

Perform the following procedure as the root user:

1. Execute the following command to edit the schedule definitions:

   ```
   >crontab -e
   ```

   Executing the "crontab -e" command starts the vi editor. Refer to the vi editor manuals for information on the vi editor.

   Example: Deleting the following configuration baseline creation schedule:

   ```
   0 6 * * 1 /opt/FJSVcfmgm/CMDB/FJSVcmdbm/bin/snapcreate.sh -q
   ```

4.2.1.3 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
```

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

If operating the admin server with ServerView Resource Orchestrator linked, run the following command to stop ServerView Resource Orchestrator.

[Windows]

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

[Linux]

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

4.2.2 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 -u
```

[Linux]

```
/opt/FJSVcfmgm/bin/swcfmg_setup -u
```

Chapter 5 Uninstallation

This chapter explains how to uninstall Systemwalker Software Configuration Manager.

5.1 Pre-uninstallation Notes

Before uninstalling Systemwalker Software Configuration Manager, the environment settings for Systemwalker Software Configuration Manager must be canceled. Refer to "Chapter 4 Setup Cancellation" for information on setup cancellation.

5.2 Uninstalling from the Admin Server

5.2.1 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 4 Setup Cancellation" for details.

5.2.2 Uninstalling Systemwalker Software Configuration Manager

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

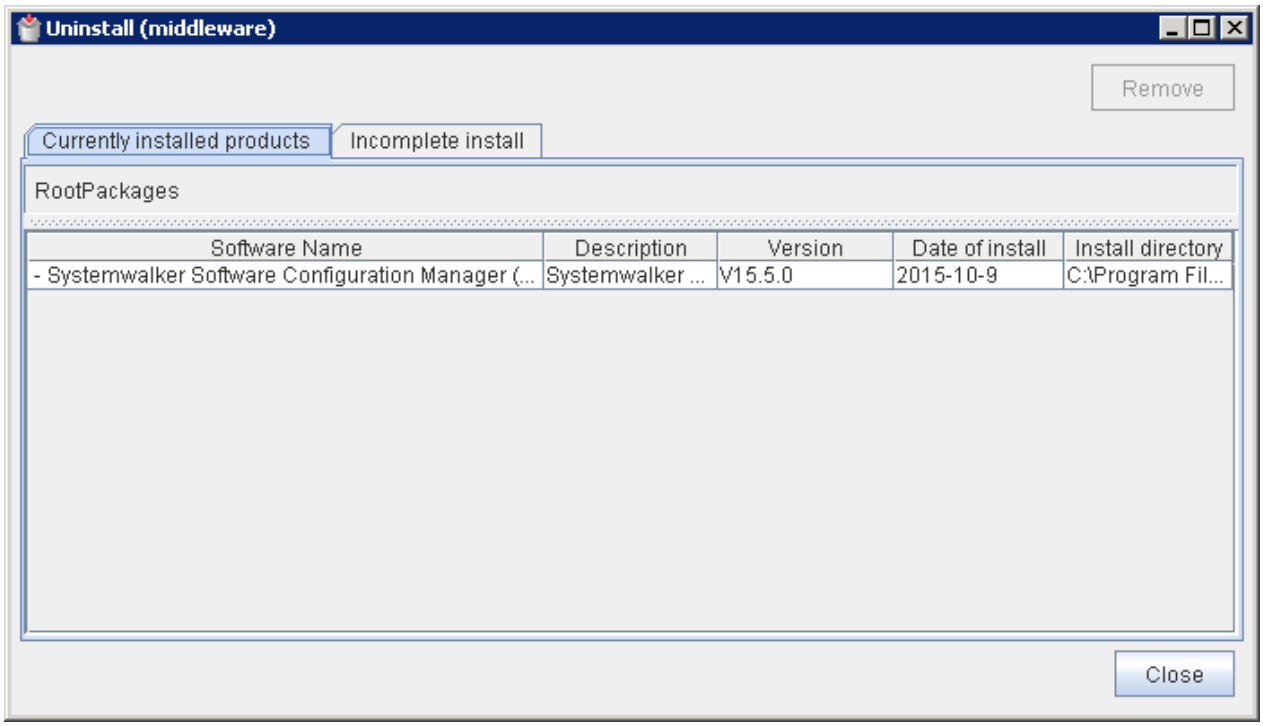
Uninstall the product from a Windows or a Linux machine.

[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.

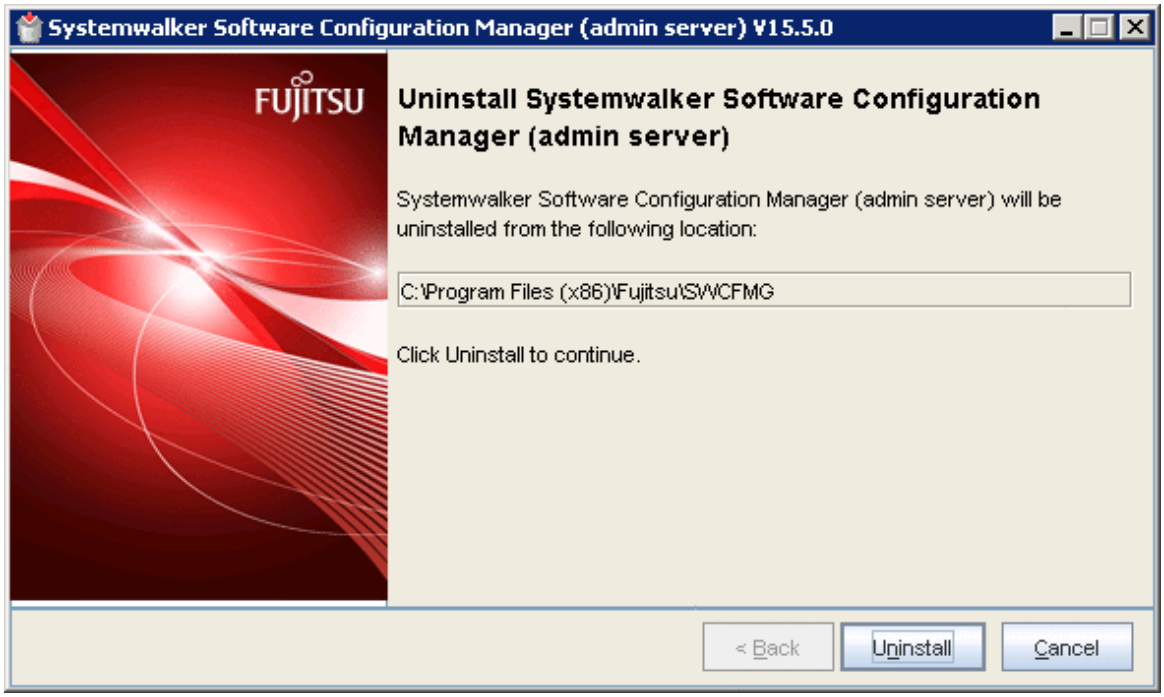


   When uninstalling Systemwalker Software Configuration Manager because of installation failure or for some other reason, Systemwalker Software Configuration Manager may be displayed in the **Incomplete install** tab. If Systemwalker Software

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.

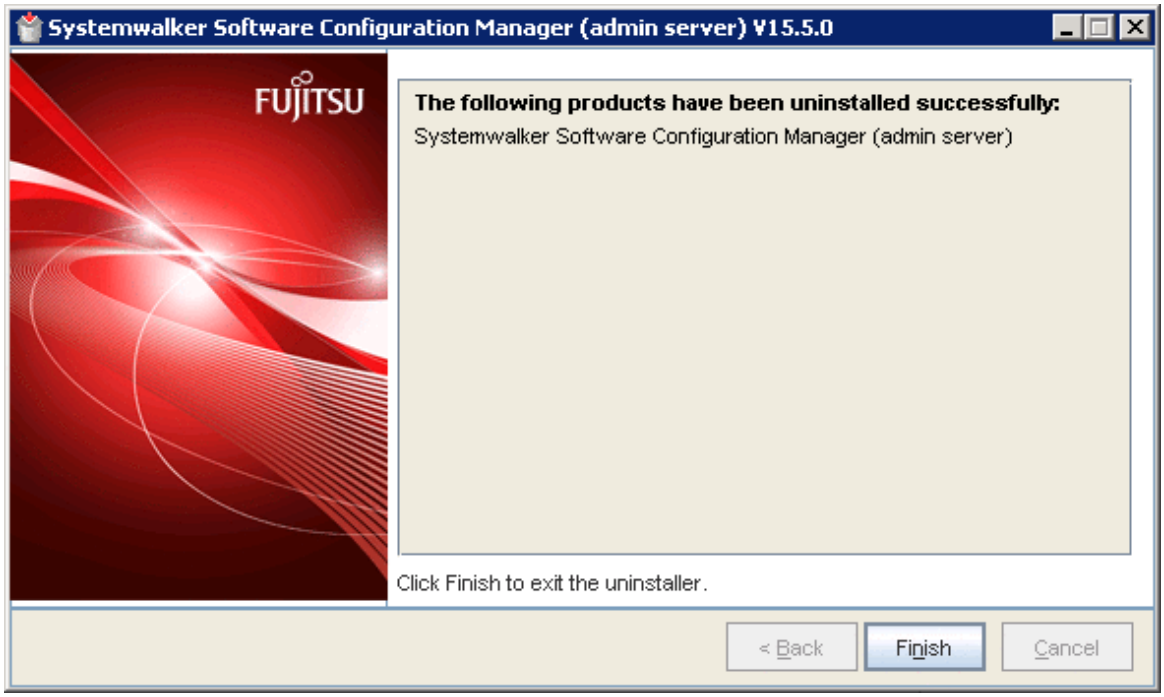
3. The **Uninstall Systemwalker Software Configuration Manager (admin server)** window will be displayed.

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



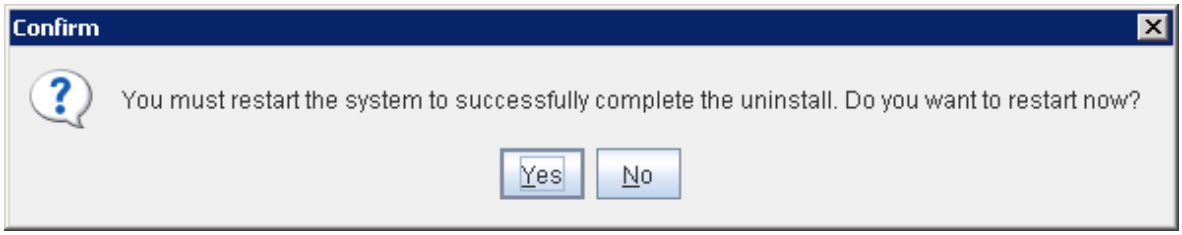
4. Upon successful completion, the following window will be displayed.

   Click the **Finish** button.



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

   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) V15.5.0

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: V15.5.0
    Manufacturer: Fujitsu Limited
    Install directory: /opt
    Date of install: 2015-7-10


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.
```

5.2.3 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 FJSVsmee package:

```
rpm -e FJSVsmee
```

5.2.4 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 FJSVsclr package:

```
rpm -e FJSVsclr
```

5.3 Uninstalling from Business Servers

This section explains how to uninstall a Systemwalker Software Configuration Manager agent from business servers.

5.3.1 Uninstalling Systemwalker Software Configuration Manager

This section explains how to uninstall a Systemwalker Software Configuration Manager agent from business servers.

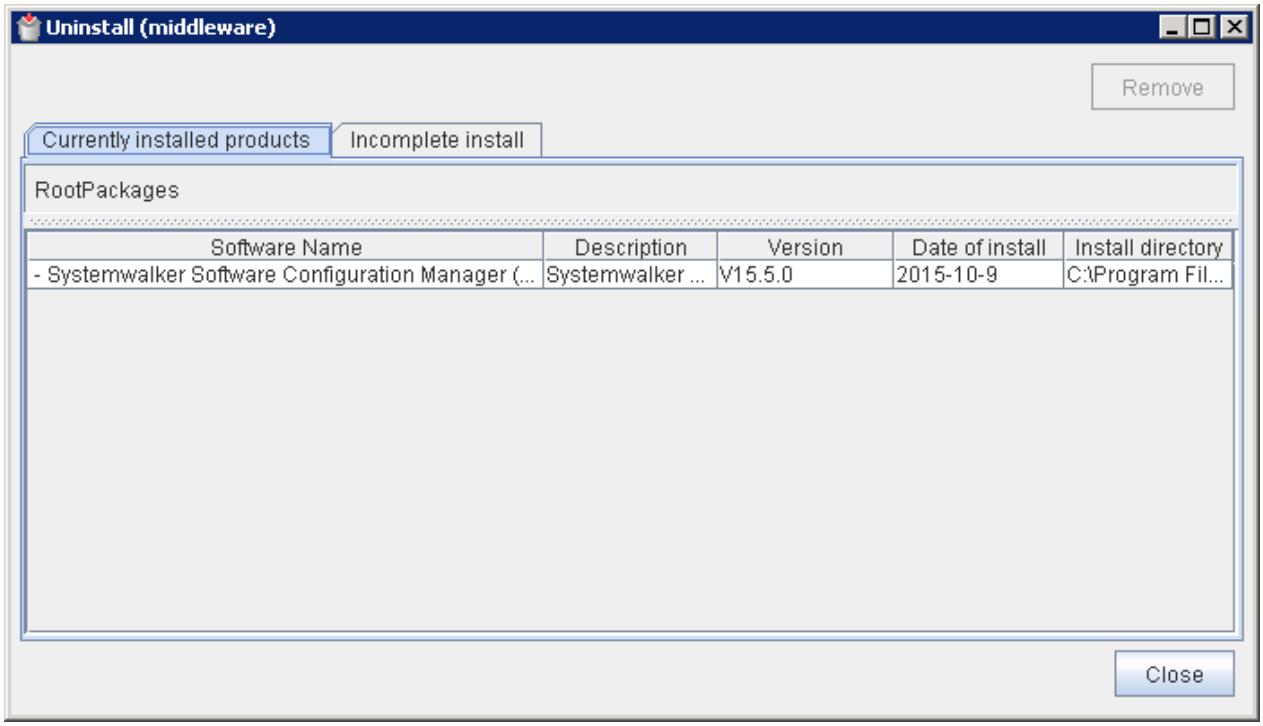
If necessary, uninstall the agents from a Windows, Linux, or Solaris machine.

[Windows]

1. Log in with administrator privileges.
2. Select **Start** >> **All Programs** or **All apps** >> **Fujitsu** >> **Uninstall (middleware)**.

   The uninstaller will start.

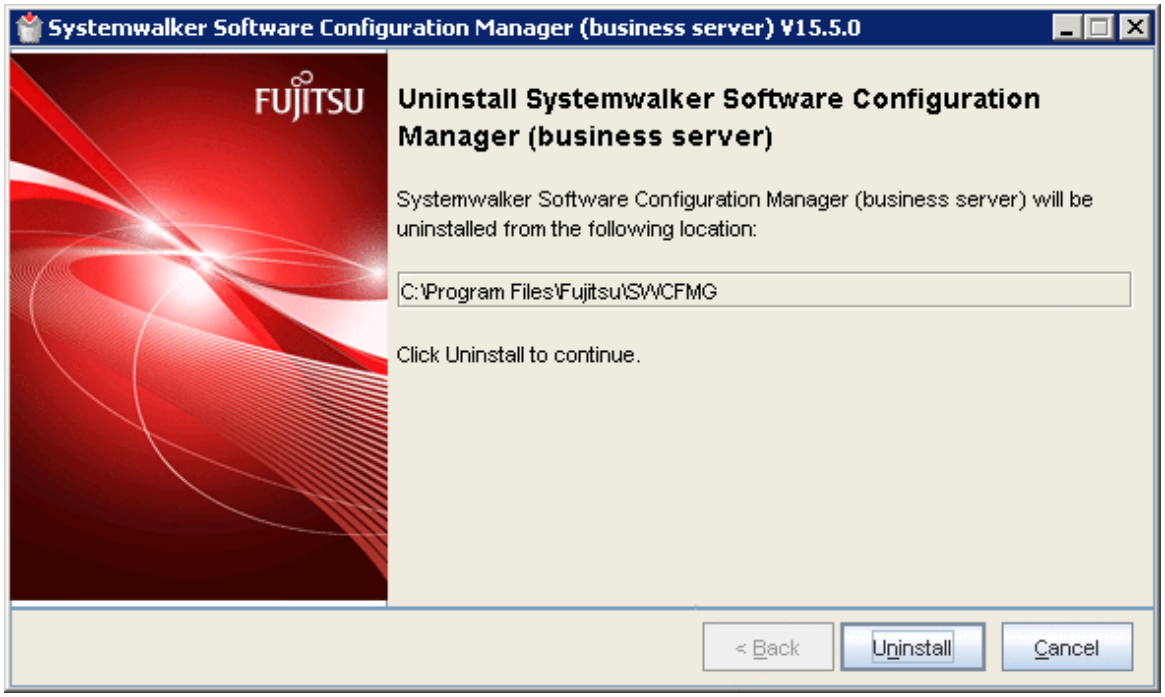
Select **Systemwalker Software Configuration Manager (business server),** and then click the **Delete** button.



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.

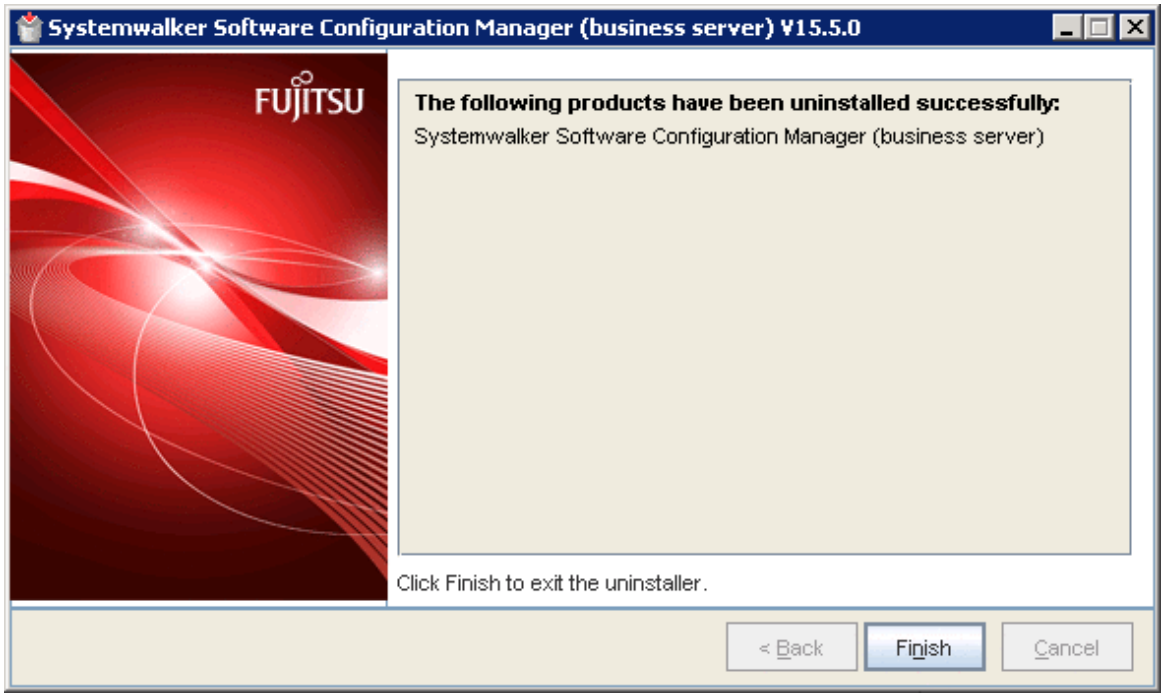
3. The **Uninstall Systemwalker Software Configuration Manager (business server)** window will be displayed.

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



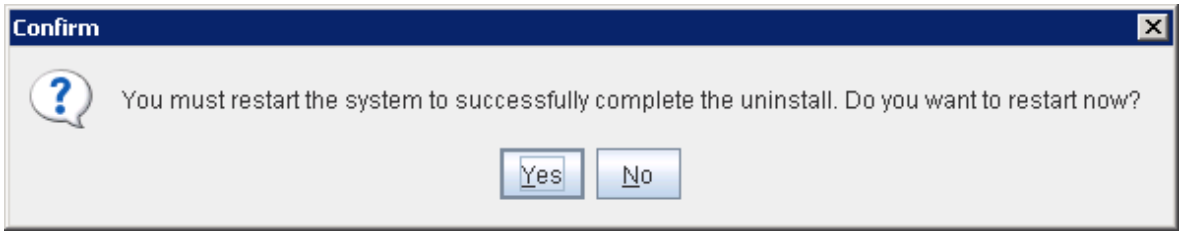
4. Upon successful completion, the following window will be displayed.

   Click the **Finish** button.



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

   Click the **Yes** button to restart the system.



[Linux] [Solaris]

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 (business server).**

   Entering "q" closes the uninstaller.

```
Loading Uninstaller...


Currently installed products
1. Systemwalker Software Configuration Manager (business server) V15.5.0.


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 (business server)
    Description: Systemwalker Software Configuration Manager (business server)
    Version: V15.5.0
    Manufacturer: Fujitsu Limited
    Install directory: /opt
    Date of install: 2015-2-10


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

5. The uninstallation will start.

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

```
Uninstalling...


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


Exiting Uninstaller.
```

5.4 Uninstalling from Linkage Servers

5.4.1 Uninstalling Systemwalker Software Configuration Manager

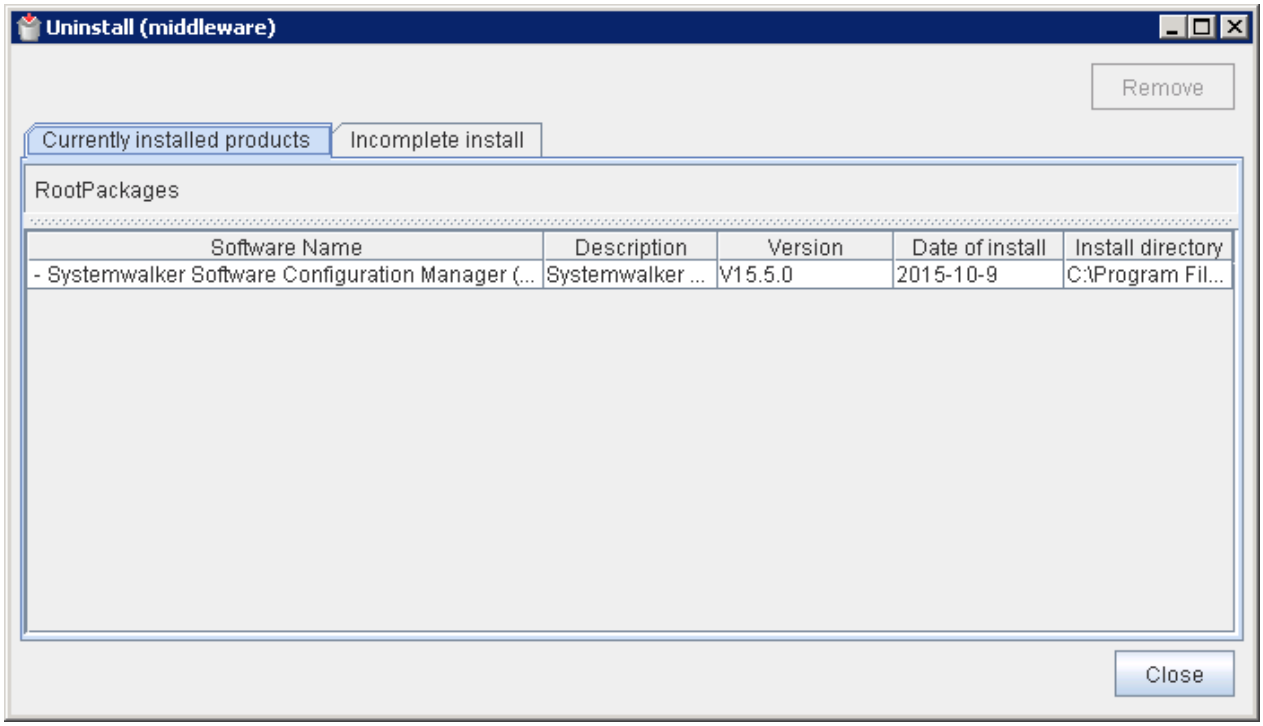
This section explains the procedure for uninstalling Systemwalker Software Configuration Manager agents from linkage servers.

[Windows]

1. Log in with administrator privileges.
2. Select **Start** >> **All Programs** or **All apps** >> **Fujitsu** >> **Uninstall (middleware)**.

   The uninstaller will start.

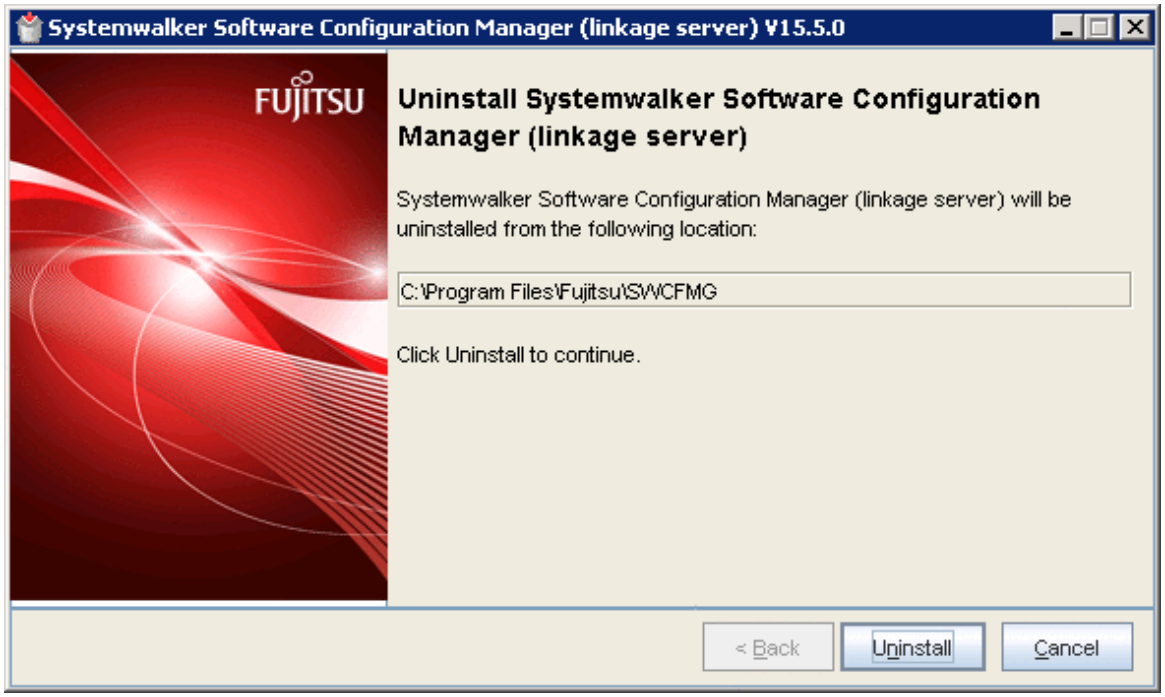
Select **Systemwalker Software Configuration Manager (linkage server),** and then click the **Delete** button.



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.

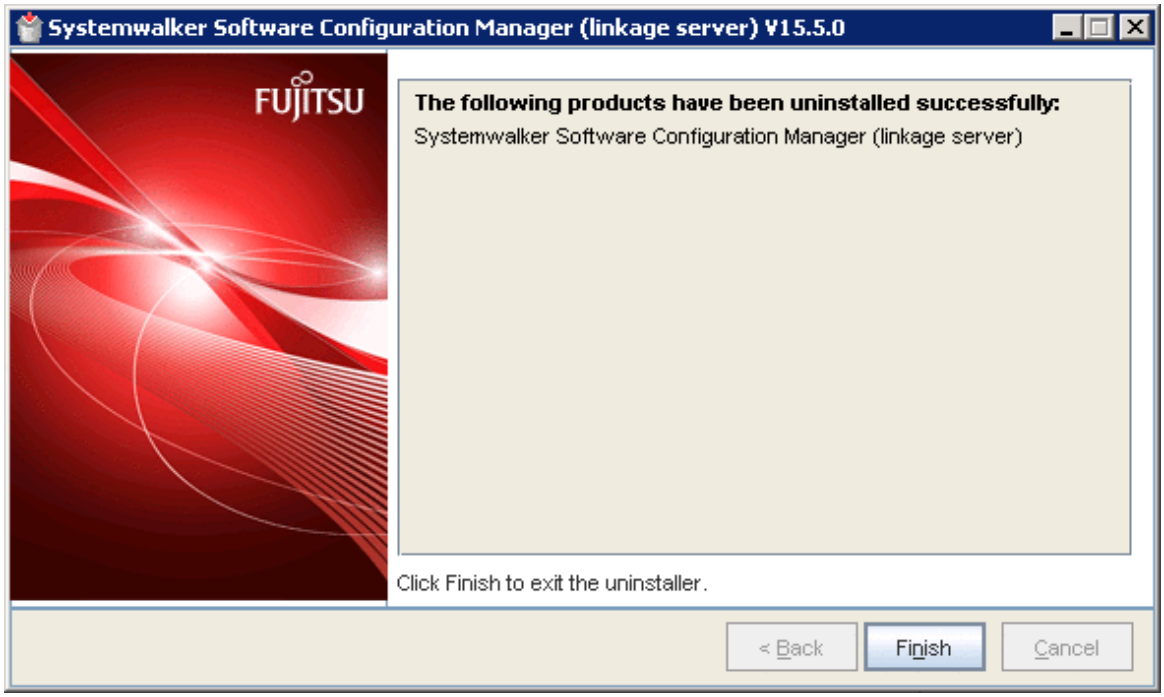
3. The **Uninstall Systemwalker Software Configuration Manager (linkage server)** window will be displayed.

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



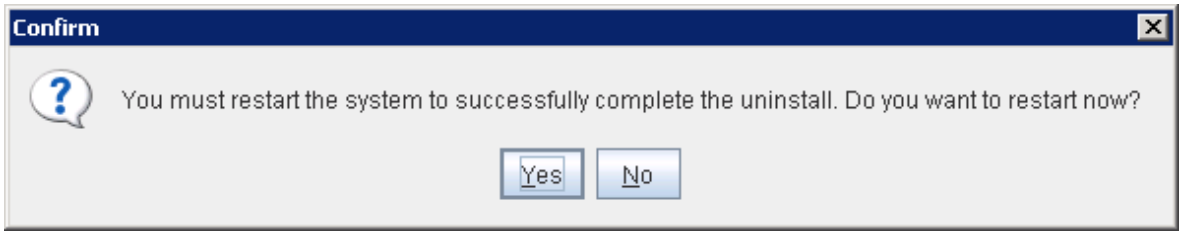
4. Upon successful completion, the following window will be displayed.

   Click the **Finish** button.



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

   Click the **Yes** button to restart the system.



[Linux]

Refer to "5.3 Uninstalling from Business Servers" for details on how to uninstall Systemwalker Software Configuration Manager.

5.5 Post-uninstallation Notes

5.5.1 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 - if this happens, manually delete any unnecessary directories or files.

[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 folders are not being used by other products, and delete them manually if they are not required.

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

- /opt/FJSVsmee
- /etc/opt/FJSVsclr

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

After this product is uninstalled, the following data remains on the directory service. Check that these folders are not being used by other products, and delete them manually if they are not required. For details on the following information, refer to "Managing User Information".

- User information registered using the user information management command
- The following group information used by this product
  - AdminRole
  - swrba_Exe
  - Role
  - IflowUsers
  - IflowGroups

5.5.2 Points to Note after Uninstalling from the Business Server

This section provides points to note after uninstalling the Agent on the linkage server.

Files and directories that may remain after uninstalling Systemwalker Software Configuration Manager

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

[Windows]

The Agent installation directory and files may still remain after the uninstallation - if this happens, manually delete any unnecessary directories or files.

[Linux] [Solaris]

The following directories and files in these directories may remain after the uninstallation - if this happens, manually delete any unnecessary directories or files.

- /etc/opt/FJSVcfmgb
- /etc/opt/FJSVlnkcf
- /opt/FJSVcfmgb
- /opt/FJSVlnkcf
- /var/opt/FJSVcfmgb
- /var/opt/FJSVlnkcf

Note

The above directory is for when installation is performed using the default value. If you have installed on Solaris and changed the installation destination, change the path to match the changed installation destination.

5.5.3 Points to Note after Uninstalling from the Linkage Server

This section provides points to note after uninstalling the Agent on the linkage 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.

When reinstalling Systemwalker Software Configuration Manager, be sure to delete them.

[Windows]

The Agent installation directory and files may still remain after the uninstallation - if this happens, manually delete any unnecessary directories or files.

[Linux]

Refer to "5.5.2 Points to Note after Uninstalling from the Business Server" for details on how to delete unnecessary directories.

5.5.4 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 V15.5.0 DISC1 (Admin Servers Program)" or "Systemwalker Software Configuration Manager Media Pack V15.5.0 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 V15.5.0 DISC1 (Admin Servers Program)" or "Systemwalker Software Configuration Manager Media Pack V15.5.0 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
     ```

  [Solaris]

  1. Log in to the system as a superuser.
  2. Insert the DVD-ROM.

     Insert the "Systemwalker Software Configuration Manager Media Pack V15.5.0 DISC1 (Admin Servers Program)" or "Systemwalker Software Configuration Manager Media Pack V15.5.0 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 -F udfs -r <DVD-ROM device> <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.

[Solaris]

```
/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
   ```

   [Solaris]

   ```
   # /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/

   [Solaris]

   /var/opt/FJSVcir/

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
```

[Solaris]

```
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 (*1) 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	No

Function	Port number/protocol	Changeable
	13325/tcp 13326/tcp 13327/tcp 13328/tcp 13331/tcp 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	Only during setup

Function	Port number/protocol	Changeable
	27567/tcp 27569/tcp	
Automated operation process group	21028/tcp 21029/tcp 21030/tcp 21031/tcp 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.

Linkage server

Port numbers for which communications from external servers must be allowed

Function	Port number/protocol	Changeable
File transfer infrastructure	9764/tcp	Yes

Business server

Port numbers for which communications from external servers must be allowed

Function	Port number/protocol	Changeable
File transfer infrastructure	9764/tcp	Yes

If Windows Server 2008 or Windows Server 2012 is being used as the operating system for the communication destination, the Windows firewall function is enabled by default, and so firewall exceptions need to be specified for the port numbers and protocols in the table above.

A.2 Procedure for Changing Ports

This section explains the procedure for changing ports.

A.2.1 When the Port Number for the File Transfer Infrastructure is Duplicated

The file transfer infrastructure uses port number 9764. If port number duplication occurs, this port number must be changed. Change the port number for the target server and for all the servers linking to that server.

Changing the content registered in the "services" file

[Windows]

Change the following port number in the "<*Windows system installation directory*>\SYSTEM32\DRIVERS\ETC\SERVICES" file to a free port number:

```
dtranh03    9764/tcp            #FJSVlnkcf
```

[Linux]

Change the following port number in the "/etc/services" file to a free port number:

```
dtranh03    9764/tcp            #FJSVlnkcf
```

[Solaris]

Change the following port number in the "/etc/services" file to a free port number:

```
dtranh03    9764/tcp            #FJSVlnkcf
```

Specify a port number between 1 and 65535.

Changing the network definition

For the port number specified in the network definition file for the file transfer infrastructure, specify the same value as the port number set above.

1. Stop the file transfer infrastructure.

   [Windows]

   - Admin server/linkage servers/business servers

     Stop the "Systemwalker File Transfer Library Control (SWCFMG)" service.

   [Linux]

   - Admin server/business servers

     Execute the following commands:

     ```
     # service FJSVlnkcf stop
     ```

   [Solaris]

   - Business server

     Execute the following commands:

     ```
     # /etc/init.d/FJSVlnkcf stop
     ```

2. Change the port number in the following network definition file:

   [Windows]

   - Admin server/linkage servers/business servers

     ```
     %LNKCF_HOME%\lnk03\gen\network_def.txt
     * The installation folder for the file transfer infrastructure is set to the "%LNKCF_HOME
     %" environment variable.
       The default folder for the admin server is C:\Fujitsu\Systemwalker\SWCFMGM\FJSVlnkcf.
       The default folder for linkage servers is C:\Fujitsu\Systemwalker\SWCFMGA\FJSVlnkcf.
       The default folder for business servers is C:\Fujitsu\Systemwalker\SWCFMGB\FJSVlnkcf.
     ```

   [Linux]

- Admin server/business servers

```
/opt/FJSVlnkcf/lnk03/GEN/network_def.txt
```

[Solaris]

- Business server

```
/opt/FJSVlnkcf/lnk03/GEN/network_def.txt
```

3. After changing the network definition file, execute the following command to update the definition information:

   [Windows]

   - Admin server/linkage servers/business servers

   ```
   %LNKCF_HOME%\lnk03\bin\f3jtlxgentrn.exe -i 03 %LNKCF_HOME%\lnk03\gen\network_def.txt
   ```

   [Linux]

   - Admin server/business servers

   ```
   /opt/FJSVlnkcf/lnk03/bin/f3jtlxgentrn -i 03 /opt/FJSVlnkcf/lnk03/GEN/network_def.txt
   ```

   [Solaris]

   - Business server

   ```
   /opt/FJSVlnkcf/lnk03/bin/f3jtlxgentrn -i 03 /opt/FJSVlnkcf/lnk03/GEN/network_def.txt
   ```

4. Start the file transfer infrastructure.

   [Windows]

   - Admin server/linkage servers/business servers

     Start the "Systemwalker File Transfer Library Control (SWCFMG)" service.

   [Linux]

   - Admin server/business servers

     Execute the following commands:

   ```
   # service FJSVlnkcf start
   ```

   [Solaris]

   - Business server

     Execute the following commands:

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

A.2.2 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 Settings for Using Business Servers/Linkage Servers Using Systemwalker Software Configuration Manager V15.4.0 or Earlier

This appendix explains the configuration procedures and advisory notes for using business servers and linkage servers using Systemwalker Software Configuration Manager V15.4.0 or earlier.

For the available versions of the business servers and linkage servers, refer to the "Release Notes".

B.1 Connection Settings for File Transfer Infrastructure

Systemwalker Runbook Automation built i When using business servers and linkage servers using Systemwalker Software Configuration Manager V15.4.0 or earlier, it is necessary to modify connection settings for the file transfer infrastructure according to the settings of the operation environment. This section explains the procedure for modifying the connection settings for the admin server and the connection settings for the file transfer infrastructure of the business servers and linkage servers using Systemwalker Software Configuration Manager V15.4.0 or earlier.

B.1.1 Changing Admin Server Settings

Perform the following procedure to modify the connection settings for the file transfer infrastructure of the admin server for Systemwalker Software Configuration Manager.

1. Stop the file transfer infrastructure.

   [Windows]

   Stop the "Systemwalker File Transfer Library Control (SWCFMG)" service.

   [Linux]

   Execute the following commands:

```
# service FJSVlnkcf stop
```

2. Modify the network definitions.

   a. Change the port number in the following network definition file:

      [Windows]

```
%LNKCF_HOME%\lnk03\gen\network_def.txt
* The installation folder for the file transfer infrastructure is set for the "%LNKCF_HOME
%" environment variable.
```

      [Linux]

```
/opt/FJSVlnkcf/lnk03/GEN/network_def.txt
```

   b. Modify the value for the following *<Port number of the file transfer infrastructure (FJSVlnkcf) for business servers and linkage servers using Systemwalker Software Configuration Manager V15.4.0 or earlier>:*

```
path name=w_path7
         :
port=<Port number of the file transfer infrastructure (FJSVlnkcf) for business servers and
linkage servers using Systemwalker Software Configuration Manager V15.4.0 or earlier>
         :
```

Note

<Port number of the file transfer infrastructure (FJSVlnkcf) for business servers and linkage servers using Systemwalker Software Configuration Manager V15.4.0 or earlier> is the port number for the file transfer infrastructure (FJSVlnkbs) that was used by the patch application function or the software parameter settings function. Do not change any parameter values other than the port number.

c. After modifying the network definition file, execute the following command to reflect the changes:

[Windows]

```
%LNKCF_HOME%\lnk03\bin\f3jtlxgentrn.exe -i 03 %LNKCF_HOME%\lnk03\gen\network_def.txt
```

[Linux]

```
/opt/FJSVlnkcf/lnk03/bin/f3jtlxgentrn -i 03 /opt/FJSVlnkcf/lnk03/GEN/network_def.txt
```

3. Start the file transfer infrastructure.

[Windows]

Start the "Systemwalker File Transfer Library Control (SWCFMG)" service.

[Linux]

Execute the following commands:

```
# service FJSVlnkcf start
```

B.1.2 Changing Business Server Settings

Perform the following procedure to modify the connection settings for the file transfer infrastructure of the business servers with Systemwalker Software Configuration Manager V15.4.0 or earlier.

1. Stop the file transfer infrastructure.

[Windows]

Stop the "Systemwalker File Transfer Library Control" service.

[Linux]

Execute the following commands:

```
# service FJSVlnkbs stop
```

[Solaris]

Execute the following commands:

```
# /etc/init.d/FJSVlnkbs stop
```

2. Modify the network definitions.

a. Change the port number in the following network definition file:

[Windows]

```
%LNKBS_HOME%\lnk02\gen\network_def.txt
* The installation folder for the file transfer infrastructure is set for the "%LNKBS_HOME
%" environment variable.
```

[Linux/Solaris]

```
/opt/FJSVlnkbs/lnk02/GEN/network_def.txt
```

b. Modify the value for the following <Port number of the file transfer infrastructure (FJSVlnkcf) for the admin server>:

```
path name=w_path7
        :
port=<Port number of the file transfer infrastructure (FJSVlnkcf) for the admin server>
        :
```

Note

<Port number of the file transfer infrastructure (FJSVlnkcf) for the admin server> is the port number of the file transfer infrastructure (FJSVlnkcf) for the admin server of Systemwalker Software Configuration Manager. Do not change any parameter values other than the port number.

c. After modifying the network definition file, execute the following command to reflect the changes:

[Windows]

```
%LNKBS_HOME%\lnk02\bin\f3jtlxgentrn.exe -i 02 %LNKBS_HOME%\lnk02\gen\network_def.txt
```

[Linux/Solaris]

```
/opt/FJSVlnkcf/lnk02/bin/f3jtlxgentrn -i 02 /opt/FJSVlnkcf/lnk02/GEN/network_def.txt
```

3. Start the file transfer infrastructure.

[Windows]

Start the "Systemwalker File Transfer Library Control" service.

[Linux]

Execute the following commands:

```
# service FJSVlnkbs start
```

[Solaris]

Execute the following commands:

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

B.1.3 Changing Linkage Server Settings

Perform the following procedure to modify the connection settings for the file transfer infrastructure of the linkage servers with Systemwalker Software Configuration Manager V15.4.0 or earlier.

1. Stop the file transfer infrastructure.

[Windows]

Stop the "Systemwalker File Transfer Library Control" service.

2. Modify the network definitions.

a. Change the port number in the following network definition file:

[Windows]

```
%LNKBS_HOME%\lnk02\gen\network_def.txt
* The installation folder for the file transfer infrastructure is set for the "%LNKBS_HOME
%" environment variable.
```

b. Modify the value for the following *<Port number of the file transfer infrastructure (FJSVlnkcf) for the admin server>:*

```
path name=w_path7
        :
port=<Port number of the file transfer infrastructure (FJSVlnkcf) for the admin server>
        :
```

Note

<Port number of the file transfer infrastructure (FJSVlnkcf) for the admin server> is the port number of the file transfer infrastructure (FJSVlnkcf) for the admin server of Systemwalker Software Configuration Manager. Do not change any parameter values other than the port number.

c. After modifying the network definition file, execute the following command to reflect the changes:

[Windows]

```
%LNKBS_HOME%\lnk02\bin\f3jtlxgentrn.exe -i 02 %LNKBS_HOME%\lnk02\gen\network_def.txt
```

3. Start the file transfer infrastructure.

[Windows]

Start the "Systemwalker File Transfer Library Control" service.

Appendix C 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.

C.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 "3.2.1.3.1 Creating SSL Server Certificates3.2.1.3.1 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
   ```