


# **FUJITSU Software**

## **Systemwalker**

### **Service Catalog Manager**

A decorative horizontal band with a red-to-dark-red gradient. It features abstract, glowing white and red lines that swirl and intersect, creating a sense of motion and technology.

# **ServerView**

## **Resource Orchestrator**

### **Integration Guide**

Windows/Linux

B1WS-1164-01ENZ0(00)  
December 2013

# Preface

---

## Purpose of This Document

This document explains the introduction procedure of ServerView Resource Orchestrator (ROR) integration feature of Systemwalker Service Catalog Manager V15.3.

The purpose of this manual is as follows:

- To learn to be able to introduce ServerView Resource Orchestrator integration feature of Systemwalker Service Catalog Manager

## Intended Readers

This document is intended for people who introduce ServerView Resource Orchestrator integration feature of Systemwalker Service Catalog Manager.

This document assumes that readers already have the following knowledge:

- Basic knowledge of the operating system being used.

## Structure of This Document

This document is structured as follows:

### [Chapter 1 Abstract](#)

Explains abstract.

### [Chapter 2 Usage Scenarios](#)

Explains usage scenarios

### [Chapter 3 Installing and Configuring APP](#)

Explains Installing and Configuring APP.

### [Chapter 4 Practicing with the Service Controller](#)

Explains practicing with the service controller.

### [Chapter 5 Creating and Publishing Service](#)

Explains creating and publishing service.

### [Chapter 6 Unsetup and Uninstall](#)

Explains unsetup and uninstall.

### [Chapter 7 Operation](#)

Explains operation.

### [Appendix A Configuration Settings for APP](#)

Explains configuration settings for APP.

### [Appendix B Service Parameters for ROR Integration Feature](#)

Explains service parameters for ROR integration feature.

### [Appendix C Command for Creating Technical Service Definition](#)

Explains command for creating technical service definition.

### [Appendix D Example to Register the Service Controller](#)

Explains example to register the service controller.

### [Appendix E Note on ROR to be Integrated](#)

Explains note on ROR to be integrated.

## Conventions Used in This Document

The following names and symbols are used for explanation in the manuals.

- Product name

The manuals refer to Systemwalker Service Catalog Manager V15 as "Systemwalker Service Catalog Manager", omitting "V15".

- Manual name

- The manual sometimes refers to themselves as "this document".
- The titles of the manuals for this product are sometimes abbreviated to "Installation Guide" or "Operator's Guide" for example, omitting "Systemwalker Service Catalog Manager V15" in front of the manual name.

- Operating system specific information

This document provides the information about server operating systems using this product that is common to both the Windows version and the Linux version. Read only the information that is relevant to the operating system for the server that is being used.

Information that is only relevant to particular operating systems is distinguished from common information by attaching the following symbols:

- **Headline[Windows]**

The entire description of the title and sub-header is a topic specific to the [Windows] edition.

- **Headline[Linux]**

The entire description of the title and sub-header is a topic specific to the Linux edition.

If the description differs between the Windows and Linux editions, each description is distinguished by adding words "For Windows system, ..." and "For Linux system, ..." and explained separately.

- Symbols

- [ ] symbols

Window names, menu names and window item names provided by Systemwalker Service Catalog Manager are surrounded by these symbols.

- Symbols used in command

The symbols used with commands are explained below:

Entry example

[PARA= { <u>a</u>   b   c   ... } ]
-------------------------------------

Meaning of each symbol

Symbol	Meaning
[ ]	Items enclosed in square brackets are optional.
{ }	Select one of the items enclosed in braces ( { } ).
<u>  </u>	When all optional items enclosed in square brackets ( [ ] ) are omitted, the default value indicated by an underscore ( <u>  </u> ) is used.
	Select one of the items separated by vertical bars.
...	The item immediately before the ellipsis (...) can be repeatedly specified.

- Symbols used in the manual

The following note types are used in the manuals:



This note type highlights particularly important points.

## Point

This note type highlights information that is worth remembering.

## Information

This note type indicates additional reference information.

## See

This note type indicates references to other sources.

### - Notations of Operating Systems

This document abbreviates Operating systems as follows.

Official name	Abbreviation	
Microsoft(R) Windows Server(R) 2008 Standard Microsoft(R) Windows Server(R) 2008 Enterprise	Windows 2008	Windows
Microsoft(R) Windows Server(R) 2012 Standard Microsoft(R) Windows Server(R) 2012 Datacenter	Windows 2012	
Microsoft(R) Windows Server(R) 2012 R2 Standard Microsoft(R) Windows Server(R) 2012 R2 Datacenter	Windows 2012 R2	
Red Hat Enterprise Linux 6 (for Intel64) Red Hat Enterprise Linux 6 (for x86) Red Hat Enterprise Linux 5 (for Intel64) Red Hat Enterprise Linux 5 (for x86)	Linux	

## Export Restrictions

If this document is to be exported or provided overseas, confirm the regulations of Foreign Exchange and Foreign Trade Control laws and adhere to all legal requirements according to those laws.

## Trademarks

Systemwalker, ServerView and Interstage are registered trademarks of Fujitsu Limited.

Microsoft, Internet Explorer, [Windows], [Windows] Server are trademarks or registered trademarks of Microsoft Corporation in the United States and other countries.

Linux is a trademark or registered trademark of Mr. Linus Torvalds in the United States and other countries.

Red Hat and all Red Hat-based trademarks and logos are trademarks or registered trademarks of Red Hat, Inc. in the United States and other countries.

Other company names and product names are trademarks or registered trademarks of respective companies.

The company names, system names, product names and other proprietary names that appear in this document are not always accompanied by trademark symbols (TM or (R))

## Issue Date and Version

Edition	Manual code
First edition December 2013	B1WS-1164-01ENZ0(00)

**Notice**

No part of the content of this manual may be reproduced without the written permission of Fujitsu Limited.  
The contents of this manual may be changed without notice.

**Copyright**

Copyright 2010-2013 FUJITSU LIMITED

# Contents

---

Chapter 1 Abstract.....	1
Chapter 2 Usage Scenarios.....	2
Chapter 3 Installing and Configuring APP.....	4
3.1 Prerequisites and Preparation.....	4
3.1.1 Install and setup CT-MG.....	4
3.1.2 Database.....	4
3.1.3 SMTP Server.....	5
3.2 Install.....	5
3.2.1 Confirming Software and Setup Utility.....	5
3.2.2 Configuring APP.....	5
3.2.3 Setup the Database.....	7
3.2.4 Setup the Domain for APP.....	8
3.2.5 Importing Certification.....	10
Chapter 4 Practicing with the Service Controller.....	12
4.1 Prerequisites.....	12
4.2 Registering the Service Controller.....	12
4.3 Importing and Confirming ROR Server Certification.....	14
4.3.1 Export the Server Certification of ROR.....	14
4.3.2 Import the Certification.....	15
4.3.3 Confirming the Server Information of Certification.....	16
Chapter 5 Creating and Publishing Service.....	17
Chapter 6 Unsetup and Uninstall.....	20
6.1 Unsetup the ROR Integration feature.....	20
6.1.1 Tasks before Unsetup.....	20
6.1.2 Unsetup.....	20
6.2 Uninstall the ROR Integration feature.....	20
6.2.1 Tasks before Uninstallation.....	20
6.2.2 Uninstallation.....	21
Chapter 7 Operation.....	23
7.1 Start/Stop.....	23
7.1.1 Prerequisites.....	23
7.1.2 Start.....	23
7.1.3 Stop.....	23
Appendix A Configuration Settings for APP.....	24
Appendix B Service Parameters for ROR Integration Feature.....	26
B.1 All Scenarios.....	26
B.2 L-Platform Provisioning and Scaling.....	27
B.3 Virtual server Provisioning.....	27
Appendix C Command for Creating Technical Service Definition.....	29
Appendix D Example to Register the Service Controller.....	31
D.1 Prerequisites.....	31
D.2 Registering technology Manager.....	31
D.3 Setup Example [Windows].....	31
D.3.1 Configuring setting files.....	32
D.3.2 Executing setting commands.....	33
D.3.3 Importing ROR Server Certification.....	35
D.4 Setup Example [Linux].....	35

D.4.1 Configuring setting files.....	35
D.4.2 Executing setting commands.....	37
D.4.3 Importing ROR Server Certification.....	38
Appendix E Note on ROR to be Integrated.....	39

# Chapter 1 Abstract

ServerView Resource Orchestrator (ROR) integration feature provides ROR feature as the services on Systemwalker Service Catalog Manager (CT-MG). The services are based on the typical usage scenarios for ROR. The supported scenarios are followings:

- Provisioning and scaling of logical platforms (L-Platform)
- Adding of logical servers (virtual server)

Refer to “[Chapter 2 Usage Scenarios](#)” for the detailed scenarios.

ROR integration feature is executed on Asynchronous Provisioning Platform (APP), which is provided by CT-MG in order to support the applications which require asynchronous provisioning. So, in order to use ROR integration feature, APP is required to install and configure. AP is installed as the domain for APP (app-domain) and application on Java EE execution environment, and APP supports the communication between main CT-MG and service applications, which require asynchronous handling. Refer to “[Chapter 3 Installing and Configuring APP](#)” for how to install and configure APP.

The service application of CT-MG running on APP is called as “service controller”. The service controller for ROR integration feature is “RORIntegration”. “RORIntegration” executes the provisioning and scaling for L-Platform and virtual server. Refer to “[Chapter 4 Practicing with the Service Controller](#)” for how to install the service controller.

After installing the service controller, by creating service working on CT-MG, ROR integration feature is published to customer organizations. Refer to “[Chapter 5 Creating and Publishing Service](#)” for how to create and publish service.

The source code of the service controller implementation as well as additional resources are contained in the following directory:  
[Windows]

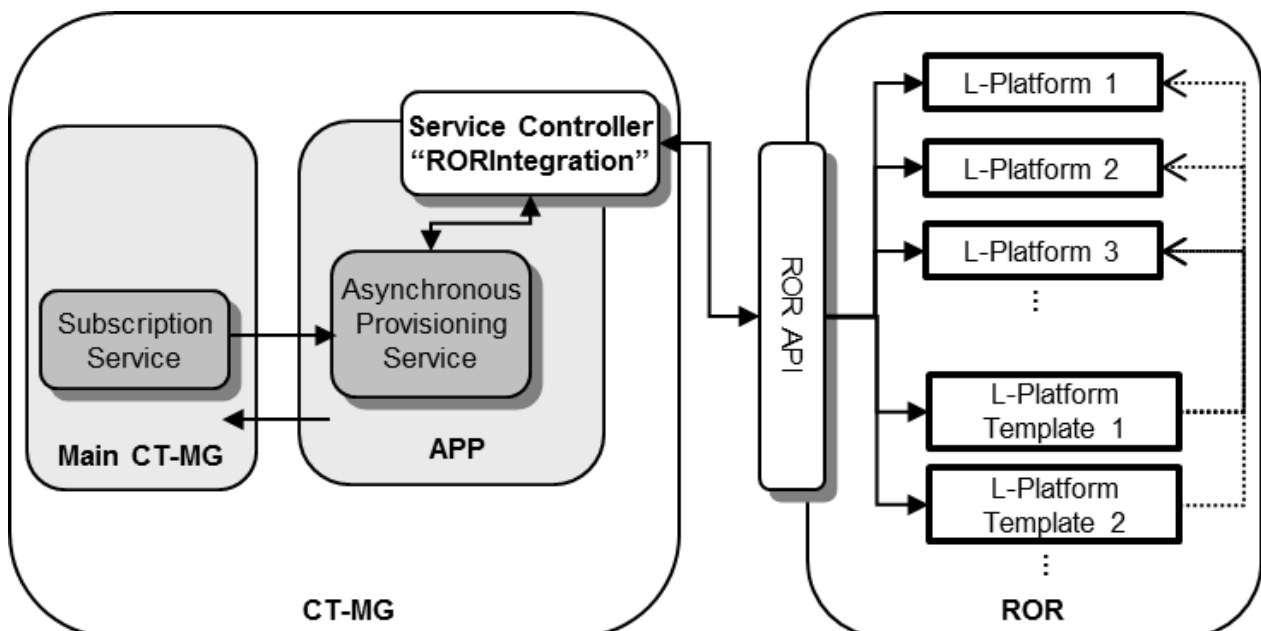
- %SWCTMG\_HOME%\app\svctrl\RORIntegration\fujitsu-bss-app-ror-sampleSRC

- [Linux]

- /opt/FJSVctbss/app/svctrl/RORIntegration/fujitsu-bss-app-ror-sampleSRC

The fujitsu-bss-app-ror-sample.ear file is an archive that has been built from the source code and can be deployed in a working APP environment. For using the service controller, a functional ROR installation is required.

In order to understand the service controller implementation, you need at least basic knowledge of ROR.





## Chapter 2 Usage Scenarios

ROR is the platform software for private clouds, for realizing effective use and streamlining of operation and management. The Infrastructure administrator of ROR modifies and tunes the configuration settings for logical platforms (L-Platform) and logical servers (virtual server) based on the needs from customers. Using L-Platform, Infrastructure administrator can provide, for example, request specific servers and operating systems, firewalls, load balancers, or pre-installed software and databases, based on the requirement from the customers. Virtual servers can be added and removed dynamically as required.

The basic configurations of L-Platform for typical usage scenarios are defined by the ROR Infrastructure administrator in so-called L-Platform **templates**. For example, L-Platform template may define a virtual server with a firewall, two application virtual servers, a server load balancer, and a database system. Different L-Platform templates can be made available for small, medium, and large scale operation. Customers can provision L-Platform based on a template which is reconfigured according to their needs.

The RORIntegration service controller provides for a basic integration feature of ROR with CT-MG. After the service controller has been deployed and configured in APP and appropriate technical and marketable services have been defined in CT-MG, the following usage scenarios are supported:

- **Provisioning of L-Platform:** This scenario is to create L-Platform for customer organization using L-Platform template created on ROR previously. ROR tenant administrator previously creates the L-Platform template on ROR, and technology provider/supplier organizations create and publish the technical service definition/marketable service in order to create L-Platform based on the L-Platform template created previously. When an administrator of customer organization subscribes to the published service, the L-Platform name can be specified as the parameter of the service. When an administrator of customer organization subscribes to the service, ROR creates the L-Platform based on the L-Platform template through the service controller. If the steps to create the L-Platform are completed successfully, the L-Platform is ready to use for the customer.
- **Horizontal scale-up and scale-down (adding and reducing of virtual server by reconfiguration):** This scenario is to add/reduce the virtual servers to/from the L-Platform subscribed by the customer. By changing the corresponding parameters in the existing subscription by the administrator of customer organization, ROR adds/reduces the number of virtual servers to/from their L-Platform through the service controller. If all steps to add/reduce the number of virtual servers are completed successfully, the virtual servers are ready to use based on the changed parameters.
- **Vertical scale-up (adding of CPU number of each virtual server by reconfiguration):** This scenario is to add the number of CPU to the virtual servers in the L-Platform subscribed by the customer. By adding the corresponding parameters in an existing subscription by an administrator of customer organization, ROR adds the number of CPU to each virtual server in their L-Platform through the service controller. If all steps to add the number of CPU are completed successfully, the virtual servers are ready to use based on the changed parameters.
- **Assignment of a single virtual server on an existing L-Platform:** This scenario is to add virtual server for customer organization using L-Platform created on ROR previously. ROR tenant administrator previously creates the L-Platform on ROR, and technology provider/supplier organizations create and publish the technical service definition/marketable service in order to add virtual server to the L-Platform created previously. When an administrator of customer organization subscribes to the published service, the virtual server name can be specified as the parameter of the service. When an administrator of customer organization subscribes to the service, ROR adds the virtual server through the service controller. If the steps to add the virtual server are completed successfully, the virtual server is ready to use for the customer.
- **Deletion of L-Platform or virtual server:** This scenario is to remove the subscription for L-Platform or virtual server subscribed by customer organization. When the customer terminates the subscription for L-Platform or virtual server, ROR terminates the L-Platform or deletes the virtual server through the service controller. The subscription is terminated independent on whether this is successful.

If an operation fails on the ROR side, the corresponding subscription in CT-MG remains pending (except when terminating a subscription). The service controller informs its responsible technology provider organization by email of any incomplete provisioning or delete operation in ROR.

In ROR, the virtual platforms and servers created for CT-MG subscriptions are managed in the same way as other L-Platform and virtual servers. They can be viewed and monitored with the standard ROR tools.



### Note

The following scenarios explained in this chapter are not available:

- Horizontal scale-up and scale-down

- Vertical scale-up

Therefore, supplier organization must turn off the checks for check boxes of the user option in “define/update a service” page, so that customer organizations cannot change the numbers of CPU and virtual server.

---

# Chapter 3 Installing and Configuring APP

This chapter explains how to install and configure APP, and the prerequisites and preparation.

## Note

The procedure described in this chapter requires the administrative privileges to execute. And, the procedure described in this chapter requires the Operator who installs CT-MG.

## Information

As for the example procedure described in this chapter and ”[Chapter 4 Practicing with the Service Controller](#)”, refer to ”[Appendix D Example to Register the Service Controller](#)”.

## 3.1 Prerequisites and Preparation

This section explains the prerequisites and preparation how to install APP on the server.

### 3.1.1 Install and setup CT-MG

ROR integration feature runs on the same server where CT-MG is installed. Confirm following items in advance:

- Completion to install and setup CT-MG for standalone configuration
- You must have access to a CT-MG installation as a technology provider and a supplier. These roles may be assigned to a single organization or to different ones.

Refer to “Installation Guide” and “Operator’s Guide” for detail.

### 3.1.2 Database

APP saves its data to the database. The database is shared which is used by CT-MG itself. So, before introducing APP, it is required to change the parameters of the database.

#### Setup and Configure Settings

Modify the following files:

[Windows]

```
%SWCTMG_HOME%\pgctbss\data\postgresql.conf
```

[Linux]

```
/var/opt/FJSVctbss/pgsql/data/postgresql.conf
```

Modify the parameters according to the following process:

1. **Add 50** to the existing value (default: 50) of “max\_prepared\_transactions” property.
2. **Add 210** to the existing value (default: 210) of “max\_connections” property.

Example:

```
max_prepared_transactions=100  
max_prepared_transactions=420
```

These properties are the high limit for the concurrent connection to the database.

Take care for following points: this value is combined and used with the setting value of JDBC pool size. When you changed the JDBC pool size, it is also required to change the value of max\_connections. In detail, refer to the “Tuning Performance” section in “Operator’s Guide”.

3. Save the files.

Reboot the database in order to activate the change the setting values. As for rebooting the database, refer to the “Start/Stop” section in “Installation Guide”.



## Note

Before rebooting the database, stop Systemwalker Service Catalog Manager Server service and Systemwalker Service Catalog Manager Indexer service. Refer to “9.1 Start/Stop” in “Installation Guide” in detail.

### 3.1.3 SMTP Server

---

APP requires the E-mail function. Prepare the SMTP server where E-mail can be used.

When some problems (such as about registration of subscription and assigning) occur, APP send requests to the SMTP server preregistered on the same server.

The settings about SMTP server are defined in “glassfish.properties” file.

## 3.2 Install

---

APP is installed in following process:

- Confirm software and setup utility
- Configure settings of APP
- Setup the database
- Setup the domain for APP
- Import certification

As for setup of the database and domain for APP, execute using APP setup utility.

### 3.2.1 Confirming Software and Setup Utility

---

APP software and setup utility are registered in following folder:

[Windows]

%SWCTMG\_HOME%\app

[Linux]

/opt/FJSVctbss/app

Also, the subdirectory (setup) includes configuration settings files and XML files. The setup of database and domain for APP is executed using these files.

### 3.2.2 Configuring APP

---

The APP software and setup utilities require a number of settings. These settings are provided in the following files in the subdirectory (setup) under “app” directory.

- db.properties: Settings for the database setup and access.

Following values are required to be modified according to the port number of CT-MG database.

- db.url=jdbc:postgresql://localhost:[ the port number of database]/bssapp
- db.port=[ the port number of database]

- glassfish.properties: Configuration settings for the domain for APP.

Following values are required to be modified according to the SMTP server information sending mail.

- db.url=jdbc:postgresql://localhost:[ the port number of database]/bssapp
- db.port=[ the port number of database]

Following values are required to be modified if the port numbers are already used for the other purpose. As for the port numbers used by the domain for APP, refer to “Port number” in “Installation Guide”.

- glassfish.app.domain.portbase=8800

This is the base port number used by app-domain.

The port numbers used by app-domain are calculated based on this base port number. Refer to “Setup” in “Installation Guide” in detail.

- glassfish.app.domain.admin.port=8848

This is the admin port number used for app-domain on Java EE execution environment. Specify the value which is added “48” to the base port number of app-domain.

Following values are required to be modified according to the folder where CT-MG is installed.

- GLASSFISH\_HOME=[Home folder of Java EE]

[Home folder of Java EE]

[Windows]

%SWCTMG\_HOME%\glassfish3

[Linux]

/opt/FJSVctbss/glassfish3

Modify following settings if required according to your user policy for user name and password.

- glassfish.app.domain.admin.user=[User name of administrator of Java EE execution environment for app-domain (default: Administrator)]
- glassfish.app.domain.admin.pwd=[Password of administrator of Java EE execution environment for app-domain (default: User1234)]

glassfish.app.domain.master.pwd=[Master password of administrator of Java EE execution environment for app-domain (default: changeit)]

- configsettings.properties: Configuration settings for the APP. The values of items in this file are required to modify. For details, refer to “[Appendix A Configuration Settings for APP](#)”

The initial installation stores these settings in the “bssapp” database.

Adapt the configuration settings to your environment. Server names, ports, paths, user IDs, and passwords require adaptation. Proceed to change is as follows:

1. Save the files to the subdirectory (setup) under “app” directory. For future reference, it is a good idea to create a backup of the files.
2. Open each of the objective files with an editor.
3. Check the values of items in each file and adapt them to your environment.

## Note

- The specified ports are suggestions. When you change the port numbers, specify the changed port numbers for each configuration information.

- If you install everything on the local system, use either the host name or localhost in all configuration files for all URLs that need to be resolved by APP.

Do not mix the specification of host names and localhost. <server> of BSS\_WEBSERVICE\_URL in “configsettings.properties” file must be same as the information specified in CN of the owner for server certification of bes-domain.

- Specify the APP\_BASE\_URL setting in “configsettings.properties” file as follows:

```
APP_BASE_URL=http://<host>:<port>/fujitsu-bss-app
```

<host> is used for name resolution by client. Use the host name available for name resolution or IP address available to access by client for <host>. Use the port number for HTTP listener of app-domain (default: 8880) for <port>

When you change the value of glassfish.app.domain.portbase in “glassfish.properties” file, <port> requires to be changed from default value.

### 3.2.3 Setup the Database

APP registers necessary configuration to the database “bssapp”.

The database is created by the APP installation scripts. It needs to be initialized with the appropriate schema and settings.

Proceed for initialization as follows:

1. Make sure that the database is running.
2. Open the command prompt (Windows) or a terminal session (Linux).
3. Set the absolute path of “psql” as the environment variable “DB\_INTERPRETER”: “psql” is the management command of database management system of CT-MG.

[Windows]

```
set DB_INTERPRETER=%SWCTMG_HOME%\fjsvpgs91_64\bin\psql.exe
```

[Linux]

```
export DB_INTERPRETER=/opt/FJSVctbss/fjsvpgs91/bin/psql
```

[Linux]

Set the library directory of database management system as the environment variable “LD\_LIBRARY\_PATH”: “LD\_LIBRARY\_PATH” is required for database management system to execute the management command for Linux only.

```
export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/opt/FJSVctbss/fjsvpgs91/lib
```

4. Specify the home directory of Java Development Kit (JDK) version 7 by environment variable.

[Windows]

```
set JAVA_HOME=%SWCTMG_HOME%\jdk7
```

[Linux]

```
export JAVA_HOME=/opt/FJSVctbss/jdk7
```

5. Create the APP database by executing the build-db.xml file in the subdirectory (setup) under “app” directory as follows:

[Windows]

```
%SWCTMG_HOME%\ant\bin\ant -f %SWCTMG_HOME%\app\setup\build-db.xml createAndUpdateDatabases -Ddb.admin.user=pgctbss -Ddb.admin.pwd=<the password of OS user for database specified in setup for Systemwalker Service Catalog Manager>
```

[Linux]

```
/opt/FJSVctbss/ant/bin/ant -f /opt/FJSVctbss/app/setup/build-db.xml createAndUpdateDatabases -
Ddb.admin.user=pgctbss -Ddb.admin.pwd=<the password of OS user for database specified in setup
for Systemwalker Service Catalog Manager>
```

## Note

In case that you specified the password of OS user for database in setup for Systemwalker Service Catalog Manager, specify the password as the value of “-Ddb.admin.pwd” option. In case that you did not specify the password, drop the “-Ddb.admin.pwd” option. Refer to “Installation Guide” for detail of the password of OS user for database.

If the setup of the database fails with errors, proceed as follows:

1. Check and correct the configuration files.
2. Execute the build-db.xml file in the subdirectory (setup) under “app” directory as follows:

[Windows]

```
%SWCTMG_HOME%\ant\bin\ant -f %SWCTMG_HOME%\app\setup\build-db.xml dropDatabases -
Ddb.admin.user=pgctbss -Ddb.admin.pwd=<the password of OS user for database specified in setup
for Systemwalker Service Catalog Manager>
```

```
%SWCTMG_HOME%\ant\bin\ant -f %SWCTMG_HOME%\app\setup \build-db.xml dropUsers -
Ddb.admin.user=pgctbss -Ddb.admin.pwd=<the password of OS user for database specified in setup
for Systemwalker Service Catalog Manager>
```

[Linux]

```
/opt/FJSVctbss/ant/bin/ant -f /opt/FJSVctbss/app/setup/build-db.xml dropDatabases -
Ddb.admin.user=pgctbss -Ddb.admin.pwd=<the password of OS user for database specified in setup
for Systemwalker Service Catalog Manager>
```

```
/opt/FJSVctbss/ant/bin/ant -f /opt/FJSVctbss/app/setup/build-db.xml dropUsers -
Ddb.admin.user=pgctbss -Ddb.admin.pwd=<the password of OS user for database specified in setup
for Systemwalker Service Catalog Manager>
```

3. Repeat the setup.

## 3.2.4 Setup the Domain for APP

APP requires specific settings and resources in the domain for APP on Java EE execution environment, such as a data source or mail settings. So, in order to use APP, the change is required for settings and resources in the domain for APP.

Proceed as follows to create the resources and make the required settings in the domain for APP:

1. Open the command prompt (Windows) or a terminal session (Linux).
2. Specify the home directory of Java Development Kit (JDK) version 7 by environment variable.

[Windows]

```
set JAVA_HOME=%SWCTMG_HOME%\jdk7
```

[Linux]

```
export JAVA_HOME=/opt/FJSVctbss/jdk7
```

3. Execute the build-glassfish-setup.xml file in the subdirectory (setup) under “app” directory as follows:

[Windows]

```
%SWCTMG_HOME%\ant\bin\ant -f %SWCTMG_HOME%\app\setup\build-glassfish-setup.xml
```

[Linux]

```
/opt/FJSVctbss/ant/bin/ant -f /opt/FJSVctbss/app/setup/build-glassfish-setup.xml
```

This command has the following results:

- The app-domain (domain for APP) is created and started.
- The settings and resources for APP are created in the domain for APP.
- APP is deployed to the app-domain (domain for APP).

-

If the setup of the domain for APP fails with errors, proceed as follows:

1. Check and correct the configuration files.
2. Execute following command and stop app-domain (domain for APP)

[Windows]

```
%SWCTMG_HOME%\glassfish3\bin\asadmin stop-domain app-domain
```

[Linux]

```
/opt/FJSVctbss/glassfish3/bin/asadmin stop-domain app-domain
```

3. Delete app-domain (domain for APP). Delete following directory:

4. [Windows]

```
%SWCTMG_HOME%\glassfish3\glassfish\domains\app-domain
```

5. [Linux]

```
/opt/FJSVctbss/glassfish3/glassfish/domains/app-domain
```

6. Repeat the setup.



## Note

Delete the passwords described in following files after setup.

[Windows]

```
%SWCTMG_HOME%\app\setup\glassfish.properties
```

```
%SWCTMG_HOME%\app\setup\configsettings.properties
```

[Linux]

```
/opt/FJSVctbss/app/setup/glassfish.properties
```

```
/opt/FJSVctbss/app/setup/configsettings.properties
```

Delete following files after setup.

[Windows]

```
%tmp%\BES\script[variable string].txt
```

[Linux]

```
/tmp/BES/script[variable string].txt
```



## 3.2.5 Importing Certification

APP runs as the application of CT-MG, and calls Web service of main CT-MG. In order to call Web service, it is required to import the certification of main CT-MG to the truststore in app-domain.

Import the certification as follows:

1. Open the command prompt (Windows) or a terminal session (Linux).
2. Export the certification from main domain by executing following command:

[Windows]

```
%SWCTMG_HOME%\jdk7\bin\keytool -export -rfc -alias slas -keystore %SWCTMG_HOME%\glassfish3\glassfish\domains\bes-domain\config\keystore.jks -file ctmgbss.crt -storepass changeit
```

[Linux]

```
/opt/FJSVctbss/jdk7/bin/keytool -export -rfc -alias slas -keystore /opt/FJSVctbss/glassfish3/glassfish/domains/bes-domain/config/keystore.jks -file ctmgbss.crt -storepass changeit
```

3. Import the certification to the truststore in app-domain by executing following command:

[Windows]

```
%SWCTMG_HOME%\jdk7\bin\keytool -import -file ctmgbss.crt -trustcacerts -alias ctmgbss -keystore %SWCTMG_HOME%\glassfish3\glassfish\domains\app-domain\config\cacerts.jks -storepass changeit
```

[Linux]

```
/opt/FJSVctbss/jdk7/bin/keytool -import -file ctmgbss.crt -trustcacerts -alias ctmgbss -keystore /opt/FJSVctbss/glassfish3/glassfish/domains/app-domain/config/cacerts.jks -storepass changeit
```

After executing above command, the prompt displayed asking if you trust the certification. Input “y” and import.

4. Check that the certification “ctmgbss” is imported to the truststore in app-domain by executing following command:

[Windows]

```
%SWCTMG_HOME%\jdk7\bin\keytool -list -keystore %SWCTMG_HOME%\glassfish3\glassfish\domains\app-domain\config\cacerts.jks -storepass changeit
```

[Linux]

```
/opt/FJSVctbss/jdk7/bin/keytool -list -keystore /opt/FJSVctbss/glassfish3/glassfish/domains/app-domain/config/cacerts.jks -storepass changeit
```

5. When the app-domain is running, restart app-domain by executing following command:

[Windows]

```
%SWCTMG_HOME%\glassfish3\bin\asadmin stop-domain app-domain  
%SWCTMG_HOME%\glassfish3\bin\asadmin start-domain app-domain
```

[Linux]

```
/opt/FJSVctbss/glassfish3/bin/asadmin stop-domain app-domain  
/opt/FJSVctbss/glassfish3/bin/asadmin start-domain app-domain
```



### Note

- Restarting app-domain is required in order to activate the imported certification.
- The password of keystore is specified after the option “-storepass”. Change the password of keystore if it is not set as “changeit”.

- The certification file "ctmgbss.crt" is created in the folder where above command is executed. Delete it as necessary.



## Chapter 4 Practicing with the Service Controller

This chapter explains the prerequisites and process for the service controller “RORIntegration”.



### Note

The procedure described in this chapter requires the administrative privileges to execute. And, the procedure described in this chapter requires the Operator who installs CT-MG.

## 4.1 Prerequisites

In order to deploy and execute the service controller “RORIntegration”, following prerequisites must be fulfilled:

- The APP framework must be installed and running.
- You must have access to a CT-MG installation as a technology provider.
- A fully functional ROR installation must be available.
- In ROR, a tenant must be created for CT-MG technology provider. And, the resource configuration accessible for this tenant, introduction of tenant user and tenant administrator, and creation of L-Platform template must be completed.



### Note

Check the version of ServerView Operations Manager used by ROR. Refer to ”[Appendix E Note on ROR to be Integrated](#)” in detail.

## 4.2 Registering the Service Controller

Configure settings of the service controller, and register the service controller to the domain where APP framework is running in following way:

1. Specify the settings information required in APP database.

Specify the parameters in following objective script file.

- objective script file: appconfiguration.sql
- the folder where objective script file is registered

[Windows]

```
%SWCTMG_HOME%\app\svctrl\RORIntegration\fujitsu-bss-app-ror-sampleSRC\Resources
```

[Linux]

```
/opt/FJSVctbss/app/svctrl/RORIntegration/fujitsu-bss-app-ror-sampleSRC/Resources
```

The settings have the following meaning:

Name	Explanation
BSS_ORGANIZATION_ID	The ID of the technology provider organization in CT-MG who is to register the technical service for ROR integration feature
IAAS_API_LOCALE	The locale to be used for accessing ROR API. Specify the locale of ROR (“en” or “ja”).
IAAS_API_USER	The user ID in ROR. This is used for access to the tenant in ROR.
IAAS_API_PWD	Specify the password of the user ID in the following format, which is specified in “IAAS_API_USER” used for access to the tenant in ROR:

Name	Explanation
	_crypt:<plain text password> The plain text password will be encrypted automatically in the APP database.
IAAS_API_TENANT	Specify the tenant name to which the user specified in “IAAS_API_USER” belongs.
IAAS_API_URI	Specify the URL of the L-Platform API of ROR in the following format: https://<ROR server>:<port>/cfmgapi/endpoint <ROR server>: host name of ROR server. This value must be same as the information specified in server certification of ROR. As for checking the information, refer to “ <a href="#">4.3.3 Confirming the Server Information of Certification</a> ”. <port>: specify the port number used for ROR L-Platform API (default: 8014).

- To register the service controller to the databases, execute following command:

[Windows]

```
%SWCTMG_HOME%\fjsvpgs91_64\bin\psql.exe -p <the port number of database (default: 5443)> -U bssappuser -d bssapp < %SWCTMG_HOME%\app\svctrl\RORIntegration\fujitsu-bss-app-ror-sampleSRC\resources\appconfiguration.sql
```

[Linux]

```
/opt/FJSVctbss/fjsvpgs91/bin/psql -p <the port number of database(default: 5443)> -U bssappuser -d bssapp < /opt/FJSVctbss/app/svctrl/RORIntegration/fujitsu-bss-app-ror-sampleSRC/resources/appconfiguration.sql
```

- Add the service controller archive to the domain of APP (app-domain). Use the fujitsu-bss-app-ror-sample.ear archive included. Execute following command:

[Windows]

```
%SWCTMG_HOME%\glassfish3\bin\asadmin -p <the admin port number of Java EE execution environment for app-domain (default: 8848)> -u <User name of Java EE execution environment> deploy %SWCTMG_HOME%\app\svctrl\RORIntegration\fujitsu-bss-app-ror-sample.ear
```

[Linux]

```
/opt/FJSVctbss/glassfish3/bin/asadmin -p <the admin port number of Java EE execution environment for app-domain (default: 8848)> -u <User name of Java EE execution environment> deploy /opt/FJSVctbss/app/svctrl/RORIntegration/fujitsu-bss-app-ror-sample.ear
```

- Make the OS service for the app-domain so that app-domain automatically starts when the server resume. Execute following command:

[Windows]

```
%SWCTMG_HOME%\glassfish3\bin\asadmin -p <the admin port number of Java EE execution environment for app-domain (default: 8848)> -u <User name of Java EE execution environment> create-service --name SWCTMGAPP app-domain
```

```
call "C:\Windows\System32\sc.exe" config SWCTMGAPP displayName= "Systemwalker Service Catalog Manager APP Server"
```

```
%SWCTMG_HOME%\glassfish3\bin\asadmin -p <the admin port number of Java EE execution environment for app-domain (default: 8848)> -u <User name of Java EE execution environment> create-jvm-options -Xrs
```

[Linux]

```
/opt/FJSVctbss/glassfish3/bin/asadmin -p <the admin port number of Java EE execution environment for app-domain (default: 8848)> -u <User name of Java EE execution environment> create-service app-domain
```

```
/opt/FJSVctbss/glassfish3/bin/asadmin -p <the admin port number of Java EE execution environment for app-domain (default: 8848)> -u <User name of Java EE execution environment> create-jvm-options -Xrs
```

## Note

Delete the passwords described in following files after setup.

[Windows]

```
%SWCTMG_HOME%\app\svctrl\RORIntegration\fujitsu-bss-app-ror-sampleSRC\resources\appconfiguration.sql
```

[Linux]

```
/opt/FJSVctbss/app/svctrl/RORIntegration/fujitsu-bss-app-ror-sampleSRC/resources/appconfiguration.sql
```

## 4.3 Importing and Confirming ROR Server Certification

1. It is required to import the server certification of ROR to the truststore in app-domain so that the communication between the service controller and ROR is done with SSL. This section explains how to export the server certification of ROR as a file, to import it to the truststore in app-domain and to confirm the server information of ROR server certification.

### 4.3.1 Export the Server Certification of ROR

This section explains how to export the server certification of ROR and to save as a file.

The objective server to export the ROR server certification is the admin server of ROR, not the server where CTMG and ROR integration feature are setup.

## Point

The exported certification file is copied and used in the server where ROR Integration feature is setup.

Remove the certification file when it is not needed.

### Export with Web browser

This explains how to export the certification with Internet Explore as Web browser. And, Internet Explore must be opened with administrative right.

1. Access to the login page of ROR console with Web browser.

Access to following URL with Web browser:

```
https://<FQDN of admin server>:8014/cfmgapi/endpoint
```

The default port number of ROR console is 23461

2. Display the certification.

Display the [Certificate] page to choose [View certificate], clicking the security status bar of Web browser, or where “Certificate Error” displays with your mouse

### 3. Export the certification

Click [Detail] tab on [Certificate] page, and click [Copy to file] button.

Export the certification according to the information in the displayed page.

The type for exporting file does not have to be changed as the default “DER encoded binary X.509”

## Export with command

Export the certification using “scsexppfx” command included in ROR.

In order to execute with the command, the password of Interstage certificate environment and the nickname of certification are required.

Refer to “ServerView Resource Orchestrator Cloud Edition Setup Guide” in “ServerView Resource Orchestrator Cloud Edition” in detail.

In the explanation of “Importing a Certificate to ServerView SSO Authentication Server, how to export is described.

## 4.3.2 Import the Certification

---

This section explains how to import the exported server certification of ROR to the truststore in app-domain.

Import the certification in following procedure.

1. Open the command prompt (Windows) or a terminal session (Linux).
2. Copy the created file in “[4.3.1 Export the Server Certification of ROR](#)” to current folder.

The file name is assumed as “ctmgror.cer” in the explanation of this section.

3. Execute following command to import the certification to the truststore in app-domain:

[Windows]

```
%SWCTMG_HOME%\jdk7\bin\keytool -import -file ctmgror.cer -trustcacerts -alias ctmgror -keystore %SWCTMG_HOME%\glassfish3\glassfish\domains\app-domain\config\cacerts.jks -storepass changeit
```

[Linux]

```
/opt/FJSVctbss/jdk7/bin/keytool -import -file ctmgror.cer -trustcacerts -alias ctmgror -keystore /opt/FJSVctbss/glassfish3/glassfish/domains/app-domain/config/cacerts.jks -storepass changeit
```

After executing above command, the prompt displayed asking if you trust the certification. Input “y” and import.

4. Check that the certification “ctmgror” is imported to the truststore in app-domain by executing following command:

[Windows]

```
%SWCTMG_HOME%\jdk7\bin\keytool -list -keystore %SWCTMG_HOME%\glassfish3\glassfish\domains\app-domain\config\cacerts.jks -storepass changeit
```

[Linux]

```
/opt/FJSVctbss/jdk7/bin/keytool -list -keystore /opt/FJSVctbss/glassfish3/glassfish/domains/app-domain/config/cacerts.jks -storepass changeit
```

5. When the app-domain is running, restart app-domain by executing following command:

[Windows]

```
%SWCTMG_HOME%\glassfish3\bin\asadmin stop-domain app-domain  
%SWCTMG_HOME%\glassfish3\bin\asadmin start-domain app-domain
```

[Linux]

```
/opt/FJSVctbss/glassfish3/bin/asadmin stop-domain app-domain  
/opt/FJSVctbss/glassfish3/bin/asadmin start-domain app-domain
```



- Restarting app-domain is required in order to activate the imported certification.
- The password of keystore is specified after the option “-storepass”. Change the password of keystore if it is not set as “changeit”.
- Delete the exported file of ROR server certification as necessary.

### 4.3.3 Confirming the Server Information of Certification

The server information of certification is required to be same as the server name of URL used for the service controller to communicate with ROR.

The information of server name can be confirmed in following procedure:

#### Confirm with Web browser

Click [Issuer] field in the page displayed by clicking [Detail] tab in the certification displayed in “4.3.1 Export the Server Certification of ROR”.

The server information is shown in the line of CN.

Example: CN = SERVER001

#### Confirm with command

Copy the certification file exported in “4.3.1 Export the Server Certification of ROR” to the server where CT-MG is setup.

The CN of owner of server certification can be confirmed by following command:

[Windows]

```
%SWCTMG_HOME%\jdk7\bin\keytool -printcert -file [file name of ROR server certification] -storepass changeit
```

[Linux]

```
/opt/FJSVctbss/jdk7/bin/keytool -printcert -file [file name of ROR server certification] -storepass changeit
```

Following information displays to execute the command, so confirm the value of CN:

```
Owner: CN=WIN-UBVC92LJ386, OU=GlassFish, O=Oracle Corporation, L=Santa Clara, ST=California, C=US
Issuer: CN=WIN-UBVC92LJ386, OU=GlassFish, O=Oracle Corporation, L=Santa Clara, ST=California, C=US
.
.
.
```

# Chapter 5 Creating and Publishing Service

This chapter explains how to create the service of CT-MG.

In order to execute the scenarios, the supplier in CT-MG needs to define appropriate services in CT-MG:

1. Create a technical service and import it to CT-MG as technology provider. Or, send the created technical service to the technology provider.

Refer to the following technical service definitions for necessary parameters and basic information for settings.

[Windows]

- For the scenario “Provisioning and scaling of L-Platform”: TechnicalService\_VirtualPlatform.xml
- For the scenario “Adding virtual server”: TechnicalService\_VirtualServer.xml
- the folder where technical service definitions are registered

[Windows]

```
%SWCTMG_HOME%\app\svctrl\RORIntegration\fujitsu-bss-app-ror-sampleSRC\resources
```

[Linux]

```
/opt/FJSVctbss/app/svctrl/RORIntegration/fujitsu-bss-app-ror-sampleSRC/resources
```

Refer to ”[Appendix B Service Parameters for ROR Integration Feature](#)” for detailed information.

The command is available to easily create the technical service definition for the scenario “Provisioning and scaling of L-Platform”. Refer to “[Appendix C Command for Creating Technical Service Definition](#)” for detailed information.

2. Define marketable services as supplier of CT-MG using created technical service, and publish them to the Marketplace Portal, so that it is available to subscribe to the services, change and terminate the subscription.



## Note

Confirm that following L-Platform templates and image information are prepared exist in ROR.

- As for L-Platform template, register one image.
- In order to use the template of technical service definition without change, the L-Platform must allow for configuring up to 6 virtual servers. Configure the max number of L-Server for L-Platform template to 6. And, configure the max number of CPU for image information to 4. In case that the max number of L-Server on L-Platform template differs from the number of virtual servers in marketable service, the number of available virtual servers on ROR is to differ from that of subscription on CT-MG.

Not reduce the number of CPU by changing the parameter of subscription. Reflecting to the provisioned virtual server is to be fail. In case to reduce the number of CPU, ask from customer organization to supplier organization.

Depending on the type of the server virtualization software, it may be not available to change the number of CPU.

- In case of VMware, it is not allowed to reduce the number of CPU when the virtual server is running.
- In case of Hyper-V, it is not allowed to add/reduce the number of CPU when the virtual server is running.

Therefore, supplier organization must turn off the check for check box of the user option in ”define/update a service” page, so that customer organizations cannot change the CPU number.

In case that the subscriptions to the services for ROR integration feature fail, refer to the error message shown in confirmation page and following logs:

[Windows]

```
%SWCTMG_HOME%\glassfish3\glassfish\domains\app-domain\logs\app-ror.log: the log of ROR Integration feature
```

```
%SWCTMG_HOME%\glassfish3\glassfish\domains\app-domain\logs\server.log: the server log of app-domain
```

[Linux]

```
/opt/FJSVctbss/glassfish3/glassfish/domains/app-domain/logs/app-ror.logs: the log of ROR Integration feature
```



/opt/FJSVctbss/glassfish3/glassfish/domains/app-domain/logs/server.log: the server log of app-domain

The examples for failed subscriptions are following:

1. ERROR process failed com.fujitsu.bss.app.ror.exceptions.RORException: Command failed: StopLServer Status: ERROR Message: PAPI00200 System Error Occurred.[HTTP Status Code[409] is illegal.]

The configuration of ServerView Operations Manager might not be done. Refer to ”[Appendix E Note on ROR to be Integrated](#)” in detail for how to configure.

2. ERROR Problem while scaling up: ... [code:62514][message:Selectable VM host not found. (not enough CPU or memory available)]

The CPU and memory resources for VM Pool might be short. Refer to “ServerView Resource Orchestrator Cloud Edition Messages” included in ServerView Resource Orchestrator Cloud Edition in detail.

3. Failed to access the WSDL at: https://<BSS\_WEBSERVICE\_URL>:8081/IdentityService/v1.5/BASIC?wsdl.

It might be failed to import the certification of main domain, or BSS\_WEBSERVICE\_URL might different from the information specified in CN of the owner for server certification of bes-domain. Refer to “[Appendix A Configuration Settings for APP](#)” and “[Appendix D Example to Register the Service Controller](#)” in detail.



## Point

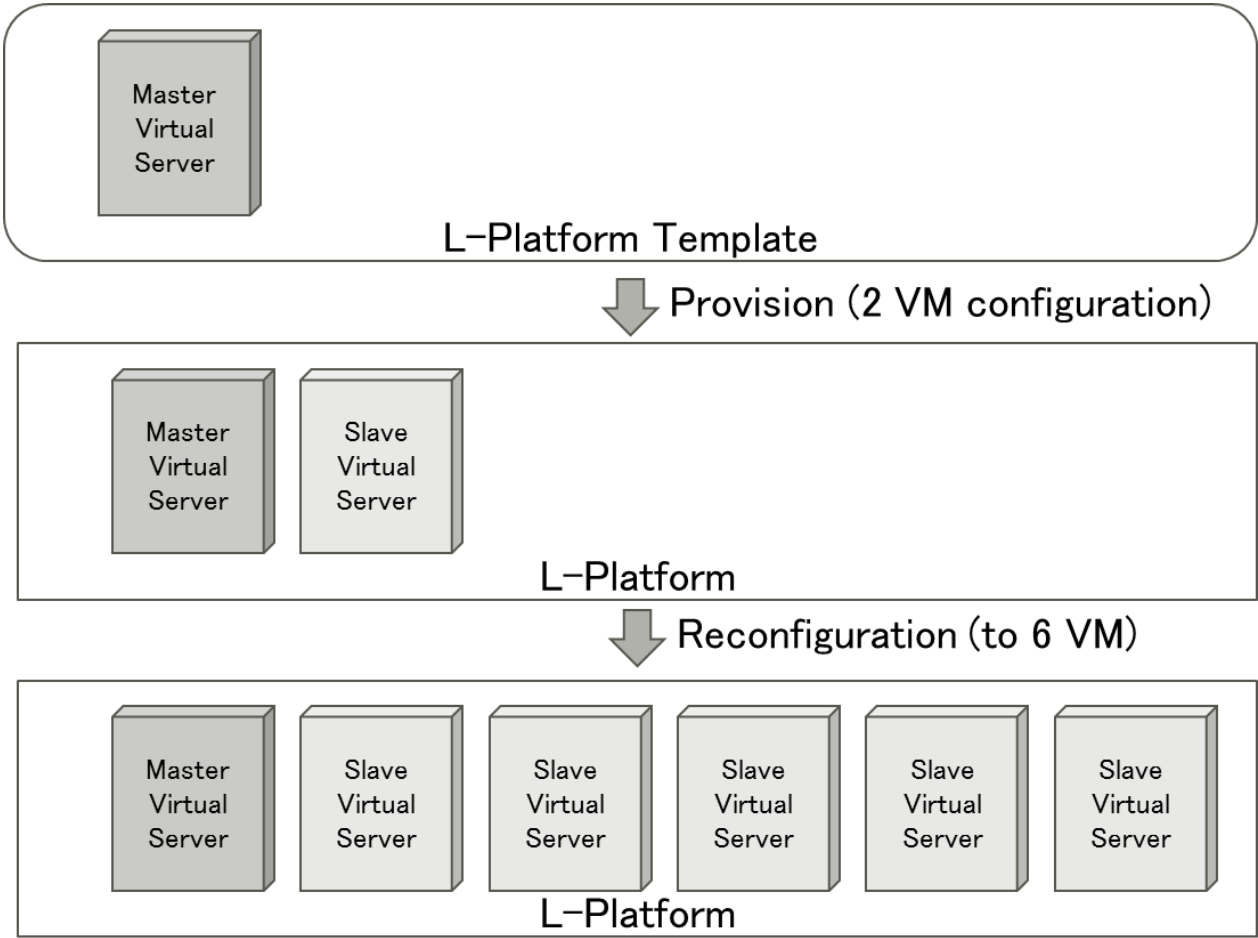


When subscribing the service for ROR integration feature, the master virtual server is provisioned as the first virtual server. And the slave virtual server is added as the second or later virtual server.

- As for the “MASTER\_TEMPLATE\_ID” specified in the technical service definition, specify the ID of image information of virtual server registered in L-Platform template specified in SYSTEM\_TEMPLATE\_ID.
- As for the “SLAVE\_TEMPLATE\_ID” specified in the technical service definition, specify the ID of image information of virtual server to be added/reduced in the provisioned L-Platform. Specify the different value from that of “MASTER\_TEMPLATE\_ID”

The IP addresses of virtual servers are noticed by email to the user assigned to the service for ROR integration feature after completion of subscribing and assigning to the service.

- As for the OS user name and password to access to the virtual servers, inform to the customer subscribing the service. For example, send email including the list of virtual servers and their access information.
- The L-Platform names and access information of virtual servers for the subscription are not available to update after subscribing the service on My subscription page. Inform to the administrator of customer organization of access information after he changes the number of virtual servers.



# Chapter 6 Unsetup and Uninstall

This chapter explains how to unsetup and uninstall ROR integration feature.

## 6.1 Unsetup the ROR Integration feature

This section explains how to unsetup ROR integration feature.

### 6.1.1 Tasks before Unsetup

#### Backup resources

Back up environment resources if necessary before unsetup ROR integration feature. Refer to "9.4 Online backup and restoration" in "Installation Guide" for details.

#### Delete marketable service and technical service definition

Delete the marketable service and technical service definition for the service controller registered to Systemwalker Service Catalog Manager. Refer to "Supplier's Guide" and "Technology Provider's Guide" for details.

### 6.1.2 Unsetup

#### Delete OS service for app-domain

Delete the OS service for app-domain. Execute following command:

[Windows]

```
call "%SWCTMG_HOME%\glassfish3\glassfish\domains\app-domain\bin\SWCTMGAPPService.exe" uninstall
```

[Linux]

```
rm -f /etc/init.d/GlassFish_app-domain
```

#### Stop the domain for APP (app-domain)

Stop the domain for APP (app-domain). Execute following command:

[Windows]

```
%SWCTMG_HOME%\glassfish3\bin\asadmin stop-domain app-domain
```

[Linux]

```
/opt/FJSVctbss/glassfish3/bin/asadmin stop-domain app-domain
```

## 6.2 Uninstall the ROR Integration feature

This section explains how to uninstall ROR integration feature.

### 6.2.1 Tasks before Uninstallation

The following tasks must be performed without fail before uninstalling software on the server.

#### Execute unsetup

If ROR integration feature has not been unsetup, it must be unsetup before uninstalled.



## Note

Unsetup must be done before uninstallation. Otherwise, resources such as registered database service will never be removed.

## 6.2.2 Uninstallation

### Delete the domain for APP (app-domain)

Delete the domain for APP (app-domain). Delete following directory:

[Windows]

```
%SWCTMG_HOME%\glassfish3\glassfish\domains\app-domain
```

[Linux]

```
/opt/FJSVctbss/glassfish3/glassfish/domains/app-domain
```

### Uninstall database for APP

Delete the database and database user for APP.

1. Set the absolute path of “psql” as the environment variable “DB\_INTERPRETER”: “psql” is the management command of database management system of CT-MG.

[Windows]

```
set DB_INTERPRETER=%SWCTMG_HOME%\fjsvp91_64\bin\psql.exe
```

[Linux]

```
export DB_INTERPRETER=/opt/FJSVctbss/fjsvp91/bin/psql
```

[Linux]

Set the library directory of database management system as the environment variable “LD\_LIBRARY\_PATH”: “LD\_LIBRARY\_PATH” is required for database management system to execute the management command for Linux only.

```
export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/opt/FJSVctbss/fjsvp91/lib
```

2. Specify the home directory of Java Development Kit (JDK) version 7 by environment variable.

[Windows]

```
set JAVA_HOME=%SWCTMG_HOME%\jdk7
```

[Linux]

```
export JAVA_HOME=/opt/FJSVctbss/jdk7
```

1. Execute the build-db.xml file. Execute following command:

[Windows]

```
%SWCTMG_HOME%\ant\bin\ant -f %SWCTMG_HOME%\app\setup\build-db.xml dropDatabases -  
Ddb.admin.user=pgctbss -Ddb.admin.pwd=<the password of OS user for database specified in setup  
for Systemwalker Service Catalog Manager>
```

```
%SWCTMG_HOME%\ant\bin\ant -f %SWCTMG_HOME%\app\setup\build-db.xml dropUsers -  
Ddb.admin.user=pgctbss -Ddb.admin.pwd=<the password of OS user for database specified in setup  
for Systemwalker Service Catalog Manager>
```

[Linux]

```
/opt/FJSVctbss/ant/bin/ant -f /opt/FJSVctbss/app/setup/build-db.xml dropDatabases -  
Ddb.admin.user=pgctbss -Ddb.admin.pwd=<the password of OS user for database specified in setup  
for Systemwalker Service Catalog Manager>
```

```
/opt/FJSVctbss/ant/bin/ant -f /opt/FJSVctbss/app/setup//build-db.xml dropUsers -  
Ddb.admin.user=pgctbss -Ddb.admin.pwd=<the password of OS user for database specified in setup  
for Systemwalker Service Catalog Manager>
```

 **Point**

.....  
In case that you did not specify the password of OS user for database in setup for Systemwalker Service Catalog Manager, drop the “-  
Ddb.admin.pwd” option.  
.....

# Chapter 7 Operation

This chapter explains the operations of ROR integration feature.

## 7.1 Start/Stop

This section explains how to start and stop ROR integration feature.

### 7.1.1 Prerequisites

Start the database of Systemwalker Service Catalog Manager. Refer to “9.1 Start/Stop” in “Installation Guide” in detail.

### 7.1.2 Start

This section explains how to start ROR integration feature.

Execute following command:

[Windows]

```
net start "Systemwalker Service Catalog Manager APP Server"
```

[Linux]

```
service GlassFish_app-domain start
```

### 7.1.3 Stop

This section explains how to stop ROR integration feature.

Execute following command:

[Windows]

```
net stop "Systemwalker Service Catalog Manager APP Server"
```

[Linux]

```
service GlassFish_app-domain stop
```

# Appendix A Configuration Settings for APP

This appendix explains the configuration settings for APP in configsettings.properties file.

## APP\_BASE\_URL

```
APP_BASE_URL=http://<server>:<port>/fujitsu-bss-app
```

The URL used to access APP.

## APP\_TIMER\_INTERVAL

```
APP_TIMER_INTERVAL=15000
```

The interval (in milliseconds) at which APP polls the status of instances. If you increase the value, provisioning will take longer. If you decrease it, more loading is put on the system.

## APP\_MAIL\_RESOURCE

```
APP_MAIL_RESOURCE=mail/APPMail
```

The JNDI name of the Java EE execution environment mail resource which is used to send mails.

The resource mail/APPMail is created during setup with the parameters defined in the “glassfish.properties” file. This setting only needs to be changed if you want to use a different mail resource.

## APP\_ADMIN\_MAIL\_ADDRESS

```
APP_ADMIN_MAIL_ADDRESS=admin@example.com
```

The email address which is used for sending notifications of information.

## BSS\_WEBSERVICE\_URL

```
BSS_WEBSERVICE_URL=https://<server>:<port>/{SERVICE}/v1.5/BASIC?wsdl
```

Required when BSS\_AUTH\_MODE is set to INTERNAL and basic authentication is used. The URL of the CT-MG server to be used. The {SERVICE} placeholder must not be replaced.

CT-MG is the HTTPS server while APP is a Web service client. The Web service calls are secured with SSL. The following requirements must be met to establish a connection to CT-MG:

- The CT-MG server must present a valid certificate.
- The CT-MG certificate must be trusted by APP.

For details on certificates, refer to the “Operator’s Guide” of the CT-MG user documentation.

## BSS\_USER\_KEY

```
BSS_USER_KEY=<userKey>
```

The user key for technology manager accessing CT-MG.

Replace <userKey> with the user key which you receive with the confirmation email for your user account. The user must have the administrator role for your organization in CT-MG. “1000” is specified as initial value of this file, assumed that the operator registered after setup of main CT-MG has technology manager role.

## BSS\_USER\_PWD

```
BSS_USER_PWD=_crypt:<password>
```

The BSS user password for technology manager accessing CT-MG.

Replace <password> with the plain text password which is valid for the technology manager given in BSS\_USER\_KEY=<userKey>.

## **BSS\_AUTH\_MODE**

`BSS_AUTH_MODE=INTERNAL`

Specifies whether CT-MG is used for user authentication or whether it acts as a SAML service provider and allows for Web browser single sign-on. The setting must be identical to the AUTH\_MODE setting in CT-MG.

Possible values: INTERNAL ( user authentication is used) or SAML\_SP ( acts as a SAML service provider ).

Contact the CT-MG platform operator for details on which value to set.

## **BSS\_WEBSERVICE\_URL\_STS\_PORT**

`BSS_WEBSERVICE_URL_STS_PORT=https://<server>:<port>/{SERVICE}/v1.5/STS?wsdl`

Required when BSS\_AUTH\_MODE is set to SAML\_SP. The URL of the CT-MG server to be used. The {SERVICE} placeholder must not be replaced.

## **APP\_KEYSTORE\_PASSWORD**

`APP_KEYSTORE_PASSWORD=changeit`

Required when BSS\_AUTH\_MODE is set to SAML\_SP. The password required to access the keystore of the domain used for APP in the domain for APP.

## **APP\_TRUSTSTORE\_PASSWORD**

`APP_KEYSTORE_PASSWORD=changeit`

Required when BSS\_AUTH\_MODE is set to SAML\_SP. The password required to access the truststore of the domain used for APP in the domain for APP.



# Appendix B Service Parameters for ROR Integration Feature

This appendix explains the parameters of technical services which are handled by the ROR Integration service controller.

## B.1 All Scenarios

The following parameters apply to all scenarios:

### APP\_CONTROLLER\_ID

Mandatory. The ID of the service controller on APP as defined in its implementation.

Default: ess.ror

### APP\_BSS\_USER

Mandatory. The user key of the technology manager to be used for service calls to CT-MG. The user must be a member of the technology provider organization for which the service controller has been registered.

Example: 38007

### APP\_BSS\_USER\_PWD

Mandatory. The password of the technology manager to be used for service calls to CT-MG.

Example: secret

### INSTANCENAME\_PATTERN

Mandatory. A regular expression specifying a pattern for the L-platform or virtual server names entered by the users when they subscribe to a corresponding service. If the names do not match the pattern, the subscription is rejected and failed.

Example: ror([a-z0-9]){2,25}

### INSTANCENAME\_PREFIX

Optional. A string to be prepended to the L-Platform or virtual server names entered by the users when they subscribe to a corresponding service.

Example: ror

### INSTANCENAME

Mandatory. The name of the L-Platform or virtual server to be provisioned. This name must be specified by the users when they subscribe to a corresponding service. The string given in INSTANCENAME\_PREFIX is prepended to the name. The name including the prefix must match the pattern given in INSTANCENAME\_PATTERN.

Example: IASPlatform

### MAIL\_FOR\_COMPLETION

Optional. The address to which emails are to be sent that describe manual steps required to continue an operation. If you specify this parameter, the service controller interrupts the processing of each operation after each step and waits for a notification about the completion of a manual action. Omit this parameter if you do not want to interrupt the processing.

Example: info@company.com

### MAIL\_FOR\_NOTIFICATION

Optional. The address to which emails are to be sent that notify service users or administrators of customer organizations. It is notified to this address that reconfiguration of L-Platform is successful. Such reconfigurations result from changes in the configuration parameters at a corresponding subscription.

Example: info@company.com

## B.2 L-Platform Provisioning and Scaling

---

The following parameters are required for provisioning L-Platform with one or more virtual servers as well as for the horizontal and vertical scaling scenarios:

### SYSTEM\_TEMPLATE\_ID

Mandatory. The ID of the ROR template to be used for L-Platforms. As for the template ID, refer to the Template Builder menu Template tab of ROR console.

Example: template-13c8ab3348d

### MASTER\_TEMPLATE\_ID

Mandatory. The ID of the image information to be used for the master virtual server (or the only virtual server) on L-Platform. As for the ID of image information, refer to the Image tab in Template tab of ROR console.

Example: image-13cedef7ed

### SLAVE\_TEMPLATE\_ID

Mandatory. The ID of the image information to be used for the slave virtual servers on L-Platform. The different ID must be specified from that specified as "MASTER\_TEMPLATE\_ID". As for the ID of image information, refer to the Image tab in Template tab of ROR console.

Example: image-13c8a812d25

### CLUSTER\_SIZE

Mandatory. The number of virtual servers to be provisioned on L-Platform. Make sure that the administrator of customer organization can only specify numbers that are supported by the corresponding L-Platform templates. This can be done, for example, by presenting the supported numbers as different parameter options.

Example: 2

### COUNT\_CPU

Optional. The number of CPUs each virtual server on L-Platform is to have. Make sure that the administrator of customer organization can only specify the same or smaller number than the max CPU number specified in corresponding image information. This can be done, for example, by presenting the supported numbers as different parameter options.

Example: 4

## B.3 Virtual server Provisioning

---

The following parameters are required for adding virtual server and adding it to existing L-Platform:

### VSYS\_ID

Mandatory. The ID of the L-Platform to which the new virtual server is to be added. As for the L-Platform ID, get by copying to clipboard from the menu shown by right-clicking on the objective L-Platform on the Management page in L-Platform tab of ROR console.

Example: SampleTe-4LPKTS4KQ

### DISKIMG\_ID

Mandatory. The resource ID of the image information corresponding to the new virtual server.

Example: image-13c8a812d25

## **NETWORK\_ID**

Mandatory. The network ID of the segment where the new virtual server is to be added. As for the network ID of the segment, execute `GetLPlatformConfiguration` and get from `<networkId>` tag. Refer to “ServerView Resource Orchestrator Cloud Edition Reference Guide (Command/XML)” included in ServerView Resource Orchestrator Cloud Edition in detail.

Example: 4LPKTS4KQ-N-2j0v

## **VSERVER\_TYPE**

Mandatory. A string describing the server type. The string must match available one in ROR. As for the server type, confirm from Configuration page of the L-Platform, or the output result of `ListServerType`. As for `ListServerType`, refer to “ServerView Resource Orchestrator Cloud Edition Reference Guide (Command/XML)” included in ServerView Resource Orchestrator Cloud Edition in detail.

Example: medium

## **COUNT\_CPU**

Optional. The number of CPUs the virtual server is to have. Make sure that the administrator of customer organization can only specify the same or smaller number than the max CPU number specified in corresponding image information. This can be done, for example, by presenting the supported numbers as different parameter options.

Example: 4

## **VM\_POOL**

Optional. The VM pool to be used for the new virtual server in ROR. As for VM pool, refer to the Template Builder menu Template tab of ROR console.

Default: VMHostPool

## **STORAGE\_POOL**

Optional. The storage pool to be used for the new virtual server in ROR. As for storage pool, refer to the Template Builder menu Template tab of ROR console.

Default: StragePool

# Appendix C Command for Creating Technical Service Definition

This appendix explains how to create technical service definition for the service controller.

The technology provider in Systemwalker Service Catalog Manager registers the technical service created in this appendix, and then the supplier in Systemwalker Service Catalog Manager defines the marketable service based on the technical service definition in this appendix.



Note

As for the command for creating technical service definition, the scenario “Provisioning and scaling of L-Platform” is only supported.

## Create technical service definition

In order to create the technical service definition for the service controller, execute following command:

[Windows]

```
%SWCTMG_HOME%\ror\bin\ror servicedef.bat [-t TEMPLATE] [-i SERVICE_ID] [-u URL] [-v VM] [-c CPU] [-f FILE]
```

[Linux]

```
/opt/FJSVctbss/ror/bin/ror servicedef.sh [-t TEMPLATE] [-i SERVICE_ID] [-u URL] [-v VM] [-c CPU] [-f FILE]
```

Table C.1 Parameter list of the command to create technical service definition for service controller

No.	Specified option	Parameter name	mandatory	Explanation
1	-t	TEMPLATE	No	Specify the path name of template file. When omitted, following file is used: [Windows] %SWCTMG_HOME%\ror\template\TechnicalService_VirtualPlatform.xml [Linux] /opt/FJSVctbss/ror/template/TechnicalService_VirtualPlatform.xml
2	-i	SERVICE_ID	No	Specify the ID of created technical service definition. When omitted, the value of template file is not changed and used.
3	-u	URL	No	Specify the protocol, host name and port number for the provisioning service of the service controller. As for the host name specify the host name of the server where APP was registered, as for the port number specify the HTTP listener port of APP domain. When omitted, the value of template file is not changed and used. Ex.: -u <a href="http://localhost:8880">http://localhost:8880</a>
4	-k	USER_KEY	No	Specify the user key of user (technology manager) in technology provider organization, which is used when CT-MG API is called from ROR integration feature Ex.: -k 10000
5	-p	PASSWORD	No	Specify the password of user (technology manager) in technology provider organization, which is used when CT-MG API is called from ROR integration feature
6	-v	VM	No	Specify the number of VMs available as the parameter of marketable service, with the list style of numbers separated by commas. When omitted, the value of template file is not changed and used. Ex.: -v "2,4,6"

7	-c	CPU	No	Specify the number of CPUs available as the parameter of marketable service, with the list style of numbers separated by commas. When omitted, the value of template file is not changed and used.  Ex.: -c "1,2,4"
8	-f	FILE	No	Specify the path name of created technical service definition. When omitted, the contents of technical service definition file are displayed to standard output.

To display how to use the command to create the technical service definition for the service controller, execute following command:

[Windows]

```
rorserVICedef.bat -h
```

[Linux]

```
rorserVICedef.sh -h
```

### Register technical service definition and marketable service

Register the technical service definition and define marketable service based on the registered technical service definition. Refer to "Supplier's Guide" and "Technology Provider's Guide" for details.

# Appendix D Example to Register the Service Controller

This appendix explains how to register the service controller with the actual example.

## D.1 Prerequisites

---

This appendix explains following prerequisites for the example:

- Completion for install and setup CT-MG according to “Installation Guide”
- Using the recommended parameters for the install and setup
- Setting no password for the OS user for the database
- Technology manager role for the Operator

## D.2 Registering technology Manager

---

This section explains how to register technology manager.

In the example in this appendix, the first operator organization and the user with operator user role are assumed to have the technology provider organization role and the technology manager role.

### 1. Log in to Admin Portal

Access to and log in Admin Portal as first operator.

For the first operator, following access information are assigned as initial values:

- User ID: administrator
- User key: 1000
- Initial password: admin123

To access to login page of Admin Portal, activate Web browser and specify following URL to its address:

http://[server host name]:[port number]/fujitsu-bss-portal/

### 2. Configure to technology provider

Add the role of technology provider to the operator organization.

Open the “Manage organization” page in “Operation” menu.

Input PLATFORM\_OPERATOR to “Organization ID”.

Check the check box of technology provider in “Organization role” item.

Input the other required items.

Click “Save” button.

### 3. Add technology manager role to the operator user.

Open the “Manage users” in “Account” menu.

Choose user ID of “administrator” in “Select the user whose data you want to change:” item.

Check the check box of technology manager in “User role” item.

Input the other required items.

Click “Save” button.

## D.3 Setup Example [Windows]

---

This section explains the setup example on Windows.

## D.3.1 Configuring setting files

---

Change the items in the setting files which are required to change.

1. Change the setting file for the database

Open the following setting file with an editor:

```
%SWCTMG_HOME%\pgctbss\data\postgresql.conf
```

Add 50 to the existing value of “max\_prepared\_transactions” property.

Add 210 to the existing value of “max\_connections” property.

Example:

```
max_prepared_transactions=100
max_connections=420
```

2. Change the setting file for the domain for APP

Open the following setting file with an editor:

```
%SWCTMG_HOME%\app\setup\glassfish.properties
```

Replace the item <mail server hostname> in MAIL\_HOST to the host name or IP address of SMTP server.

Example:

```
MAIL_HOST=smtp.example.com
```

3. Change the setting file for APP

Open the following setting file with an editor:

```
%SWCTMG_HOME%\app\setup\configsettings.properties
```

Replace the item <host> in APP\_BASE\_URL to the host name available for name resolution or IP address available to access by client.

```
https://<host>:8880/fujitsu-bss-app
```

Example:

```
https://SERVER001:8880/fujitsu-bss-app
```

Replace the item <server> in BSS\_WEBSERVICE\_URL to the name of computer where CT-MG is setup.

```
https://<server>:8081/{SERVICE}/v1.5/BASIC?wsdl
```

Example:

```
https://SERVER001:8081/{SERVICE}/v1.5/BASIC?wsdl
```

The specified name of computer must be same as the information specified in CN of the owner for server certification of bes-domain.

The CN of the owner for server certification can be checked by following command:

```
%SWCTMG_HOME%\jdk7\bin\keytool -export -rfc -alias slas -keystore %SWCTMG_HOME%
\glassfish3\glassfish\domains\bes-domain\config\keystore.jks -file ctmgbss.crt -storepass
changeit

%SWCTMG_HOME%\jdk7\bin\keytool -printcert -file ctmgbss.crt -storepass changeit
```

Following information displays to execute the command:

```
Owner: CN=WIN-UBVC92LJ386, OU=GlassFish, O=Oracle Corporation, L=Santa Clara, ST=California, C=US
Issuer: CN=WIN-UBVC92LJ386, OU=GlassFish, O=Oracle Corporation, L=Santa Clara, ST=California,
```

```
C=US
.
.
.
```

Remove the created file “ctmgbss.crt” as necessary.

#### 4. Change the setting file for APP database

Open the following setting file with an editor:

```
%SWCTMG_HOME%\app\svctrl\RORIntegration\fujitsu-bss-app-ror-sampleSRC\Resources\appconfiguration.sql
```

Change following strings in the file according to environment:

String	Explanation
<ROR user>	User ID in ROR. This is used for access to the tenant in ROR.
<ROR password>	The password of the user ID specified in “IAAS_API_USER”. This is used for access to the tenant in ROR.
<ROR tenant>	The tenant name to which the user specified in “IAAS_API_USER” belongs.
<ROR endpoint URL>	Specify the URL of the L-Platform API of ROR in the following format:  https://<ROR server>:<port>/cfmgapi/endpoint  <ROR server>: host name of ROR server. This value must be same as the information specified in server certification of ROR. As for checking the information, refer to “ <a href="#">4.3.3 Confirming the Server Information of Certification</a> ”.  <port>: specify the port number used for ROR L-Platform API (default: 8014).

Example:

```
INSERT INTO configurationsetting (settingkey, settingvalue, controllerid) VALUES ('IAAS_API_USER', 'ctmg.ror', 'ess.ror');
INSERT INTO configurationsetting (settingkey, settingvalue, controllerid) VALUES ('IAAS_API_PWD', '_crypt:ctmg.ror', 'ess.ror');
INSERT INTO configurationsetting (settingkey, settingvalue, controllerid) VALUES ('IAAS_API_TENANT', 'ctmgtenant', 'ess.ror');
INSERT INTO configurationsetting (settingkey, settingvalue, controllerid) VALUES ('IAAS_API_URI', 'https://server002:8014/cfmgapi/endpoint', 'ess.ror');
```

## D.3.2 Executing setting commands

Execute the setting commands to setup APP and the service controller.

Execute following setting commands:

#### 1. Stop and Start Systemwalker Service Catalog Manager

```
net stop "Systemwalker Service Catalog Manager Server"

net stop "Systemwalker Service Catalog Manager Indexer Server"

net stop "Systemwalker Service Catalog Manager DB Service"
```



```
net start "Systemwalker Service Catalog Manager DB Service"

net start "Systemwalker Service Catalog Manager Indexer Server"

net start "Systemwalker Service Catalog Manager Server"
```

## 2. Set environment variables

```
set DB_INTERPRETER=%SWCTMG_HOME%\fjsvp91_64\bin\psql.exe

set JAVA_HOME=%SWCTMG_HOME%\jdk7
```

## 3. Setup APP

```
%SWCTMG_HOME%\ant\bin\ant -f %SWCTMG_HOME%\app\setup\build-db.xml createAndUpdateDatabases -
Ddb.admin.user=pgctbss

%SWCTMG_HOME%\ant\bin\ant -f %SWCTMG_HOME%\app\setup\build-glassfish-setup.xml

%SWCTMG_HOME%\jdk7\bin\keytool -export -rfc -alias slas

-keystore %SWCTMG_HOME%\glassfish3\glassfish\domains\bes-domain\config\keystore.jks -file
ctmgbss.crt -storepass changeit

%SWCTMG_HOME%\jdk7\bin\keytool -import -file ctmgbss.crt -trustcacerts -alias ctmgbss -keystore
%SWCTMG_HOME%\glassfish3\glassfish\domains\app-domain\config\cacerts.jks -storepass changeit

del ctmgbss.crt

%SWCTMG_HOME%\jdk7\bin\keytool -list -keystore %SWCTMG_HOME%\glassfish3\glassfish\domains\app-
domain\config\cacerts.jks -storepass changeit

%SWCTMG_HOME%\glassfish3\bin\asadmin stop-domain app-domain

%SWCTMG_HOME%\glassfish3\bin\asadmin start-domain app-domain
```

## 4. Setup the service controller

```
%SWCTMG_HOME%\fjsvp91_64\bin\psql.exe -p 5443 -U bssappuser -d bssapp <%SWCTMG_HOME%\app\svctrl
\RORIntegration\fujitsu-bss-app-ror-sampleSRC\resources\appconfiguration.sql

%SWCTMG_HOME%\glassfish3\bin\asadmin -p 8848 -u Administrator deploy %SWCTMG_HOME%\app\svctrl
\RORIntegration\fujitsu-bss-app-ror-sample.ear

%SWCTMG_HOME%\glassfish3\bin\asadmin -p 8848 -u Administrator create-service --name SWCTMGAPP
app-domain
call "C:\Windows\System32\sc.exe" config SWCTMGAPP displayName= "Systemwalker Service Catalog
Manager APP Server"

%SWCTMG_HOME%\glassfish3\bin\asadmin -p 8848 -u Administrator create-jvm-options -Xrs
```

### Note

The password required to input in executing “asadmin” command is specified as the following initial value of item "glassfish.app.domain.admin.pwd" in setting file for the domain for APP "glassfish.properties".

- User1234

## D.3.3 Importing ROR Server Certification

---

It is required to import the server certification of ROR to the truststore in app-domain so that the communication between the service controller and ROR is done.

To import the certification, refer to “[4.3 Importing and Confirming ROR Server Certification](#)”.

## D.4 Setup Example [Linux]

---

This section explains the setup example on Linux.

### D.4.1 Configuring setting files

---

Change the items in the setting files which are required to change.

Open the following setting file with an editor:

1. Change the setting file for the database

Open the following setting file with an editor:

```
/var/opt/FJSVctbss/pgsql/data/postgresql.conf
```

Add 50 to the existing value of “max\_prepared\_transactions” property.

Add 210 to the existing value of “max\_connections” property.

Example:

```
max_prepared_transactions=100  
max_connections=420
```

2. Change the setting file for the domain for APP

Open the following setting file with an editor:

```
/opt/FJSVctbss/app/setup/glassfish.properties
```

Replace the item <mail server hostname> in MAIL\_HOST to the host name or IP address of SMTP server.

Example:

```
MAIL_HOST=smtp.example.com
```

3. Change the setting file for APP

Open the following setting file with an editor:

```
/opt/FJSVctbss/app/setup/configsettings.properties
```

Replace the item <host> in APP\_BASE\_URL to the host name available for name resolution or IP address available to access by client.

```
https://<host>:8880/fujitsu-bss-app
```

Example:

```
https://SERVER001:8880/fujitsu-bss-app
```

Replace the item <server> in BSS\_WEBSERVICE\_URL to the name of computer where CT-MG is setup.

```
https://<server>:8081/{SERVICE}/v1.5/BASIC?wsdl
```

Example:

```
https://SERVER001:8081/{SERVICE}/v1.5/BASIC?wsdl
```

The specified name of computer must be same as the information specified in CN of the owner for server certification of bes-domain.

The CN of the owner for server certification can be checked by following command:

```
/opt/FJsvctbss/jdk7/bin/keytool -export -rfc -alias slas -keystore /opt/FJsvctbss/glassfish3/glassfish/domains/bes-domain/config/keystore.jks -file ctmgbss.crt -storepass changeit

/opt/FJsvctbss/jdk7/bin/keytool -printcert -file ctmgbss.crt -storepass changeit
```

Following information displays to execute the command:

```
Owner: CN=WIN-UBVC92LJ386, OU=GlassFish, O=Oracle Corporation, L=Santa Clara, ST=California, C=US
Issuer: CN=WIN-UBVC92LJ386, OU=GlassFish, O=Oracle Corporation, L=Santa Clara, ST=California, C=US
.
.
.
```

Remove the created file “ctmgbss.crt” as necessary.

4. Change the setting file for APP database

Open the following setting file with an editor:

```
/opt/FJsvctbss/app/svctrl/RORIntegration/fujitsu-bss-app-ror-sampleSRC/resources/appconfiguration.sql
```

Change following strings in the file according to environment:

String	Explanation
<ROR user>	User ID in ROR. This is used for access to the tenant in ROR.
<ROR password>	The password of the user ID specified in “IAAS_API_USER”. This is used for access to the tenant in ROR.
<ROR tenant>	The tenant name to which the user specified in “IAAS_API_USER” belongs.
<ROR endpoint URL>	Specify the URL of the L-Platform API of ROR in the following format:  https://<ROR server>:<port>/cfmgapi/endpoint  <ROR server>: host name of ROR server. This value must be same as the information specified in server certification of ROR. As for checking the information, refer to “ <a href="#">4.3.3 Confirming the Server Information of Certification</a> ”.  <port>: specify the port number used for ROR L-Platform API (default: 8014).

Example:

```
INSERT INTO configurationsetting (settingkey, settingvalue, controllerid) VALUES ('IAAS_API_USER', 'ctmg.ror', 'ess.ror');
INSERT INTO configurationsetting (settingkey, settingvalue, controllerid) VALUES ('IAAS_API_PWD', '_crypt:ctmg.ror', 'ess.ror');
INSERT INTO configurationsetting (settingkey, settingvalue, controllerid) VALUES ('IAAS_API_TENANT', 'ctmgtenant', 'ess.ror');
INSERT INTO configurationsetting (settingkey, settingvalue, controllerid) VALUES ('IAAS_API_URI', 'https://server002:8014/cfmgapi/endpoint', 'ess.ror');
```

## D.4.2 Executing setting commands

---

Execute the setting commands to setup APP and the service controller.

Execute following setting commands:

### 1. Stop and Start Systemwalker Service Catalog Manager

```
service swctmgserver stop

service swctmgindexer stop

/opt/FJSVctbss/bin/swctmg_stopdb.sh

/opt/FJSVctbss/bin/swctmg_startdb.sh

service swctmgindexer start

service swctmgserver start
```

### 2. Set environment variables

```
export DB_INTERPRETER=/opt/FJSVctbss/fjstvpgs91/bin/psql

export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/opt/FJSVctbss/fjstvpgs91/lib

export JAVA_HOME=/opt/FJSVctbss/jdk7
```

### 3. Setup APP

```
/opt/FJSVctbss/ant/bin/ant -f /opt/FJSVctbss/app/setup/build-db.xml createAndUpdateDatabases -
Ddb.admin.user=pgctbss

/opt/FJSVctbss/ant/bin/ant -f /opt/FJSVctbss/app/setup/build-glassfish-setup.xml

/opt/FJSVctbss/jdk7/bin/keytool -export -rfc -alias slas -keystore /opt/FJSVctbss/glassfish3/
glassfish/domains/bes-domain/config/keystore.jks -file ctmgbss.crt -storepass changeit

/opt/FJSVctbss/jdk7/bin/keytool -import -file ctmgbss.crt -trustcacerts -alias ctmgbss -
keystore /opt/FJSVctbss/glassfish3/glassfish/domains/app-domain/config/cacerts.jks -storepass
changeit

rm ctmgbss.crt

/opt/FJSVctbss/jdk7/bin/keytool -list -keystore /opt/FJSVctbss/glassfish3/glassfish/domains/app-
domain/config/cacerts.jks -storepass changeit

/opt/FJSVctbss/glassfish3/bin/asadmin stop-domain app-domain

/opt/FJSVctbss/glassfish3/bin/asadmin start-domain app-domain
```

### 4. Setup the service controller

```
/opt/FJSVctbss/fjstvpgs91/bin/psql -p 5443 -U bssappuser -d bssapp < /opt/FJSVctbss/app/svctrl/
RORIntegration/fujitsu-bss-app-ror-sampleSRC/resources/appconfiguration.sql

/opt/FJSVctbss/glassfish3/bin/asadmin -p 8848 -u Administrator deploy /opt/FJSVctbss/app/svctrl/
RORIntegration/fujitsu-bss-app-ror-sample.ear

/opt/FJSVctbss/glassfish3/bin/asadmin -p 8848 -u Administrator create-service app-domain

/opt/FJSVctbss/glassfish3/bin/asadmin -p 8848 -u Administrator create-jvm-options -Xrs
```



The password required to input in executing “asadmin” command is specified as the following initial value of item "glassfish.app.domain.admin.pwd" in setting file for the domain for APP "glassfish.properties".

- User1234

### **D.4.3 Importing ROR Server Certification**

---

It is required to import the server certification of ROR to the truststore in app-domain so that the communication between the service controller and ROR is done with SSL.

To import the certification, refer to “[4.3 Importing and Confirming ROR Server Certification](#)”.

## Appendix E Note on ROR to be Integrated

You need to configure the TLS/SSL communication settings of ServerView Operations Manager if the version of ServerView Operations Manager used by ROR is 6.10 or later. Follow the steps below to change the setting on the ROR server to be integrated.

### Note

Please back up the files to be edited beforehand.

As for the file "standalone.xml", the content of it is to be changed to original contents. Change the file again after ServerView Operations Manager is restarted.

1. Stop manager of ServerView Resource Orchestrator.

Refer to the manual of ServerView Resource Orchestrator for how to stop the manager.

2. Edit following file.

[Windows]

```
<ServerView Suite installation folder>\jboss\standalone\configuration\standalone.xml
```

[Linux]

```
/opt/fujitsu/ServerViewSuite/jboss/standalone/configuration/standalone.xml
```

Look up the XML section `<subsystem xmlns="urn:jboss:domain:web:1.1" ...>`, and add there the attribute `cipher-suite` to the XML tag `<ssl ...>` as follows.

[Before change]

```
<subsystem xmlns="urn:jboss:domain:web:1.1" default-virtual-server="default-host"
native="false">
  <configuration>
    <jsp-configuration x-powered-by="false" display-source-fragment="false"/>
  </configuration>
  <connector name="http" protocol="HTTP/1.1" scheme="http" socket-binding="http"/>
  <connector name="https" protocol="HTTP/1.1" scheme="https" socket-binding="https"
secure="true">
    <ssl name="https" password="changeit" certificate-key-file="../standalone/svconf/pki/
keystore" verify-client="false"/>
  </connector>
  <virtual-server name="default-host" enable-welcome-root="false"/>
</subsystem>
```

[After change]

```
<subsystem xmlns="urn:jboss:domain:web:1.1" default-virtual-server="default-host"
native="false">
  <configuration>
    <jsp-configuration x-powered-by="false" display-source-fragment="false"/>
  </configuration>
  <connector name="http" protocol="HTTP/1.1" scheme="http" socket-binding="http"/>
  <connector name="https" protocol="HTTP/1.1" scheme="https" socket-binding="https"
secure="true">
    <connector name="https" protocol="HTTP/1.1" scheme="https" socket-binding="https"
secure="true">
      <ssl name="https" password="changeit" certificate-key-file="../standalone/svconf/pki/
keystore" cipher-
suite="TLS_RSA_WITH_AES_128_CBC_SHA256,TLS_RSA_WITH_AES_128_CBC_SHA,SSL_RSA_WITH_RC4_128_SHA,SS
L_RSA_WITH_3DES_EDE_CBC_SHA,SSL_RSA_WITH_RC4_128_MD5,TLS_EMPTY_RENEGOTIATION_INFO_SCSV,TLS_RSA_
WITH_NULL_SHA256,SSL_RSA_WITH_NULL_SHA,SSL_RSA_WITH_DES_CBC_SHA,SSL_RSA_WITH_NULL_MD5,SSL_RSA_E
XPOR_T_WITH_RC4_40_MD5,SSL_RSA_EXPORT_WITH_DES40_CBC_SHA,TLS_KRB5_WITH_RC4_128_SHA,TLS_KRB5_WITH
```

```

    RC4_128_MD5,TLS_KRB5_WITH_3DES_EDE_CBC_SHA,TLS_KRB5_WITH_3DES_EDE_CBC_MD5,TLS_KRB5_WITH_DES_CB
    C_SHA,TLS_KRB5_WITH_DES_CBC_MD5,TLS_KRB5_EXPORT_WITH_RC4_40_SHA,TLS_KRB5_EXPORT_WITH_RC4_40_MD5
    ,TLS_KRB5_EXPORT_WITH_DES_CBC_40_SHA,TLS_KRB5_EXPORT_WITH_DES_CBC_40_MD5" verify-client="false"/
>
    </connector>
    <virtual-server name="default-host" enable-welcome-root="false"/>
</subsystem>

```

3. Edit following file.

[Windows]

```
<ServerView Suite installation folder>\opends\config\schema\02-config.ldif
```

[Linux]

```
/opt/fujitsu/ServerViewSuite/opends/config/schema/02-config.ldif
```

Change the objectclasses declaration ds-cfg-administration-connector so that May line looks like this:

[Before change]

```

objectClasses: ( 1.3.6.1.4.1.26027.1.2.183
  NAME 'ds-cfg-administration-connector'
  SUP top
  STRUCTURAL
  MUST ( cn $
    ds-cfg-listen-port $
    ds-cfg-key-manager-provider $
    ds-cfg-trust-manager-provider $
    ds-cfg-ssl-cert-nickname )
  MAY ( ds-cfg-listen-address )
  X-ORIGIN 'OpenDS Directory Server' )

```

[After change]

```

objectClasses: ( 1.3.6.1.4.1.26027.1.2.183
  NAME 'ds-cfg-administration-connector'
  SUP top
  STRUCTURAL
  MUST ( cn $
    ds-cfg-listen-port $
    ds-cfg-key-manager-provider $
    ds-cfg-trust-manager-provider $
    ds-cfg-ssl-cert-nickname )
  MAY ( ds-cfg-listen-address )
  MAY ( ds-cfg-listen-address $ ds-cfg-ssl-cipher-suite $ ds-cfg-ssl-protocol )
  X-ORIGIN 'OpenDS Directory Server' )

```

4. Edit following file.

[Windows]

```
<ServerView Suite installation folder>\opends\config\config.ldif
```

[Linux]

```
/opt/fujitsu/ServerViewSuite/opends/config/config.ldif
```

Add the attributes ds-cfg-ssl-cipher-suite and ds-cfg-ssl-protocol to the entry cn=LDAPS Connection Handler,cn=Connection Handlers,cn=config as follows.

[Before change]

```

dn: cn=LDAPS Connection Handler,cn=Connection Handlers,cn=config
objectClass: ds-cfg-ldap-connection-handler

```

```
objectClass: top
objectClass: ds-cfg-connection-handler
ds-cfg-ssl-client-auth-policy: optional
ds-cfg-key-manager-provider: cn=JKS,cn=Key Manager Providers,cn=config
ds-cfg-ssl-cert-nickname: svcs_cms
ds-cfg-trust-manager-provider: cn=JKS,cn=Trust Manager Providers,cn=config
ds-cfg-max-blocked-write-time-limit: 2 minutes
ds-cfg-allow-tcp-reuse-address: true
ds-cfg-allow-start-tls: false
ds-cfg-send-rejection-notice: true
ds-cfg-allow-ldap-v2: true
cn: LDAPS Connection Handler
ds-cfg-use-tcp-no-delay: true
ds-cfg-enabled: true
ds-cfg-java-class: org.opens.server.protocols.ldap.LDAPConnectionHandler
ds-cfg-keep-stats: true
ds-cfg-max-request-size: 5 megabytes
ds-cfg-accept-backlog: 128
ds-cfg-buffer-size: 4096 bytes
ds-cfg-listen-address: 0.0.0.0
ds-cfg-num-request-handlers: 2
ds-cfg-listen-port: 1474
ds-cfg-use-ssl: true
ds-cfg-use-tcp-keep-alive: true
```

[After change]

```
dn: cn=LDAPS Connection Handler,cn=Connection Handlers,cn=config
objectClass: ds-cfg-ldap-connection-handler
objectClass: top
objectClass: ds-cfg-connection-handler
ds-cfg-ssl-client-auth-policy: optional
ds-cfg-key-manager-provider: cn=JKS,cn=Key Manager Providers,cn=config
ds-cfg-ssl-cert-nickname: svcs_cms
ds-cfg-trust-manager-provider: cn=JKS,cn=Trust Manager Providers,cn=config
ds-cfg-max-blocked-write-time-limit: 2 minutes
ds-cfg-allow-tcp-reuse-address: true
ds-cfg-allow-start-tls: false
ds-cfg-send-rejection-notice: true
ds-cfg-allow-ldap-v2: true
cn: LDAPS Connection Handler
ds-cfg-use-tcp-no-delay: true
ds-cfg-enabled: true
ds-cfg-java-class: org.opens.server.protocols.ldap.LDAPConnectionHandler
ds-cfg-keep-stats: true
ds-cfg-max-request-size: 5 megabytes
ds-cfg-accept-backlog: 128
ds-cfg-buffer-size: 4096 bytes
ds-cfg-listen-address: 0.0.0.0
ds-cfg-num-request-handlers: 2
ds-cfg-listen-port: 1474
ds-cfg-use-ssl: true
ds-cfg-ssl-cipher-suite: TLS_RSA_WITH_AES_128_CBC_SHA256
ds-cfg-ssl-cipher-suite: TLS_RSA_WITH_AES_128_CBC_SHA
ds-cfg-ssl-cipher-suite: SSL_RSA_WITH_RC4_128_SHA
ds-cfg-ssl-cipher-suite: SSL_RSA_WITH_3DES_EDE_CBC_SHA
ds-cfg-ssl-cipher-suite: SSL_RSA_WITH_RC4_128_MD5
ds-cfg-ssl-cipher-suite: TLS_EMPTY_RENEGOTIATION_INFO_SCSV
ds-cfg-ssl-cipher-suite: TLS_RSA_WITH_NULL_SHA256
ds-cfg-ssl-cipher-suite: SSL_RSA_WITH_NULL_SHA
ds-cfg-ssl-cipher-suite: SSL_RSA_WITH_DES_CBC_SHA
ds-cfg-ssl-cipher-suite: SSL_RSA_WITH_NULL_MD5
ds-cfg-ssl-cipher-suite: SSL_RSA_EXPORT_WITH_RC4_40_MD5
```



```

ds-cfg-ssl-cipher-suite: SSL_RSA_EXPORT_WITH_DES40_CBC_SHA
ds-cfg-ssl-cipher-suite: TLS_KRB5_WITH_RC4_128_SHA
ds-cfg-ssl-cipher-suite: TLS_KRB5_WITH_RC4_128_MD5
ds-cfg-ssl-cipher-suite: TLS_KRB5_WITH_3DES_EDE_CBC_SHA
ds-cfg-ssl-cipher-suite: TLS_KRB5_WITH_3DES_EDE_CBC_MD5
ds-cfg-ssl-cipher-suite: TLS_KRB5_WITH_DES_CBC_SHA
ds-cfg-ssl-cipher-suite: TLS_KRB5_WITH_DES_CBC_MD5
ds-cfg-ssl-cipher-suite: TLS_KRB5_EXPORT_WITH_RC4_40_SHA
ds-cfg-ssl-cipher-suite: TLS_KRB5_EXPORT_WITH_RC4_40_MD5
ds-cfg-ssl-cipher-suite: TLS_KRB5_EXPORT_WITH_DES_CBC_40_SHA
ds-cfg-ssl-cipher-suite: TLS_KRB5_EXPORT_WITH_DES_CBC_40_MD5
ds-cfg-ssl-protocol: SSLv2Hello
ds-cfg-ssl-protocol: SSLv3
ds-cfg-ssl-protocol: TLSv1
ds-cfg-use-tcp-keep-alive: true

```

In the same configuration file, change the attribute ds-cfg-listen-address of the entry dn: cn=Administration Connector,cn=config as follows.

[Before change]

```

dn: cn=Administration Connector,cn=config
objectClass: ds-cfg-administration-connector
objectClass: top
ds-cfg-listen-address: 0.0.0.0
ds-cfg-listen-port: 4444
cn: Administration Connector
ds-cfg-key-manager-provider: cn=Administration,cn=Key Manager Providers,cn=config
ds-cfg-ssl-cert-nickname: svcs_cms
ds-cfg-trust-manager-provider: cn=Administration,cn=Trust Manager Providers,cn=config

```

[After change]

```

dn: cn=Administration Connector,cn=config
objectClass: ds-cfg-administration-connector
objectClass: top
ds-cfg-listen-address: 127.0.0.1
ds-cfg-listen-port: 4444
cn: Administration Connector
ds-cfg-key-manager-provider: cn=Administration,cn=Key Manager Providers,cn=config
ds-cfg-ssl-cert-nickname: svcs_cms
ds-cfg-trust-manager-provider: cn=Administration,cn=Trust Manager Providers,cn=config

```

- Restart ServerView Operations Manager by following command(s).

[Windows]

```

net stop "SVJBASSVC"
net start "SVJBASSVC"

```

[Linux]

```

/etc/init.d/sv_jboss restart

```

- Start manager of ServerView Resource Orchestrator.

Refer to the manual of ServerView Resource Orchestrator for how to start the manager.