

# **FUJITSU Software**

## **Cloud Services Management V1.1.0**

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

# Operation Guide

Windows(64)

B1WS-1229-02ENZ0(00)  
August 2016

# Preface

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## Purpose of This Document

This manual explains the basic operations for operation and maintenance of FUJITSU Software Cloud Services Management (hereinafter this product).

## Intended Readers

This manual is written for the operators who operate and maintain Cloud Services Management.

## Required Knowledge

It is assumed that readers have the following knowledge:

- Knowledge about the operating system they are using, including adjustment and execution of batch files
- General knowledge about clouds
- General understanding of the setting methods for servers, storage, and network devices
- Knowledge of relational databases, including PostgreSQL databases

## Structure of This Document

The structure of this manual is as follows.

### [Chapter 1 Overview](#)

Provides an overview of the operations and maintenance work performed by each department that uses Cloud Services Management.

### [Chapter 2 Operation](#)

Explains how to start and stop Cloud Services Management, and the system settings that are required for definition files.

### [Chapter 3 Billing](#)

Explains the billing of Cloud Services Management.

### [Chapter 4 Maintenance](#)

Explains the operations related to maintenance of Cloud Services Management and the method for collecting troubleshooting data when trouble occurs.

### [Chapter 5 Command Reference](#)

Explains the commands used to manage data and perform maintenance, etc. when using Cloud Services Management.

### [Chapter 6 Troubleshooting](#)

Explains the corrective actions for trouble that occurs when operating Cloud Services Management.

### [Appendix A Operation of RDBs and SLBs](#)

Explains the operations for RDBs and SLBs in Cloud Services Management.

### [Appendix B Operation of the Browser Interface for Coordination Adapter Base Management](#)

Explains operations of the Browser Interface for Coordination Adapter Base Management.

## Positioning of This Document

Refer to the "FUJITSU Software Cloud Services Management Documentation Roadmap" for an overview of the Cloud Services Management manuals.

## Notational Conventions

For details about the names, abbreviations, and symbols used in this manual, refer to the "FUJITSU Software Cloud Services Management Documentation Roadmap" and the following table.

Proper Name	Abbreviation
FUJITSU Software Cloud Services Management	Cloud Services Management
FUJITSU Software ServerView Resource Orchestrator	ROR
FUJITSU Cloud Service A5 for Microsoft Azure	Azure
Amazon Web Services	AWS
FUJITSU Cloud Service K5	K5
VMware vSphere	VMware
ServerView Operations Manager	SVOM

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## Revision History

Month/Year Issued, Edition	Manual Code
October 2015, First Edition	B1WS-1229-01ENZ0(00)
August 2016, Second Edition	B1WS-1229-02ENZ0(00)

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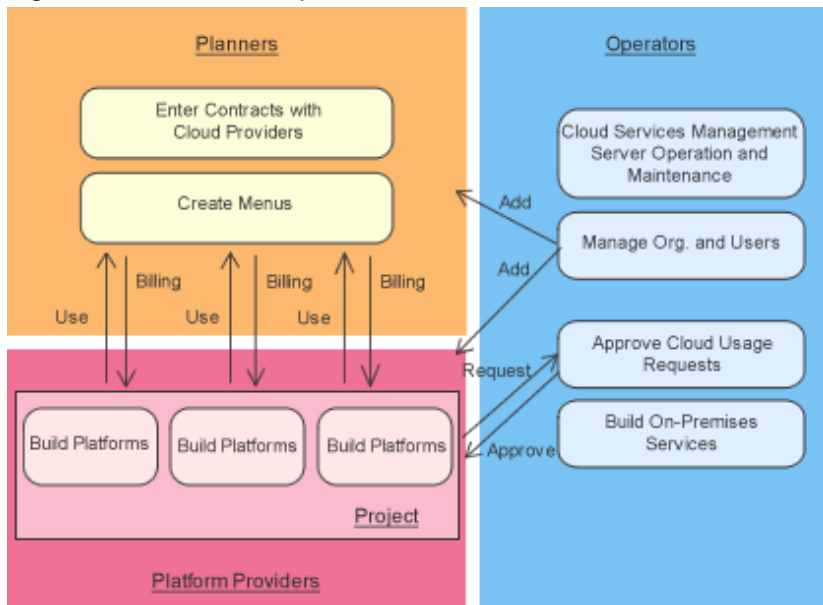
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# Chapter 1 Overview

Users of Cloud Services Management are categorized into the following three departments:

- Planners
- Operators
- Platform Providers

Figure 1.1 The Three Departments and Their Main Tasks in Cloud Services Management



The role of planners is to manage the contracts provided by cloud providers and notify Cloud Services Management users of the fee structure and available services.

The role of operators is to perform system operation and maintenance of Cloud Services Management.

The role of platform providers is to configure platforms that use clouds and provide them to end users.

This chapter explains the overview of the operations and maintenance tasks performed by each department.

## 1.1 Overview of Operations and Maintenance Performed by Planners

This section explains the operations and maintenance performed by planners.

Planners create concrete specifications of the menus provided by clouds and determine the optimal means of realizing the required service level.

Planners perform the following tasks:

- Organizing contracts with cloud providers

Planners evaluate the services offered by cloud providers and arrange contracts.

After arranging contracts, planners request the operators to add the contract information to Cloud Service Management. When arranging a contract with a new cloud provider, planners must also submit a request for the addition of cloud vendor information.

- Adding menus

Planners determine the initial costs, basic charges, option charges, etc. for the service usage via Cloud Services Management based on the content of the services provided by the target cloud for a contract. This information is added to Cloud Services Management as a menu, and published. For details on operation procedures for addition and publication, refer to the "FUJITSU Software Cloud Services Management User's Guide for Planner and Operator".

For added menus, instructions are provided for platform providers.

- Usage status confirmation

Planners confirm the usage and billing statuses of menus. Usage and billing statuses can be checked from the [Billing Management] window of the Cloud Services Management Cloud Management Portal. For detailed procedures, refer to the "FUJITSU Software Cloud Services Management User's Guide for Planner and Operator".

- Menu management

Planners manage contract statuses and also update and add menus when changes are made such as the addition of cloud services.

For details on how to update or add menus, refer to the "FUJITSU Software Cloud Services Management User's Guide for Planner and Operator".

## 1.2 Overview of Operations and Maintenance Performed by Operators

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This section explains the operations and maintenance performed by operators.

Operators manage configuration information and user information for operating Cloud Services Management and perform maintenance of the Cloud Services Management environment, including the operation and maintenance of servers.

Operators perform the following tasks:

- Installation and setup of Cloud Services Management

Operators perform installation and setup of Cloud Services Management. For installation and setup operations, refer to the "FUJITSU Software Cloud Services Management Installation Guide".

- Operation and maintenance of the management server for Cloud Services Management

Operators monitor the operation statuses of Cloud Services Management and respond to trouble in the system. For details, refer to "[Chapter 2 Operation](#)" and "[Chapter 4 Maintenance](#)".

Operators also manage the system information of Cloud Services Management. When reconfiguration becomes necessary for an operation, refer to "[2.2 Initial Configuration before Operation](#)".

- Creation of Notification information

It is possible to display content which you want to show to Cloud Management Portal users on the [Home] window. For details on the setting of notification information, refer to "[2.10.6 Notification Information](#)".

- Creation and modification of organization information, accounting codes, and users

Operators create and modify accounts for the users of the cloud management portal. Operators also create and modify the information of the organization to which the users belong. Operators create and modify accounting codes for organization information.

Creation and modification of organization information and user information can be performed from the Cloud Management Portal or by using commands. Accounting codes can be created and modified using commands. For details on the creation and modification procedures from the cloud management portal, refer to the "FUJITSU Software Cloud Services Management User's Guide for Planner and Operator". For details on the creation and modification procedures using commands, refer to "[5.2.1 Organization Operation Commands](#)", "[5.2.2 User Operation Commands](#)", and "[5.2.13 Accounting Code Operation Commands](#)".

- Creation and modification of cloud vendor information and operation options

Upon request from planners, operators perform creation of connection information with vendors or cloud management software, modification of parameters, etc. For configuring cloud vendor information, refer to "[2.10.2 Cloud Vendor Information](#)". When adding options to a menu, refer to the details about configuration in "[2.10.3 Operation Option Information](#)".

- Creation of contracts

Contracts can be created from the Cloud Management Portal or by using commands. For details on the creation procedure from the cloud management portal, refer to the "FUJITSU Software Cloud Services Management User's Guide for Planner and Operator". For details on the creation procedure using commands, refer to "[5.2.3 Contract Operation Commands](#)".



- Receiving requests for usage of clouds from platform providers

Upon request from a department that wants to use a cloud, operators perform the addition of organization information and user creation for the platform providers.

In addition, operators receive and approve requests for addition, modification, and deletion from platform providers.

Depending on the platform requested by platform providers, operators may also perform the installation and deployment of RDBs and SLBs.

For details on the operation of RDBs and SLBs, refer to "[Appendix A Operation of RDBs and SLBs](#)".

- Approval of Requests

The addition, modification, and deletion of the following information managed by Cloud Services Management requires final approval by operators:

- Organization information
- User information
- Platform information
- Service information

For the details on how to perform operations related to requests, refer to the "FUJITSU Software Cloud Services Management User's Guide for Planner and Operator".

- Management of the metering log

Operations such as the addition and deletion of platforms and the starting and stopping of virtual machines are recorded in a log. This log can be stored as a record of resource usage.

For details on how to output metering logs, refer to "[5.2.7 Metering Log Output Command](#)".

## 1.3 Overview of Operations and Maintenance Performed by Platform Providers

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This section explains the operations and maintenance performed by platform providers.

Platform providers set up the platforms that use menus designed by planners and provide them to end users.

Platform providers perform the following tasks:

- Submission of platform usage requests to operators

Platform providers organize the supervisors, management organizations, and request process routes of the platform to be created and submit requests for operators to create the organization information and add users.

- Adding Projects

Platform providers add projects from the Cloud Management Portal. For the project to add, the payers of the charges for the platforms to be set up and the users involved with the setup and operation of those platforms are added. For details regarding how to add projects, refer to the "FUJITSU Software Cloud Services Management User's Guide for Platform Provider".

- Adding Platforms

From the Cloud Management portal, platform providers select the menus to use and add platforms. For details regarding how to add platforms, refer to the "FUJITSU Software Cloud Services Management User's Guide for Platform Provider".

- Installation and operation of platforms

Platform providers perform the installation and operation of platforms in cloud user environments.

- Checking billing information

Platform providers can confirm charges for usage of clouds using the Cloud Management Portal. For details regarding the [Billing] window, refer to the "FUJITSU Software Cloud Services Management User's Guide for Platform Provider".

# Chapter 2 Operation

This chapter explains the system operation of Cloud Services Management.

## 2.1 Starting and Stopping

This section explains how to start and stop the services of Cloud Services Management.

Cloud Services Management consists of the following services:

- FUJITSU Software Cloud Services Management Web Server(GUI)
- FUJITSU Software Cloud Services Management Web Server(API)
- FUJITSU Software Cloud Services Management Web Server(APP)
- FUJITSU Software Cloud Services Management DB Service(fjsvfscsmdb\_FSCSMSYSTEM)
- FUJITSU Software Cloud Services Management DB Service(fjsvfscsmdb\_FSCSMETERINGLOG)
- FUJITSU Software Cloud Services Management DB Service(fjsvfscsmdb\_FSCSMACCOUNTING)
- FUJITSU Software Cloud Services Management DB Service(fjsvfscsmdb\_FSCSMAPP)

From the Windows Control Panel, open [Administrative Tools], and then open the [Services] window to check the status of each service.

### 2.1.1 Starting

Execute the following command using the command prompt:

```
net start "FUJITSU Software Cloud Services Management Web Server(APP)"
```

The above services and the other services of Cloud Services Management start in sequence.

### 2.1.2 Stopping

Execute the following command using the command prompt:

```
net stop "FUJITSU Software Cloud Services Management DB Service(fjsvfscsmdb_FSCSMSYSTEM)"
```

The above services and the other services of Cloud Services Management stop in sequence.

## 2.2 Initial Configuration before Operation

This section explains the initial configuration tasks to perform after the installation and setup of Cloud Services Management.

#### 1. Configure definition files

Configure the system information, cloud vendor information, operation options, "Notifications" for the Cloud Management Portal, etc. These settings are configured using the "definition file" of Cloud Services Management. For the procedure for editing definition files, refer to ["2.10 Modifying Settings"](#).



Planners and operators should decide the configuration details of definition files beforehand.

#### 2. Create organizations and users

Creation of organization information and user information can be performed from the Cloud Management Portal or by using commands. Using commands, batch addition and modification can be performed. For details on the creation procedure from the cloud management portal, refer to the "FUJITSU Software Cloud Services Management User's Guide for Planner and Operator".

For details regarding the creation procedure using commands, refer to "[5.2.1 Organization Operation Commands](#)" and "[5.2.2 User Operation Commands](#)".

## Point

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### Creation of Administrator Users

It is possible to create administrator users with the authority to add, modify, and delete all resources provided by Cloud Services Management and whose operations do not require approval.

Administrator users belong to the operators.

Create an administrator user when it is necessary for operators to take over troubleshooting, other process handling, verify connections, etc.

Creation of the first administrator user must be performed using commands. For details on creation using commands, refer to "[5.2.2 User Operation Commands](#)".

Using the first administrator user, additional administrator users can be created from the Cloud Management Portal. For details on the creation procedure from the cloud management portal, refer to the "FUJITSU Software Cloud Services Management User's Guide for Planner and Operator".

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## Note

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When using Active Directory as the directory service integrated with SVOM, it is necessary to add the same users in Cloud Services Management and Active Directory. When there are no entries on Active Directory, it is not possible to log in to the Cloud Management Portal.

Add users in Active Directory before or after adding the same users in Cloud Services Management.

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### 3. Create an approval flow

In Cloud Services Management, approvals are required when adding, modifying, or deleting the following resource information:

- Organizations
- Users
- Menus
- Projects
- Platforms
- Services

The approval flows are predefined for each resource type and department to which the requester belongs. However, parts of the approval flows can be modified.

For details on the configuration procedure for approval flows, refer to "[2.10.4 Approval Flow Configuration Information](#)".

### 4. Create accounting codes and link them to organization information

An accounting code refers to the code used for categorizing the payers of usage charges for cloud services.

Accounting codes can be managed using organization information. Multiple accounting codes can be added to a single organization. The same accounting code cannot be added to multiple organizations.

Specifying accounting codes during the creation of project information for multiple platforms at once determines the payer of the charges for the platforms and the management organization of the platforms.

Create an accounting code system for use in Cloud Services Management based on organizations responsible for payment, payment methods, and other aspects of operation related to payment.

Accounting codes can be created using commands. For details, refer to "[5.2.13 Accounting Code Operation Commands](#)".

## 5. Configure backup

Cloud Services Management provides two types of backup methods: offline backup and online backup.

As backup targets differ depending on the backup type, design an operation environment such that backup is performed regularly, using the method appropriate for the intended use of the system.

For details on backup, refer to "[4.2 Backup and Restore](#)".

## 2.3 Adding Contracts

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This section explains how to add contracts.

### 2.3.1 Cloud Preparations

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In order to use Cloud Services Management, preparation of the integrated cloud vendors is necessary.

- When using AWS, Azure, and K5, contracts must be arranged with cloud providers. When using ROR and VMware, the setup of cloud management software must be performed.
- Resources in cloud environments must also be prepared, and the deployment of virtual machines enabled, depending on the service specifications to be released as menus.

In Cloud Services Management, contracts with cloud providers and information regarding cloud management software can be managed using Contract Management. The information required to deploy virtual machines is configured in the parameters for cloud vendor information.

#### Information Related to Contracts

The information managed using Contract Management is as shown below. Decide the details of this information with planners, and collect it beforehand.

Information Name	Required	Information to Prepare	Usage	Remarks
Contract Number	-	The ID, etc. that can be used by the cloud provider and cloud management software to identify a contract.	Enables easier determination of which contracts are linked to the contract of this product.	-
Vendor Portal ID	-	The ID used for logging in to the cloud provider portal	Displays the ID used for logging on to the portals of the cloud provider.	For AWS, Azure, and K5 only
Maintenance Service ID	-	The ID used for contacting the cloud provider	Displays the ID used for contacting the cloud provider.	For AWS, Azure, and K5 only

#### Configuration Required to Deploy Virtual Machines

Perform the following configuration in the integrated cloud and collect the information required to deploy virtual machines.

For details, refer to the published documents on individual cloud products.

- For AWS

1. Sign up for AWS.
2. Create an IAM user.

The access key (access key ID and secret access key) of an IAM user is required.

3. Create a subnet.

4. Create a Virtual Private Cloud(VPC).

Cloud Services Management uses a local IP address to access deployed virtual machines. This operation is necessary for connecting using a local IP address.

5. Create a security group.

6. Confirm the information of the items to be specified in the vendor definition file. For details on these items, refer to "[2.10.2 Cloud Vendor Information](#)".

- For Azure

1. Register the subscription file for connecting with Azure.

For the procedure for adding subscription files, refer to "Configuring Azure Connection Information (Only when Performing Azure Coordination)" in the "FUJITSU Software Cloud Services Management Installation Guide".

2. Create a virtual network, subnets, affinity groups, and a storage account.

3. Confirm the information of the items to be specified in the vendor definition file. For details on these items, refer to "[2.10.2 Cloud Vendor Information](#)".

- For ROR

1. Create tenants to use in Cloud Services Management.

2. Configure resources for the tenants.

3. Confirm the information of the items to be specified in the vendor definition file. For details on these items, refer to "[2.10.2 Cloud Vendor Information](#)".

4. Add and configure tenant users and tenant administrators, and then create an L-Platform template. Cloud Services Management associates each platform with a single L-Platform for management. Create an L-Platform template under the following conditions:

- Prepare an L-Platform template for each serviceOption specified in the cloud vendor definition file (systemDiskImageOptions).
- Define a single virtual machine only.
- Define a single NIC only.
- Set the same values as the parameters specified for serviceOption(COUNT\_CPU/PROCESSORSPEED/MEMORYSIZE) in the cloud vendor definition file (instanceOptions). When defining multiple entries of instanceOptions in the cloud vendor definition file, set the parameter values for the first virtual machine to be deployed on the platform.
- Set the same values as the parameters specified for serviceOption(DISKIMG\_ID/NETWORK\_ID/VSERVER\_TYPE) in the cloud vendor definition file (systemDiskImageOptions).
- Set the same value as the parameter specified for serviceOption(BLOCK\_DEVICE\_SIZE) in the cloud vendor definition file (dataDiskImageOptions).
- Set the same value as the parameter specified for deployParameter(VM\_POOL/STRAGE\_POOL) in the cloud vendor definition file (deployParameters).
- For the parameters in the L-Platform template other than the above, set the common values for each menu.



See

When ROR is operated using SVOM 6.10 or later, it is necessary to reconfigure the TLS/SSL communication settings used by SVOM. For details, refer to "Configuring SVOM" in the "FUJITSU Software Cloud Services Management Installation Guide".

- For K5

1. Create a K5 project to use in Cloud Services Management.

In the new K5 project, add users to be used by Cloud Services Management to access K5.

In addition, submit a request for increasing the maximum number of virtual machines available for use in the K5 project if necessary.

2. In the created project, create the following resources:

- A virtual router
- A virtual network/subnet
- A security group

Configure the virtual network so that it allocates IP addresses to virtual machines automatically.

In addition, configure the virtual network so that it can be directly accessed from an internal network (an access source used by the platform providers when using virtual machines) using the private IP address of a virtual machine.

Configure the security group so that it allows platform providers to use a remote desktop and SSH when using a virtual machine.

3. When using multiple K5 projects, repeat steps 1 and 2.
4. Confirm the information of the items to be specified in the vendor definition file. For details on these items, refer to "[2.10.2 Cloud Vendor Information](#)".



#### Note

When using multiple K5 projects, all of the networks to be created must belong to the same availability zone.

- For VMware

1. Create a vCenter Server and a data center.  
Create clusters and folders if necessary.
2. Create resource pools and a datastore.
3. Using vSphere Client, create users to be used by Cloud Services Management for connecting using vSphere API.

Allocate the following roles to the created users:

- Virtual Machine (all roles)
- Resource (allocation to the resource pool for virtual machines)
- Datastore (area allocation)

4. Create a VMware template. For the number of NICs, specify "1".
5. Prepare the DHCP server on the virtual network where virtual machines are to be deployed.
6. Confirm the information of the items to be specified in the vendor definition file. For details on these items, refer to "[2.10.2 Cloud Vendor Information](#)".

## 2.3.2 Configuring Cloud Vendor Information

Add cloud vendor information by using information collected during "[2.3.1 Cloud Preparations](#)". For details on how to add, refer to "[2.10.2 Cloud Vendor Information](#)".



#### Note

Planners and operators should decide the configuration details of vendor information beforehand.

## 2.3.3 Adding Contracts

---

Add a contract using the information collected during ["2.3.1 Cloud Preparations"](#). Perform the addition using one of the following methods:

- Addition using the Cloud Management Portal

Users who have the operator role can add contracts using the Cloud Management Portal. For details, refer to "Contract Management" in the "FUJITSU Software Cloud Services Management User's Guide for Planner and Operator".

- Adding using commands

For details on the creation procedure using commands, refer to ["5.2.3 Contract Operation Commands"](#).

## 2.4 Adding menus

---

Add menu using one of the following methods:

- Addition using the Cloud Management Portal

Menus can be added by users who have the planner role.

- Adding using commands

For details on addition using commands, refer to ["5.2.4 Menu Operation Commands"](#).



### Note

- In Menu Details, select the "Vendor Unique Parameters" specified in the cloud vendor information. Planners and operators should decide which definitions should be used beforehand.

- If a single virtual machine is added under a platform using ROR, a virtual server is created according to the definition of the L-Platform template.

Planners and operators should decide what instance type is used beforehand, based on the definition of the system disk image.

## 2.5 Adding Projects

---

It is necessary to add projects for managing the accounting details and users of platforms.

Projects can be added using the following procedure.

**Addition using the Cloud Management Portal**

Users who have the platform provider approver role can add projects.

To use platforms and services, users must be added as project members. When adding or modifying projects, add the corresponding users as project members.



### Note

When adding a project, it is necessary to select an accounting code. Confirm that the selected accounting code is available for use beforehand.

Accounting codes can be checked using the following methods:

- Viewing the [Organization/User List] window of the Cloud Management Portal
- Executing ["5.2.13 Accounting Code Operation Commands"](#)

For the operation procedure from the Cloud Management Portal, refer to the "FUJITSU Software Cloud Services Management User's Guide for Platform Provider".

## 2.6 Adding Platforms

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Select an added menu and add a platform.

Perform the addition using one of the following methods:

- Addition using the Cloud Management Portal

Users who have the platform provider role can add platforms.

- Addition using commands

For details on the creation procedure using commands, refer to "[5.2.5 Platform Operation Commands](#)".

In the following cases, it is necessary to associate each platform with a key pair (key pair name and private key) using Cloud Services Management after creating a platform.

- When deploying virtual Windows/Linux machines using AWS
- When deploying virtual Linux machines operating using K5

In the [Platform Management] window of the Cloud Management Portal, select a registered platform and create a key pair.

For the operation procedure from the Cloud Management Portal, refer to the "FUJITSU Software Cloud Services Management User's Guide for Platform Provider".

## 2.7 Adding Services

---

Use the following procedure to add services on a cloud.

Addition using the Cloud Management Portal

Users who have the platform provider role can add services. Select an added platform from the [Platform List] window and add a service from the Details window.

For the operation procedure from the Cloud Management Portal, refer to the "FUJITSU Software Cloud Services Management User's Guide for Platform Provider".

## 2.8 Usage of Services

---

To use a service created on a cloud environment, it is necessary to notify the platform providers that requested use of the service as to the information necessary to access it. The following information related to a virtual machine is necessary to access a service:

- Access information

The IP address of the virtual machine

- OS login information

The user ID, initial password, private key, etc.

This section explains the detailed information necessary for access, preparations related to service usage, and operation tasks for each cloud.



In Cloud Services Management, it is assumed that operation is performed while connected to a network on a public cloud, and that the network is in a company which uses a dedicated line or an Internet VPN (Virtual Private Network). Therefore, access of a virtual machine on a public cloud from a company network uses a private IP address, not a global IP address.

### 2.8.1 AWS

---

The information necessary to use a virtual machine is as shown below.

The following information is sent to platform providers through a deployment completion email for each virtual machine.



Information	Description
The IP address of the virtual machine	A private IP address.
Login user ID	The user name of the OS administrator of the virtual machine.
Key Pair Name	<p>A key pair created by platform providers after a platform is created is used.</p> <p>For each OS type of virtual machine, a key pair is used for the following purposes:</p> <ul style="list-style-type: none"> <li>- For Windows <p>Notification of the initial password encrypted using the public key of the key pair is received from AWS. The initial password can be obtained by decrypting it using the private key of the key pair.</p> </li> <li>- For Linux <p>Use the private key of the key pair for SSH login authentication.</p> </li> </ul>

## Operation of Key Pairs

The following is an operation example of a key pair used by platform providers for each task.

1. In the [Platform Management] window of the Cloud Management portal, a platform provider selects the menu for AWS and requests the addition of a platform.
2. After addition of the platform is completed, a platform provider selects the platform added using the [Platform Management] window and then creates a key pair from the [Platform Details] window.
3. A notification email of creation completion of the key pair is sent to the email address linked with the platform.
4. A platform provider downloads the key pair from the [Platform Details] window and stores it in a secure location.



### Note

When [Internet Explorer's Enhanced Security Configuration] is enabled in a Windows Sever environment, it may not be possible to download files using Internet Explorer.

## Accessing Virtual Machines

Depending on the OS type, use the following methods to access a virtual machine:

### a. For Windows

1. The IP address of the virtual machine, login user ID, and the initial password encrypted using the public key of the key pair are sent to platform providers through a deployment completion email sent for each virtual machine.
2. If the key pair has not been downloaded, download it from the [Platform Details] window and then decrypt the initial password encrypted using the private key of the key pair.
3. Use the information of the login user ID and the decrypted initial password to log in to the virtual machine.



### See

For details on how to decrypt the initial password, refer to the published documents on AWS.

### b. For Linux

1. Platform providers are notified of the IP address of the virtual machine, login user ID, and key pair name through a deployment completion email sent for each virtual machine.
2. Confirm that the key pair name displayed in the [Platform Details] window matches the notified key pair name.

3. If the key pair has not been downloaded, download it from the [Platform Details] window.
4. Log in to the notified IP address using a command supporting SSH communication or a terminal emulator, entering the notified user name and the private key of the key pair.



See

- For details on the private key format and SSH authentication method, refer to the published documents on AWS.
- For details on the SSH login method using a private key, refer to the documents of the SSH client being used.

## 2.8.2 Azure

The information necessary to use a virtual machine is as shown below.

The following information is sent to platform providers through a deployment completion email for each virtual machine.

Information	Description
The IP address of the virtual machine	A private IP address.
Login user ID	<p>The user name of the OS administrator of the virtual machine.</p> <p>This varies for each type of virtual machine.</p> <ul style="list-style-type: none"> <li>- For Windows</li> </ul> <p>Configure this information as a parameter of the cloud vendor definition. The value is fixed for each menu.</p> <ul style="list-style-type: none"> <li>- For Linux</li> </ul> <p>azureuser (fixed)</p> <p>* Note: This may differ depending on the disk image being used.</p>
Login password	<p>The password of the OS administrator of the virtual machine.</p> <p>Configure this information as a parameter of the cloud vendor definition. The value is fixed for each menu.</p>

### Accessing Virtual Machines

Use the following methods to access virtual machines:

1. Platform providers are notified of the IP addresses of virtual machines, login user IDs, and login passwords through a deployment completion email sent for each virtual machines.
2. Platform provider users are sent login user IDs and passwords to use when logging in to virtual machines.

## 2.8.3 ROR and VMware

The information necessary to use a virtual machine is as shown below.

The following information is sent to platform providers through a deployment completion email for each virtual machine.

Information	Description
The IP address of the virtual machine	A private IP address.
Login user ID	The user name of the OS administrator of the virtual machine.
Login password	The password of the OS administrator of the virtual machine.

## Accessing Virtual Machines

Use the following methods to access virtual machines:

1. Platform providers are notified of the IP addresses of virtual machines, login user IDs, and login passwords through a deployment completion email sent for each virtual machines.
2. Platform provider users are sent login user IDs and passwords to use when logging in to virtual machines.

### 2.8.4 K5

The information necessary to use a virtual machine is as shown below.

The following information is sent to platform providers through a deployment completion email for each virtual machine.

Information	Description
The IP address of the virtual machine	A private IP address.
Login user ID	The user name of the OS administrator of the virtual machine.
Login password	The password of the OS administrator of the virtual machine. Use this when the OS type of the virtual machine is Linux.
Key Pair Name	A key pair created by platform providers after a platform is created is used. When the OS type of the virtual machine is Linux, use the private key of the key pair for SSH login authentication.

## Operation of Key Pairs

The following is an operation example of a key pair used by platform providers for each task.

1. In the [Platform Management] window of the Cloud Management portal, platform providers select the menu for K5 and request the addition of a platform.
2. After addition of the platform is completed, a platform provider selects the platform added using the [Platform Management] window and then creates a key pair from the [Platform Details] window.
3. A notification email of creation completion of the key pair is sent to the email address linked with the platform.
4. Platform providers download the key pair from the Details window of [Platform Management] and store it in a secure location.



### Note

When [Internet Explorer's Enhanced Security Configuration] is enabled in a Windows Server environment, it may not be possible to download files using Internet Explorer.

## Accessing Virtual Machines

Depending on the OS type, use the following methods to access a virtual machine:

- a. For Windows
  1. Platform providers are notified of the IP addresses of virtual machines, login user IDs, and login passwords through a deployment completion email sent for each virtual machines.
  2. Platform provider users use the notified login user IDs and passwords to log in to virtual machines from a remote desktop.
- b. For Linux
  1. Platform providers are notified of the IP address of the virtual machine, login user ID, and key pair name through a deployment completion email sent for each virtual machine.

2. Confirm that the key pair name displayed in the [Platform Details] window matches the notified key pair name.
3. If the key pair has not been downloaded, download it from the [Platform Details] window.
4. Log in to the notified IP address using a command supporting SSH communication or a terminal emulator, entering the notified user name and the private key of the key pair.



- For details on the private key format and SSH authentication method, refer to the published documents on K5.
- For details on the SSH login method using a private key, refer to the documents of the SSH client being used.

## 2.9 Usage of Physical Servers

---

In Cloud Services Management, a single platform is linked with a single or multiple physical servers.

The operations from the preparation of physical servers to enabling platform provider users to use the software are as shown below.

1. Configure the cloud vendor information  
Refer to "[2.10.2 Cloud Vendor Information](#)".
2. Add the contract  
Select the cloud vendor information which was configured in step 1, and add the contract.
3. Adding menus  
Select the cloud vendor information which was added in step 2, and add the menu.  
Enter the information for the physical servers, etc., that is provided in Description Details.
4. Requesting platforms  
Platform providers request the addition of platforms, and operators approve the addition requests.  
Operators configure the physical servers to be provided before the final approval is given by an approver of operators.
5. Sending notifications of physical server access information  
After the final addition request of the platform is approved, operators use an e-mail or the internet, etc. to send platform providers the information necessary to access the physical server which has been paid for and provided.

## 2.10 Modifying Settings

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This section explains the definition files for Cloud Services Management.

Definition files handle the configuration information of Cloud Services Management. During operation, modify these definition files if necessary.



- Depending on the definition file, it may be necessary to restart the services of the management server of Cloud Services Management to reflect modifications. For details, refer to the explanation of each definition file. To restart services, perform "[2.1.2 Stopping](#)" followed by "[2.1.1 Starting](#)".
- If offline backup has already been performed, perform it again after correcting all definition files. If offline back is not performed, the corrected definition files are not restored.  
For details on offline backup, refer to "[4.2 Backup and Restore](#)" and "[4.2.1 Offline Backup](#)".



See

For the storage location of the files and folders explained in this manual, the environment variable "FSCSM\_HOME" is used. "FSCSM\_HOME" indicates the absolute path of the folder which contains the files and folders that are necessary for setup and operation. For details on "FSCSM\_HOME", refer to the "FUJITSU Software Cloud Services Management Installation Guide".

## 2.10.1 System Information

The system information definition file defines the information related to overall system behavior, such as the port numbers for mail transmission and the cut-off dates for usage charges. It is necessary to restart the services to reflect any modifications.

The file name and storage location are as follows:

File Name

```
fscsm_config.xml
```

Storage Location

```
%FSCSM_HOME%\conf
```

Setting Items

Item	Description
sendmail.smtp	The IP address or hostname of the SMTP server for sending email
sendmail.smtp.port	The port number of the SMTP server for sending email
sendmail.fromAddr	The email address of the sender
accounting.calc.use	Specify whether to use the usage charge calculation function using the following format: true: Use false: Do not use Default: true
accounting.cutoff.date	Specify the cutoff date for usage charges. Specify a value between 1 and 31. In cases where the specified date does not exist, the cut-off date will be the end of the month. For example, if 31 is specified, but the target month only has 30 days, then the 30th will be used as the cut-off date. Any modification of this item should be performed immediately after setting up this product. Do not modify this item after operation has started. Default: 31
accounting.cutoff.month	Specify the month to be used as the base when referring to the usage charges for multiple months in the [Billing] window. Specify a value between 1 and 12. Default: 4
accounting.retention.use	Specify whether to use the function for storing (deleting) usage charge data (including metering) in the following format: true: Use Usage charge data for which the storage period has expired is deleted. false: Do not use Usage charge data is not deleted. Default: false

Item	Description
accounting.retention.period	<p>Specify the storage period of usage charge data (including metering). Specify the year and month of the storage period in the format YY-MM.</p> <p>For example, if a nine-year storage period is desired, specify 09-00.</p> <p>Do not specify 00-00. Expired usage charge data is automatically deleted at 01:15 every day.</p> <p>Default: 09-00</p> <p>This item is valid only when the function for storing (deleting) usage charge data is set to "true".</p>
accounting.mail.sender.address	The sender address used when sending monthly usage charge files.
accounting.mail.sender.name	The sender name used when sending monthly usage charge files.
accounting.mail.receiver.address	<p>Specify the destination addresses used when sending monthly usage charge files.</p> <p>Multiple addresses can be specified. When specifying multiple values, separate them using semicolons (";").</p>
help.url.operation_manager	<p>Specify the path or the external URL of the file ("FUJITSU Software Cloud Services Management User's Guide for Planner and Operator") displayed when the [Help] link is clicked when an operator approver is logged in to the Cloud Management Portal.</p> <p>Default: /manual/index.html</p>
help.url.operation_user	<p>Specify the path or the external URL of the file ("FUJITSU Software Cloud Services Management User's Guide for Planner and Operator") displayed when the [Help] link is clicked when an operator representative is logged in to the Cloud Management Portal.</p> <p>Default: /manual/index.html</p>
help.url.planEval_manager	<p>Specify the path or the external URL of the file ("FUJITSU Software Cloud Services Management User's Guide for Planner and Operator") displayed when the [Help] link is clicked when a planner approver is logged in to the Cloud Management Portal.</p> <p>Default: /manual/index.html</p>
help.url.planEval_user	<p>Specify the path or the external URL of the file ("FUJITSU Software Cloud Services Management User's Guide for Planner and Operator") displayed when the [Help] link is clicked when a planner representative is logged in to the Cloud Management Portal.</p> <p>Default: /manual/index.html</p>
help.url.bizSysProv_manager	<p>Specify the path or the external URL of the file ("FUJITSU Software Cloud Services Management User's Guide for Platform Provider") displayed when the [Help] link is clicked when a platform provider approver is logged in to the Cloud Management Portal.</p> <p>Default: /manual/html/B1WS-1231-02ENZ0-00/index.html</p>
help.url.bizSysProv_user	<p>Specify the path or the external URL of the file ("FUJITSU Software Cloud Services Management User's Guide for Platform Provider") displayed when the [Help] link is clicked when a platform provider representative is logged in to the Cloud Management Portal.</p> <p>Default: /manual/html/B1WS-1231-02ENZ0-00/index.html</p>
help.url.operation_admin	Specify the path or the external URL of the file ("FUJITSU Software Cloud Services Management User's Guide for Planner and Operator" or "FUJITSU Software Cloud Services Management User's Guide for Platform Provider")

Item	Description
	<p>displayed when the [Help] link is clicked when an administrator user is logged in to the Cloud Management Portal.</p> <p>Default: /manual/index.html</p>
help.url.default	<p>Specify the path or the external URL of the file ("FUJITSU Software Cloud Services Management User's Guide for Planner and Operator" or "FUJITSU Software Cloud Services Management User's Guide for Platform Provider") displayed when the [Help] link is clicked by a user with a role for which the key for help.url.&lt;role_ID&gt; is not set.</p> <p>Default: /manual/index.html</p>
org.depth.max	<p>Specify the maximum number of levels of organization hierarchy.</p> <p>Specify an integer between 1 and 7. When modifying the value of this item, modify the hierarchy level of gui.org.hierarchy.label.&lt;n&gt; accordingly.</p> <p>Default: 3</p>
gui.global.title.label	<p>Specify the character strings to show in the header of the Cloud Management Portal, and the sender name of the email for user notification.</p> <p>Default: FUJITSU Software Cloud Services Management</p>
gui.org.hierarchy.label.<n>	<p>Configure the names for approval levels corresponding to the organization hierarchy.</p> <p>For &lt;n&gt;, specify the level in the organization hierarchy using an integer between 1 and 7. Configuration must be performed according to the number specified for org.depth.max. For example, if org.depth.max is set to 5, it is necessary to configure gui.org.hierarchy.label.1 through gui.org.hierarchy.label.7.</p> <p>Default:</p> <p>gui.org.hierarchy.label.1: Unit</p> <p>gui.org.hierarchy.label.2: Division</p> <p>gui.org.hierarchy.label.3: Department</p> <p>If something other than an integer between 1 and 7 is specified for &lt;n&gt;, the approval level name corresponding to that value is not displayed.</p> <p>In [Approval Level] in the [Menu Management] window, the approval level names specified for gui.org.hierarchy.label.&lt;n&gt;, the name specified for gui.project.auth.label, and "Approval is unnecessary" are displayed as selectable options.</p>
gui.project.auth.label	<p>Specify the display name of an approval level that requires only the approval of a project manager.</p> <p>Default: Project</p>
gui.org.customfield.label.<n>	<p>Specify the item name of the custom field that can be defined for the organization.</p> <p>Only specify an integer between 1 and 5 for &lt;n&gt; when you want to add an item.</p> <p>Default: gui.org.customfield.label.&lt;n&gt;: Organization Custom Field &lt;n&gt; (defined in fscsm_config.xml)</p>
gui.user.customfield.label.<n>	<p>Specify the item name of the custom field that can be defined for users. For &lt;n&gt;, specify an integer between 1 and 5.</p> <p>By adding this item, it is possible to increase the number of items that can be configured when creating and modifying users.</p> <p>Up to five items can be added.</p>

Item	Description
	Default: gui.user.customfield.label.<n>: User Custom Field Name <n> (defined in fscsm_config.xml)
gui.project.customfield.label.<n>	<p>Specify the item name of the custom field that can be defined for projects. For &lt;n&gt;, specify an integer between 1 and 5.</p> <p>By adding this item, it is possible to increase the number of items that can be configured when creating and modifying projects.</p> <p>Up to five items can be added.</p> <p>Default: gui.project.customfield.label.&lt;n&gt;: project custom field name &lt;n&gt; (defined in fscsm_config.xml)</p>
gui.header.loginuser.info	<p>Specify the display format of the information of the login user to show in the header of the Cloud Management Portal.</p> <p>id: Display the user ID</p> <p>name: Display the user name</p> <p>Default: id</p>
request.retention.use	<p>Specify whether to use the function for deleting request data automatically in the following format.</p> <p>true: Use</p> <p>false: Do not use</p> <p>Default: false</p> <p>When using the function, request data is deleted automatically after the period specified for request.retention.period.</p>
request.retention.period	<p>Specify the storage period of request data. Specify the year and month of the storage period in the format YY-MM. The storage period refers to the period elapsed since entry of a request.</p> <p>For example, if a one-year storage period is desired, specify 01-00.</p> <p>The value "00-00" cannot be specified. When this value is specified, the function for storing (deleting) request data is not performed.</p> <p>Expired request data is automatically deleted at 02:15 every day.</p> <p>Default: 01-00</p> <p>This function is enabled only when request.retention.use is set to "true".</p>
quota.use	<p>Specify whether to use the limit management function using the following format:</p> <p>true: Use</p> <p>false (or when not specified): Do not use</p> <p>Default: true</p>
quota.exceed.restrict.vm.start	<p>Specify whether to use the limit management function to restrict the start of virtual machine services when the limit has been exceeded.</p> <p>true: Restrict the start of virtual machine services</p> <p>false: Do not restrict the start of virtual machine services</p> <p>Default: true</p>
ldap.mode	<p>Specify the setting for communication with a directory service according to the integrated directory service for authentication.</p> <p>read_write: Specify when using the directory service provided with SVOM</p> <p>read_only: Specify when using Active Directory integration</p>



Item	Description
	Default: read_write

## 2.10.2 Cloud Vendor Information

Cloud vendor information refers to the information related to the vendor that is selected first when adding contracts using Cloud Services Management. Vendors and connection information with the cloud management software is managed here.

When arranging a contract with a new cloud provider or when adding a private cloud as a service, the addition of new cloud vendor information is necessary.

Files in the following storage location are loaded as cloud vendor information. It is necessary to restart the services to reflect any modifications.

### Storage Location

```
%FSCSM_HOME%\conf\vendors
```

### Point

The following sample files of cloud vendor definitions are added during the installation of this product. These files may be copied or modified as necessary.

The format of modified cloud vendor information can be confirmed using the "[5.2.15 Cloud Vendor Definition File Confirmation Command](#)".

Cloud Vendor	Sample Vendor Definition File Name
AWS	default_aws.xml
Azure	default_azure.xml
ROR	default_ror.xml
K5	default_k5.xml
VMware	default_vmware.xml
Physical Servers	default_physical.xml

### Note

- Note the following when modifying or deleting cloud vendor information after the start of operation:
  - When modifying cloud vendor information  
For the cloud vendor information and each option, add new information or parameters rather than modifying the existing ones.
  - When deleting cloud vendor information  
Do not delete cloud vendor information which is being used in a contract. In addition, do not delete cloud vendor information that was used to create a service during a month in which that service is being used, as the cloud vendor information is used to calculate billing.
- For the cloud vendor information of the physical machine, only "vendor" and "basicMenus/basicMenu" of "Setting Items" are configured. No values are configured for other items, "optional parameter value", and "other available configuration options".

### Setting Items

Category	Item	Description
vendor	vendorId	The ID for the individual management of connection information with cloud services and cloud management

Category	Item	Description	
		software. Specify a value which differs from other cloud vendor information items.	
	type	Specify a cloud vendor type. For the cloud services and cloud management software supported by Cloud Services Management, the following character strings can be specified:	
		Value to Specify	Product Type
		aws	AWS
		azure	Azure
		ror	ROR
		k5	K5
		vmware	VMware
		physical	Physical Servers
vendorName	The display name of connection information with cloud services and cloud management software.		
basicMenus/basicMenu	-	The item names of the basic menus supported by this menu can be managed. The value for the item can be defined during menu addition.	
	menuId	The ID for the individual management of basic menus. Specify a unique value in the basic menu of the cloud vendor information.	
	name	The name of the basic menu displayed when creating a menu using the Cloud Management Portal.	
instanceOptions/serviceOption	-	It is possible to manage the options related to virtual machines in the configuration options that can be selected during the addition of services.	
	optionId	The ID for the individual management of the option definitions for virtual machines in the configuration options. Specify a unique value for the configuration options (virtual machine information) of the cloud vendor information.	
	name	The display name of the configuration options for virtual machines.	
	parameter	The parameter used by Cloud Services Management itself, cloud services, and cloud management software as a configuration option when this option is selected during the addition of services.  Specify an appropriate parameter key for the vendor type. For a list of keys that can be specified, refer to " <a href="#">Optional parameter values</a> ".	
	defaultPrice	The Unit Price of the option that is displayed by default during the addition of menus.	
systemDiskImageOptions/serviceOption	-	It is possible to manage the options related to the system disk in the configuration options that can be selected during the addition of services.	
	optionId	The ID for the individual management of the option definitions for the system disk in the configuration options.  Specify a unique value for the configuration options (system disk information) in the cloud vendor information.	

Category	Item	Description
	name	The display name of the configuration options (system disk) for virtual machines.
	parameter	The parameter used by Cloud Services Management itself, cloud services, and cloud management software as a configuration option when this option is selected during the addition of services.  Specify an appropriate parameter key for the vendor type. For a list of keys that can be specified, refer to " <a href="#">Optional parameter values</a> ".
	defaultPrice	The Unit Price of the option that is displayed by default during the addition of menus.
	diskSize	The value used by Cloud Services Management as the disk size (GB) of the system disk on a virtual machine when this option is selected during the addition of menus.  This value is not reflected on the virtual machines which are deployed by cloud service and cloud management software. For the virtual machines to be deployed by cloud service and cloud management software, check the disk size (GB) of the system disk and specify that size as the value for this option.  Specify an integer between 0 and 99999999.
dataDiskImageOptions/ serviceOption	-	It is possible to manage the options related to additional data disks in the configuration options that can be selected during the addition of services.
	optionId	The ID for the individual management of the option definitions of additional data disks in the configuration options.  Specify a unique value for the configuration options (additional data disk information) of the cloud vendor information.
	name	The display name of the configuration options (additional data disk) for virtual machines.
	parameter	The parameter used by Cloud Services Management itself, cloud services, and cloud management software as a configuration option when this option is selected during the addition of services.  Specify an appropriate parameter key for the vendor type. For a list of keys that can be specified, refer to " <a href="#">Optional parameter values</a> ".
	defaultPrice	The Unit Price of the option that is displayed by default during the addition of menus.
	diskSize	The value used by Cloud Services Management itself, cloud services, and cloud management software as the disk size (GB) of the system disk on a virtual machine when this option is selected during the addition of menus.  Specify an integer between 0 and 99999999.
othersOptions/serviceOption	-	It is possible to manage the other options in the configuration options that can be selected during the addition of services.  Omit the serviceOption element for cloud vendors for which no other options have been prepared.

Category	Item	Description
		For details on specifiable values, refer to " <a href="#">Other Available Configuration Options</a> ".
	optionId	The ID for the individual management of the definitions of other options for virtual machines in the configuration options.  Specify a unique value for the configuration options (other configuration option information) of the cloud vendor information.
	name	The display name of the configuration options (other) for virtual machines.
deployParameters/ deployParameter	-	The specific parameter information that is passed to the cloud vendor and cloud management software, excluding configuration options, can be managed. This item can be selected during the addition of menus.
	id	The ID for the individual management of specific parameter information.  Specify a unique value for the specific parameters of the cloud vendor information.
	name	The display name for the individual management of specific parameter information to be passed to cloud service and cloud management software.
	parameter	The value of the parameter information used by Cloud Services Management itself, cloud services, and cloud management software during deployment when this parameter definition is selected during the addition of services.  Specify an appropriate parameter key for the vendor type. For a list of keys that can be specified, refer to " <a href="#">Optional parameter values</a> ".

## Information

The specifiable character strings for each item are as follows:

- Id (vendorId, optionId, etc.)

Any character string up to 32 characters in length containing lower-case alphanumeric characters, hyphens ("-"), underscores ("\_") and periods (".") can be specified. The beginning character must be a lower-case alphanumeric character.

- name, vendorName

Any character string containing 1 to 64 characters, excluding control characters such as line feeds, can be specified.

- defaultPrice

Any number up to 9 digits and within 6 decimal points can be specified.

For prices which have yet to be specified (are awaiting discussion), specify "-1" or "-1.0000".

Optional parameter values

## Note

Dependencies may occur for each of the following items. For details on these items, refer to the specifications of the relevant cloud vendor or cloud management software.

AWS

Category/Item	Parameter for Specifying Parameter Element	Required	Description
instanceOptions/ serviceOption	INSTANCE_TYPE	Yes	The type of a virtual machine to create. Any valid Amazon EC2 instance type can be specified.
systemDiskImageOptions /serviceOption	IMAGE_ID	Yes	Specify the Amazon Machine Image (AMI) ID of the virtual machine to create.  AMI IDs can be obtained from the AWS management console.  Example: amzn-ami-minimal-pv-2013.09.0.x86_64-ebs
	OS_TYPE	Yes	Specify one of the following according to the OS type of the image specified for IMAGE_NAME:  For Linux: "Linux"  For Windows: "Windows"
	BLOCK_DEVICE_NAMES	Yes	The device names of additional block devices.  Specify as many device names as the number of devices that can be added in the EC2 instance, separating them using commas.  Example: /dev/sdf,/dev/sdg,/dev/sdh
	ADMIN_USER	Yes	Specify the user name of the OS administrator of the virtual machine.  Specify the user name configured for the Amazon Machine Image (AMI).
dataDiskImageOptions/ serviceOption	BLOCK_DEVICE_SIZE	Yes	Specify the size of additional block devices in GB.  The same size is configured for all block devices added during the creation of the virtual machine.  This does not apply to the root device.  Example: 80
	BLOCK_DEVICE_TYPE	Yes	Specify the device type of additional block devices (the volume name of AWS).  The same type is configured for all block devices added during the creation of the virtual machine.  When reconfiguring a virtual machine, only block devices of the same type as those already added can be specified.  This does not apply to the root device.  Example: gp2
	BLOCK_DEVICE_NUM	Yes	Specify the number of additional block devices.  Specify the fixed character string "[dataDiskNum]" in the parameter value.  The value specified from the Cloud Management Portal when creating or modifying a virtual machine is configured in the internal processes of Cloud Services Management.

Category/Item	Parameter for Specifying Parameter Element	Required	Description
deployParameters/ deployParameter	SECURITY_GROUP_NAMES		Specify the names of already created security groups.  Multiple security group names can be specified by separating them using commas.
	SUBNET_ID		Specify the ID of a subnet where the EC2 instances are created.  This parameter cannot be specified when AVAILABILITY_ZONE is specified.  When omitted, Cloud Services Management operates as follows:  When AVAILABILITY_ZONE is specified, the default subnet for AVAILABILITY_ZONE is configured.  When AVAILABILITY_ZONE is not specified, the default subnet for the default VPC is configured.
	REGION	Yes	The region where the data center which hosts the EC2 instances is located. Any valid region for EC2 can be specified.
	AVAILABILITY_ZONE		Specify an availability zone in which the instances are created.  If omitted, the public IP address will be assigned according to the configuration of the subnet.  This parameter cannot be defined if SUBNET_ID is defined.

#### Azure

Category/Item	Parameter for Specifying Parameter Element	Required	Description
instanceOptions/ serviceOption	INSTANCE_TYPE	Yes	Specify the type of a virtual machine to create (the size of Azure).  Example: Basic_A0
systemDiskImageOptions /serviceOption	IMAGE_NAME	Yes	Specify image name or disk name. Public image names of Azure can be obtained by executing Azure commands or APIs.  Example: myimage.vhd
	OS_TYPE	Yes	Specify one of the following according to the OS type of the image specified for IMAGE_NAME:  For Linux: "Linux"  For Windows: "Windows"
	ADMIN_USER	Yes	Specify the user name used for logging into the virtual machine to create.

Category/Item	Parameter for Specifying Parameter Element	Required	Description
			When the OS created using IMAGE_NAME is Linux, the fixed value "azureuser" is used regardless of what value is set here.
	ADMIN_PASS	Yes	Specify the password of the user used for logging into the virtual machine to create.
dataDiskImageOptions/ serviceOption	BLOCK_DEVICE_SIZE	Yes	Specify the size of additional block devices in GB. The same size is configured for all block devices added during the creation of the virtual machine. This does not apply to the root device. Example: 80
	BLOCK_DEVICE_TYPE	Yes	Specify the device type of additional block devices (the disk cache policy for Azure).
	BLOCK_DEVICE_NUM	Yes	Specify the number of additional block devices. Specify the fixed character string "[dataDiskNum]" in the parameter value. The value specified from the Cloud Management Portal when creating or modifying a virtual machine is configured in the internal processes of Cloud Services Management.
deployParameters/ deployParameter	AFFINITY_GROUP	Yes	Specify the name of an existing affinity group that was created using the Azure management portal. Example: AF_GROUP1
	SUBSCRIPTION_ID	Yes	Specify an Azure subscription ID. Example: 11111111-2222-3333-4444-555555555555
	STORAGE_ACCOUNT_NAME	Yes	Specify a storage account name used for volume management. Example: account100
	AVAILABILITY_SET		Specify an availability set name.
	VIRTUAL_NETWORK_NAME	Yes	Specify a virtual network name. Example: vnet2
	SUBNET_ID	Yes	Specify the ID of a subnet that has been created in the Azure management portal. Example: subnet2

ROR

Category/Item	Parameter for Specifying Parameter Element	Required	Description
instanceOptions/ serviceOption	COUNT_CPU		Specify the number of CPUs. When this parameter is not specified, the default value of VSERVER_TYPE is configured.
	PROCESSORSPEED		Specify CPU performance in GHz.

Category/Item	Parameter for Specifying Parameter Element	Required	Description
			<p>A value up to the first decimal place can be specified.</p> <p>When this parameter is not specified, the default value of VSERVER_TYPE is configured.</p> <p>The value specified must be equal to or greater than the value of the reserved CPU performance (CPUReserve) configured in VSERVER_TYPE. For details about the value of the reserved CPU performance (CPUReserve), refer to the manuals of ROR.</p>
	MEMORYSIZE		<p>Specify the memory size in GB.</p> <p>A value up to the first decimal place can be specified.</p> <p>When this parameter is not specified, the default value of VSERVER_TYPE is configured.</p> <p>The value specified must be equal to or greater than the value of the reserved memory capacity (MemoryReserve) configured in VSERVER_TYPE. For details about the value of the reserved memory capacity (CPUReserve), refer to the manuals of ROR.</p>
systemDiskImageOptions /serviceOption	SYSTEM_TEMPLATE_ID	Yes	<p>Specify the ID of the L-Platform template.</p> <p>This template ID is used to create an L-Platform when there are no services in the platform.</p>
	DISKIMG_ID	Yes	<p>Specify the resource ID (disk) of the image information of the virtual machine added in the L-Platform.</p> <p>Depending on the server virtualization software integrated with ROR, virtual machine service operations may be limited. For details, refer to the manuals of ROR.</p>
	NETWORK_ID	Yes	Specify the network ID of the segment used by the virtual machine added in the L-Platform.
	VSERVER_TYPE	Yes	<p>Specify the character string indicating the server type of the virtual machine added in the L-Platform. This character string must indicate a server type supported by ROR.</p> <p>Example: sample_small</p>
	OS_TYPE	Yes	<p>Specify one of the following according to the OS type of the image specified for DISKIMG_ID:</p> <p>For Linux: "Linux"</p> <p>For Windows: "Windows"</p>
	ADMIN_USER	Yes	Specify the user name of the OS administrator of the virtual machine. It is necessary to specify according to the image ID to be used.
dataDiskImageOptions /serviceOption	BLOCK_DEVICE_SIZE	Yes	Specify the size of additional block devices in GB.



Category/Item	Parameter for Specifying Parameter Element	Required	Description
			The same size is configured for all block devices added during the creation of the virtual machine. This does not apply to the root device. Example: 80
	BLOCK_DEVICE_NUM	Yes	Specify the number of additional block devices. Specify the fixed character string "[dataDiskNum]" in the parameter value. The value specified from the Cloud Management Portal when creating or modifying a virtual machine is configured in the internal processes of Cloud Services Management.
deployParameters/ deployParameter	VM_POOL	Yes	Specify a VM pool of ROR to use when creating the new virtual machine.
	STORAGE_POOL	Yes	Specify a storage pool of ROR to use when creating a new virtual machine.

K5

Category/Item	Parameter for Specifying Parameter Element	Required	Description
instanceOptions/ serviceOption	FLAVOR_ID	Yes	Specify the flavor ID indicating specifications of the virtual machine. Specify the flavor ID using K5 IaaS API. Example: 1101
systemDiskImageOptions /serviceOption	DISKIMG_ID	Yes	Specify the image ID used for creating a virtual machine. K5 public image IDs can be obtained from the K5 management console.
	OS_TYPE	Yes	Specify one of the following according to the OS type of the image specified for DISKIMG_ID: For Linux: "Linux" For Windows: "Windows"
	VOL_SIZE	Yes	Specify the size of the root device of the virtual machine in GB.
	ADMIN_USER	Yes	Specify the user name of the OS administrator of the virtual machine. The user name specified in this parameter is sent to platform providers by email when deployment of the virtual machine completes. It is necessary to specify according to the image ID to be used.
	ADMIN_PASS	Yes *1	Specify the initial OS administrator password for the virtual machine. The password specified in this parameter is sent to platform providers by email when deployment of the virtual machine completes.
	DEDICATED_INSTANCE		Specify whether to deploy the virtual machine as a dedicated instance (dedicated virtual server). Specify "true" to deploy the virtual machine as a

Category/Item	Parameter for Specifying Parameter Element	Required	Description
			dedicated instance. Specify "false" to not deploy the virtual machine as a dedicated instance.  The default value used when this parameter is omitted is "false".
dataDiskImageOptions/ serviceOption	BLOCK_DEVICE_SIZE	Yes	Specify the size of additional block devices in GB.  The same size is configured for all block devices added during the creation of the virtual machine.  This does not apply to the root device.  Example: 80
	BLOCK_DEVICE_TYPE	Yes	Specify the device type of additional block devices (the type of block storage for K5).  The same type is configured for all block devices added during the creation of the virtual machine.  When reconfiguring a virtual machine, only block devices of the same type as those already added can be specified.  This does not apply to the root device.  Example: F1
	BLOCK_DEVICE_NUM	Yes	Specify the number of additional block devices.  Specify the fixed character string "[dataDiskNum]" in the parameter value.  The value specified from the Cloud Management Portal when creating or modifying a virtual machine is configured in the internal processes of Cloud Services Management.
deployParameters/ deployParameter	AVAILABILITY_ZONE		Specify an availability zone in which the instances are created. If not specified, the availability zone is configured on K5.  Example: jp-east-1a
	PROJECT_INFO	Yes	Specify the K5 project names, the network IDs created in the K5 project, and security group names, separating them using commas.  Example: <K5 project name 1>,<Network ID 1>,<Security group name 1>, <K5 project name 2>,<Network ID 2>,<Security group name 2>
	PROJECT_MAX_VM	Yes	Specify the maximum number of virtual machines available for use in a K5 project.  This parameter is applied to all of the K5 projects specified in PROJECT_INFO.
	DOMAIN		Specify the K5 domain to connect. If not specified, the K5 domain specified during setup is used as the connection destination.

\*1: Specify only when using Windows. When using Linux, this parameter is disabled even when specified.

VMware

Category/Item	Parameter for Specifying Parameter Element	Required	Description
instanceOptions/ serviceOption	NUMBER_OF_CPU	Yes	Specify the number of CPUs.
	AMOUNT_OF_RAM	Yes	Specify the memory size in GB.
systemDiskImageOptions/ /serviceOption	IMAGE_NAME	Yes	Specify the name of the VMware template to use for cloning a new instance.  Example: centos6x64tpl
	DISK_SIZE	Yes	Specify the system disk size in GB. Only one virtual device is supported. If multiple virtual devices are specified, only the first device will be configured.
	OS_TYPE	Yes	Specify one of the following according to the OS type of the image specified for IMAGE_NAME:  For Linux: "Linux"  For Windows: "Windows"
	ADMIN_USER	Yes	Specify the user name of the OS administrator of the virtual machine.  Specify the user name configured for the VMware template.
	ADMIN_PASS	Yes	Specify the OS administrator password for the virtual machine.  For Windows, the password specified in this parameter is configured.  For Linux, specify the password for the OS specified in the template.
dataDiskImageOptions/ serviceOption	BLOCK_DEVICE_SIZE	Yes	Specify the size of additional block devices in GB.  The same size is configured for all block devices added during the creation of the virtual machine.  This does not apply to the root device.  Example: 40
	BLOCK_DEVICE_NUM	Yes	Specify the number of additional block devices.  Specify the fixed character string "[dataDiskNum]" in the parameter value.  The value specified from the Cloud Management Portal when creating or modifying a virtual machine is configured in the internal processes of Cloud Services Management.
deployParameters/ deployParameter	TARGET_DATACENTER	Yes	Specify the name of the data center.  *The information of vCenter Server can be specified using the VMware setup command.
	TARGET_CLUSTER		Specify the cluster name.  When TARGET_STORAGE is not specified, ensure that this parameter is configured.  When TARGET_STORAGE is specified, the setting of this parameter is invalid.

Category/Item	Parameter for Specifying Parameter Element	Required	Description
	TARGET_HOST	Yes	Specify the name of the host where the virtual machine is created.  When a cluster is specified, specify a host in the cluster.  When a cluster is not specified, specify a host in the data center.
	TARGET_STORAGE		Specify the datastore name.  When a datastore name is not specified, the datastore defined for the host is automatically configured on the cloud.  When TARGET_CLUSTER is not specified, ensure that this parameter is configured.
	TARGET_FOLDER		Specify the name of the folder in which the virtual machine is created. When not specified, the virtual machine is placed in the same folder as the template.  Only a single level inside a folder can be specified.

#### Other Available Configuration Options

##### AWS

Available Option	Value of option_id Attribute
Whether to use SLB	"slb"
Whether to use RDB	"rdb"
Whether to use snapshot	"snapshot"

##### Azure

There are no other available configuration options.

##### ROR

There are no other available configuration options.

##### VMware

There are no other available configuration options.

##### K5

Available Option	Value of option_id Attribute
Whether to use snapshot	"snapshot"



See

For example specifications of each parameter, refer to the sample files of cloud vendor definitions.

## 2.10.3 Operation Option Information

Operation option information is the information about the option services provided using menus. Operation option information is displayed as selectable operation options when adding a menu using the Cloud Management Portal.

The file name and storage location are as follows: It is necessary to restart the services to reflect any modifications.

File Name

extraOption.xml

Storage Location

%FSCSM\_HOME%\conf

Setting Items

Category	Item	Description
extendedOptions/extendedOption	-	It is possible to manage operation options. This item is displayed as a candidate for operation options during the addition of menus.
	optionId	The ID for the individual management of operation options.
	optionName	The display name of the operation option.
	defaultPrice	The default unit price of the operation option that is displayed during the addition of menus.
	comment	A description which explains the operation options when adding platforms. Any UTF-8 format characters up to 256 characters in length, excluding control characters such as line feed, can be specified.  When a value other than "default" is configured for usageType, enter a description of the usage.
	usageType	Specify the usage type used for calculating usage charges of operation options.  When not specified or when an invalid value is specified, it is assumed that "default" is specified.
	unitLabel	The label of the unit which is output to the [Billing] window and billing files.  When not specified, the default label corresponding to the usage type is displayed.  (Refer to the Unit Label column below)

Acceptable Values for usageType

Values that can be specified for the item usageType are shown below.

Value Specified for usageType	Usage Amount Applied During Billing	Unit Label (Default)
default	When a platform with the corresponding operation options has been deployed for any amount of time, "1" is applied.	month
serviceNum	The number of services of the platforms with the corresponding operation options selected is applied (the configuration that yields the highest charge for the target month is used).	service-month
vmNum	The number of virtual machine services of the platforms with the corresponding operation options selected is applied (the configuration that yields the highest charge for the target month is used).	service-month
nonVmNum	The number of services other than those of virtual machines of the platforms with the corresponding operation options selected is applied	service-month

Value Specified for usageType	Usage Amount Applied During Billing	Unit Label (Default)
	(the configuration that yields the highest charge for the target month is used).	
totalDiskSize	The total size (in GB) of the system disks and data disks of the platforms with the corresponding operation options selected is applied (the configuration that yields the highest charge for the target month is used).	GB-month
systemDiskSize	The size (in GB) of the system disk of the platforms with the corresponding operation options selected is applied (the configuration that yields the highest charge for the target month is used).	GB-month
dataDiskSize	The size (in GB) of the data disk of the platforms with the corresponding operation options selected is applied (the configuration that yields the highest charge for the target month is used).	GB-month

### Information

The specifiable character strings for each item are as follows:

- optionId

Any character string up to 32 characters in length containing lower-case alphanumeric characters, hyphens ("-"), underscores ("\_") and periods (".") can be specified. The beginning character must be a lower-case alphanumeric character.

- optionName

Any character string containing 1 to 64 characters, excluding control characters such as line feeds, can be specified.

- defaultPrice

Any number up to 9 digits and within 6 decimal points can be specified.

For prices which have yet to be specified (are awaiting discussion), specify "-1" or "-1.0000".

### Note

When you want to modify operation option information after starting the operation of this product, as the information may already be in use, add new parameters of operation options information, rather than modifying existing parameters.

## 2.10.4 Approval Flow Configuration Information

The approval flow configuration information defines the approval flows used when addition, modification, or deletion of resource information of Cloud Services Management is requested. Configure each approval flow based on the type of resources to be added such as organization information, projects, platforms, etc. In addition, depending on the target resource, configure an approval flow based on the department to which the user who operates that resource belongs.

The file name and storage location are as follows: It is necessary to restart the services to reflect any modifications.

When a key is not configured for a definition file, or when a value that cannot be specified is specified, the default value is used to define the approval flow.

File Name

```
request_flow.xml
```

Storage Location

```
%FSCSM_HOME%\conf
```

Setting Items

Item	Description
<p>menu.approval-Planners</p>	<p>Specify the approval flow necessary for performing addition, modification, or deletion of menus.</p> <p>Specify one of the following values:</p> <p>manager_approval: Requires the approval of Planners - Approver</p> <p>no_approval: Approval is unnecessary</p> <p>Default: manager_approval</p> <p>For details on the approval flows, refer to "Figure 4.5 The Menu Approval Process" in the "FUJITSU Software Cloud Services Management User's Guide for Planner and Operator".</p> <p>Route 1 in the figure is the flow used when "manager_approval" is specified and Route 2 in the figure is the flow used when "no_approval" is specified.</p>
<p>org.approval-Operators</p>	<p>Specify the approval flow necessary when performing addition, modification, or deletion of organizations.</p> <p>Specify one of the following values:</p> <p>manager_approval: Requires the approval of Operators - Approver</p> <p>no_approval: Approval is unnecessary</p> <p>Default: manager_approval</p> <p>For details on the approval flows, refer to "Figure 2.2 The Organization Information Approval Process" in the "FUJITSU Software Cloud Services Management User's Guide for Planner and Operator".</p> <p>Route 1 in the figure is the flow used when "manager_approval" is specified and Route 2 in the figure is the flow used when "no_approval" is specified.</p>
<p>user.approval-Operators.applicant-Operators</p>	<p>Specify the approval flow necessary when operators perform addition, modification, or deletion of users.</p> <p>Specify one of the following values:</p> <p>manager_approval: Requires the approval of Operators - Approver</p> <p>no_approval: Approval is unnecessary</p> <p>Default: manager_approval</p> <p>For details on the approval flows, refer to "Figure 2.3 The User Information Approval Flow (for Operators)" in the "FUJITSU Software Cloud Services Management User's Guide for Planner and Operator".</p> <p>Route 1 in the figure is the flow used when "manager_approval" is specified and Route 2 in the figure is the flow used when "no_approval" is specified.</p>

Item	Description
user.approval- Operators.applicant- PlannersProviders	<p>Specify the approval flow performed by operators which is necessary when planners or platform providers perform addition, modification, or deletion of users.</p> <p>Specify one of the following values:</p> <p>full_approval: Requires approvals of Operators - Representative and then Operators - Approver.</p> <p>single_approval: Requires the approval of either Operators - Representative or Operators - Approver</p> <p>no_approval: Approval is unnecessary</p> <p>Default: full_approval</p> <p>For details on the approval flows, refer to "Figure 2.4 The User Information Approval Flow (for Planners - Representative)" and "Figure 2.5 The User Information Approval Flow (for Planners - Approver)" in the "FUJITSU Software Cloud Services Management User's Guide for Planner and Operator". Or refer to "Figure 2.3 The User Information Approval Flow (for Platform Providers - Representative)" and "Figure 2.4 The User Information Approval Flow (for Platform Providers - Approver)" in the "FUJITSU Software Cloud Services Management User's Guide for Platform Provider".</p> <p>Route 1, Route 2, and Route 3 for [Operators] in the figure are the flows when "full_approval", "single_approval", and "no_approval" are selected, respectively.</p>
user.approval- PlannersProviders	<p>Planners or platform providers specify the approval flow performed within their own department which is necessary when performing addition, modification, or deletion of users.</p> <p>Specify one of the following values:</p> <p>manager_approval: Requires the approval of an approver belonging to the same department/organization as the requester</p> <p>no_approval: Approval is unnecessary</p> <p>Default: manager_approval</p> <p>For details on the approval flows, refer to "Figure 2.4 The User Information Approval Flow (for Planners - Representative)" in the "FUJITSU Software Cloud Services Management User's Guide for Planner and Operator". Or refer to "Figure 2.3 The User Information Approval Flow (for Platform Providers - Representative)" in the "FUJITSU Software Cloud Services Management User's Guide for Platform Provider".</p> <p>Route 1 in the figure is the flow used when "manager_approval" is specified and Route 2 in the figure is the flow used when "no_approval" is specified.</p>
platform.approval-Operators	<p>Specify the approval flow performed by operators which is necessary when performing addition, modification, or deletion of platforms.</p> <p>Specify one of the following values:</p> <p>full_approval: Requires approvals of Operators - Representative and then Operators - Approver.</p> <p>single_approval:</p>



Item	Description
	<p>Requires the approval of either Operators - Representative or Operators - Approver</p> <p>no_approval: Approval is unnecessary Default: full_approval</p> <p>For details on the approval flows, refer to "Figure 4.7 The Platform Approval Flow (for Project Users, with the Level Specified)", "Figure 4.8 The Platform Approval Flow (for Project Managers, with the Level Specified)", and "Figure 4.9 The Platform Approval Process (Approval is Unnecessary)" in the "FUJITSU Software Cloud Services Management User's Guide for Platform Provider".</p> <p>Route 1, Route 2, and Route 3 for [Operators] in the figure are the flows when "full_approval", "single_approval", and "no_approval" are selected, respectively.</p>
service.approval-Operators	<p>Specify the approval flow performed by operators which is necessary when performing addition, modification, or deletion of services.</p> <p>Specify one of the following values:</p> <p>full_approval: Requires approvals of Operators - Representative and then Operators - Approver.</p> <p>single_approval: Requires the approval of either Operators - Representative or Operators - Approver</p> <p>no_approval: Approval is unnecessary Default: full_approval</p> <p>For details on the approval flows, refer to "Figure 4.13 The Service Approval Flow (for Project Users, with the Level Specified)", "Figure 4.14 The Service Approval Flow (for Project Managers, with the Level Specified)", and "Figure 4.15 The Service Approval Flow (Approval is Unnecessary)" in the "FUJITSU Software Cloud Services Management User's Guide for Platform Provider".</p> <p>Route 1, Route 2, and Route 3 for [Operators] in the figure are the flows when "full_approval", "single_approval", and "no_approval" are selected, respectively.</p>
project.approval-Operators	<p>Specify the approval flow performed by operators, which is necessary when performing addition, modification, or deletion of projects (but not for member operations).</p> <p>Specify one of the following values:</p> <p>full_approval: Requires approvals of Operators - Representative and then Operators - Approver.</p> <p>single_approval: Requires the approval of either Operators - Representative or Operators - Approver</p> <p>no_approval: Approval is unnecessary Default: full_approval</p> <p>For details on the approval flows, refer to "Figure 3.5 The Project Addition Approval Flow" and "Figure 3.5 Approval Process of Addition, Modification, and Deletion of a Project"</p>

Item	Description
	<p>in the "FUJITSU Software Cloud Services Management User's Guide for Platform Provider".</p> <p>Route 1, Route 2, and Route 3 for [Operators] in the figure are the flows when "full_approval", "single_approval", and "no_approval" are selected, respectively.</p>
project-member.approval	<p>Specify the approval flow performed by operators, which is necessary when a project user performs addition, modification, or deletion of projects.</p> <p>Specify one of the following values:</p> <p>manager_approval: Requires the approval of a project manager</p> <p>no_approval: Approval is unnecessary</p> <p>Default: manager_approval</p> <p>For details on the approval flows, refer to "Figure 3.6 The Project Member Addition and Deletion Approval Flow (Project User)" in the "FUJITSU Software Cloud Services Management User's Guide for Platform Provider".</p> <p>Route 1 in the figure is the flow used when "manager_approval" is specified and Route 2 in the figure is the flow used when "no_approval" is specified.</p>
project.auth.level	<p>Specify a hierarchy level of the approval flow within the organization, which is necessary when performing addition, modification, or deletion (excluding member operations) of projects.</p> <p>Specify 1 for the organization at the top level of the hierarchy, 2 for its sub-organization, or 3 for an organization in the sub-organization. For this reason, when 1 is specified, the approval of each hierarchy level, in ascending order, of the organization to which the user who performed the operation belongs is required.</p> <p>The value must be an integer between 1 and 7 and equal to or smaller than the value of org.depth.max that is defined in "2.10.1 System Information". If no approvals are necessary within the organization, specify "no_approval".</p> <p>Default: 1</p> <p>For details on the approval flows, refer to "Figure 3.5 The Project Addition Approval Flow" and "Figure 3.5 Approval Process of Addition, Modification, and Deletion of a Project" in the "FUJITSU Software Cloud Services Management User's Guide for Platform Provider".</p> <p>Route 1 in the figure is the flow used when a hierarchy level is specified and Route 2 in the figure is the flow used when "no_approval" is specified.</p>

 Note

When approval flow configuration information is modified, processes under request are processed with the previous configuration settings.

## Information

- Approval settings within the organization in an approval flow for platforms and services are not configured in approval flow configuration information.  
Approval settings change depending on the value of the approval level specified using the menu selected when a platform is added.
- The following settings eliminate the necessity of approval processes for platforms or services.

platform.approval-Operators:no\_approval

service.approval-Operators:no\_approval

It is not necessary to set an approval level for menus.

By combining these settings with the limit management function, it is possible to enable platform providers to operate services within the limits for usage charges.

## 2.10.5 Online Backup Configuration Information

Online backup configuration information is referred to when performing online backup. It defines the backup destination and whether to perform the backup operation.

The file name and storage location are as follows:

File Name

```
fscsm_backup_config.xml
```

Storage Location

```
%FSCSM_HOME%\conf
```

Setting Items

Item	Description
manager.onlinebackup.directory	<p>Specify the storage location of the backup files. Specify the storage location folder using only alphanumeric characters, periods ("."), hyphens ("-"), and back slashes ("\").</p> <p>It is necessary to create the folders and subfolders to be specified here beforehand.</p> <p>For details, refer to "<a href="#">Backup Storage Location</a>" below.</p> <p>Default: "" (Empty string)</p> <p>Configuration example 1: F:\csm\online</p> <p>Configuration example 2: \\10.20.30.40\csm\online</p>
csm.base.onlinebackup	<p>Specify whether to enable or disable online backup.</p> <p>true: Online backup is performed</p> <p>false: Online backup is not performed</p> <p>Default: false</p>

Backup Storage Location

The folder to be specified as the backup location and its subfolders must be created beforehand.

Create the following folder structure in the folder to specify:

```
<Backup storage folder>
|
|---CSMAccounting
|
```

```

|      +-- wal
|
|----CSMMETERINGLOG
|      |
|      +-- wal
|
|----CSMSYSTEM
|      |
|      +-- wal
|
|----CSMAPP
|      |
|      +-- wal

```

When specifying a folder as the backup storage location, note the following:

- Use two back slashes ("\\") as a folder separator
- Ensure that the specified folder string does not end with "\\\""
- Use the following escape characters if necessary:
  - "<" -> "&lt;"
  - ">" -> "&gt;"
  - "&" -> "&amp;"
  - """"(double quotes) -> "&quot;"

### Note

- The backup storage location is accessed from the services of this product and by the user who executes the command. Therefore, it must be accessible using the OS administrator privileges and the privileges of the OS user for database connection (fjvcsmdb).
- In order to prevent information that was backed up from being corrupted due to failure of the management server, specify another recording media or an external storage device for the backup location of the files on the management server.

## 2.10.6 Notification Information

Notification information is displayed in the [Home] window of the Cloud Management Portal.

The file name and storage location are as follows: Restarting services is not necessary to reflect modifications.

File Name

messages.txt

Storage Location

%FSCSM\_HOME%\conf

Setting Content

In the notification information file, one message is stated on each line.

Date, message

Enter the date and the message separated by a comma (",").

The character strings entered for the date and message are displayed as is. For the message section, text such as information about system stoppage and contact information can be added.

In this file, "YYYY-MM-DD,XXXX" is entered by default. Edit the file as necessary.

## Note

Use UTF-8 for the character code of the notification information file.

### Setting Example

```
2011/06/25, Maintenance is scheduled for the weekend.
```

## 2.10.7 Menu Icons

---

Icons to be displayed in the Menu List window for platform providers can be added.

Files in the following storage location are loaded as icon files. Icon files are displayed in a list during the addition of menus so that you can select them from the list. Save each icon as an image file in a format supported by web browsers, such as png.

### Storage Location

```
%FSCSM_HOME%\conf\images
```

Icons to be displayed in the Menu List window for platform providers can be added.

## Note

The dimensions of each icon should be 96 px \* 96 px.

# Chapter 3 Billing

This chapter explains billing.

## 3.1 Overview of Billing

---

This section explains the overview of the billing function.

The billing function provides the basis for billing related to the platforms usage of all organizations.

Billing includes the following functions.

- Unit price management using menus

Configures and modifies the unit prices for billing resources for which charges are calculated, such as platforms and virtual machines.

For details on Menu Management, refer to the "FUJITSU Software Cloud Services Management User's Guide for Planner and Operator".

In addition, when requesting a service, it is possible to display the Estimated Charges for the service based on the set unit price.

For details on the estimated charges of services, refer to the "FUJITSU Software Cloud Services Management User's Guide for Platform Provider".

- Calculation of Billing

Calculates billing based on the amount of use of platforms and the unit price that was set using menus. For details on how to calculate and operate billing, refer to "[3.2 Calculation of Billing](#)" and "[3.3 Operation of Billing](#)".

- Viewing Billing

Billing can be viewed from the Cloud Management Portal. Billing information can also be downloaded as a file. For details, refer to the "FUJITSU Software Cloud Services Management User's Guide for Planner and Operator".

- Managing Billing Limits (Thresholds)

Limits for usage charges incurred by the platforms belonging to a project can be configured and the following functions can be used:

- Sending alarm notifications to the email address configured in a project before and when the limit is exceeded
- Suppression of operations that would increase usage charges for the resources belonging to a project that has reached the limit

For configuring limits and the process performed when limits are exceeded, refer to "[3.5 Limit Management](#)".

## 3.2 Calculation of Billing

---

This section explains the calculation of billing.

Refer to "[3.4 Metering Logs](#)" for information on the metering log, which is the information upon which the calculation of billing is based.

### 3.2.1 Aggregation of Usage Times of Resources

---

When a user performs operation of a platform or a virtual machine, each operation that was performed is recorded in the metering log. The usage times of resources are aggregated based on the content of this log.

Billing is calculated for each platform based on the aggregated usage time, the amount of resources used, and the unit price in the menu.

### 3.2.2 Calculation of Billing

---

#### Resource Usage Time

There are two types of resource usage time. One is the deployed time, and the other is the operated time. Both types of resource usage time are aggregated based on the information in the metering log.

- Deployment time is the time between when the resource is deployed and when it is deleted.

- Operation time is the time between when the resource is started and when it is stopped.

For both deployment time and operation time, the total usage time per day is aggregated in minutes.

Aggregation results are rounded off to the nearest minute. 30 seconds or over is counted as 1 minute and less than 30 seconds is counted as 0 minutes.

## Calculation of Resource Usage and Billing

Billing is calculated for all resources using the following formula: <usage amount or usage time of resources> \* <unit price>

There are two types of calculation methods for billing: by a fixed rate and by the amount used.

- For fixed rate charging, charges are calculated based on a fixed fee rather than the usage time of the resources.
- For charging by the amount used, charges are calculated based on the usage time of the resources.

The type of calculation method used for billing depends on the resource.

The following table shows whether usage amount or usage time is applied to each resource and the charging method applied.

Resource	Usage Amount or Usage Time	Type
Basic charge	When the platform has been deployed for any amount of time, the usage amount is counted as "1".	Fixed charging
Initial cost	When the platform was created during the month, and it has been deployed for any amount of time, the usage amount is counted as "1".	Fixed charging
Operation options	Usage amounts are configured according to the usage types specified in the operation option information file. For details on usage types, refer to "2.10.3 Operation Option Information".	Fixed charging
Virtual machines	The operation time of a virtual machine is regarded as its usage time. Operation time is counted in hours.	Charge by amount of use
System disk image	When a virtual machine with a corresponding system disk image selected has been deployed for any amount of time, the usage amount is counted as "1".	Fixed charging
Data disks	The number of data disks is regarded as the usage amount. The number of data disks that yields the highest charge for the target month is used as the usage amount.	Fixed charging
Snapshot	The total size of the snapshot is regarded as the usage amount. The snapshot size includes the system disk and data disk. The unit is GB. The snapshot size that yields the highest billing for the target month is used as the usage amount.	Fixed charging
SLB	The number of SLBs is regarded as the usage amount. The SLB configuration that yields the highest charge for the target month is used as the usage amount.	Fixed charging
RDB	The number of RDBs is regarded as the usage amount. The configuration that yields the highest charge for the target month is used as the usage amount.	Fixed charging



When projects or platforms are deleted, moved, or transferred, the following applies regarding the billing target organizations and usage charges:

- When a project or platform is deleted  
For resources to which fixed charging applies, a fixed usage charge is calculated.

For resources which are charged based on the amount of use, charges are calculated based on the usage time before the resources are deleted.

The charges incurred by the deleted platform are shown on the [Billing] window even after the platform is deleted.

- When moving a platform to another project

For resources to which fixed charging applies, fixed usage charges are applied to the organization linked to the accounting code of the project to which resources are moved, not to the organization linked to the accounting code of the project from which resources are moved.

After resources which are charged based on the amount of use have moved, charges are calculated, based on the amount of use, to the organization linked to the accounting code of the project to which resources are moved. For the organization linked with the accounting code of the project from which resources are moved, charges are calculated based on the amount of use before the movement.

The organization before the movement and the organization after the movement are displayed as two separate platforms in the [Billing] window.

- When modifying the accounting code of a project (transfer)

For resources to which fixed charging applies, charges are calculated for the organization linked with the accounting code of the modified resource. Charges are not calculated for the organization linked with the accounting code of the resource before the modification.

After resources which are charged based on the amount of use have been modified, charges are calculated for the organization linked with the accounting code of the resource after it was modified based on the amount of use. For the organization linked with the accounting code of the resource before it was modified, charges are calculated based on the amount of use before the modification.

When modifying the accounting code of a project, the project before the modification and after the modification are displayed as two separate projects in the [Billing] window.

Unit prices which have been changed using the menu are reflected on billing calculations from the time of approval of the request. For billing, however, the unit price is applied that yields the highest billing for the target month. This means that, if a menu is modified and its unit price reduced, the unit price before modification will be applied for the month it was changed.

### Example

When organization B belonging to organization A is moved to organization C, the following organizations are displayed in the [Billing] window.

- In the [Billing] window, for the month when the change of the organization was performed, organization B is displayed as two different organizations. One of which belongs to organization A and the other which belongs to organization C.
- For subsequent months after the change, only the organization B belonging to organization C is displayed.

## 3.2.3 Sending Billing

---

The billing for the previous month (confirmed the day after the cut-off date) are attached to an email as a Billing file and a Billing Details file and sent to the destination email address. An explanation of the Billing file and the Billing Details file is as follows:

- Billing file
  - File name: acnt\_cutoff\_YYYY-MM.zip  
A zip file containing Billing Details files. YYYY-MM indicates the year and month of the billing period.
- Billing Details file
  - File name: <Accounting\_code>\_<Project\_ID>\_<Project\_resource ID>\_<Platform\_ID>\_<Platform\_resource\_ID>.csv  
A CSV file showing the breakdown of billing for each platform.





See

The character code of the output file is UTF-8.

For details on Billing files, refer to "[5.2.8 Billing Output Command](#)".

## 3.3 Operation of Billing

This section explains how to operate billing.

Billing can be operated by setting, modifying, and viewing the unit prices that are configured in the menu. For details on the operation procedure, refer to "FUJITSU Software Cloud Services Management User's Guide for Planner and Operator".

### 1. Creating a Menu

When creating a menu, set the unit price for each resource.

Determine the values to be set beforehand, referring to "[3.2.2 Calculation of Billing](#)".

Unit prices in the menu are used for billing calculation from when the menu is created to when the menu is deleted.

### 2. Modifying a Menu

The unit price of each resource can be modified when modifying the menu.

For example, unit prices can be modified when you want to set limited time prices such as promotional prices or when you want to raise prices.

Unit prices that were changed using the menu are reflected on billing calculation upon receiving approval for the request for menu changes.

### 3. Viewing Unit Prices

Unit price information can be viewed from the Menu Details window.

## 3.4 Metering Logs

This section explains the items output to the metering log.

A metering log records the operations performed by users as an operation log, in order to aggregate the usage times of resources.

The target operations for recording are the addition, modification, and deletion of platforms, and the addition, modification, starting, stopping, and deletion of services. When billing is calculated, the usage time of resources are aggregated according to this metering log.

Refer to following table for details of the items output in the metering log.

Item Name	Description	Value
version	Version information	Version information of the file format is output. Example: 2
eventTime	Time of event	A character string is output. The following format is used. Format: YYYY-MM-DDThh:mm:ss.SSSZ Example: Displays "2012-04-01T00:00:00.000+0900" for the date and time 00:00 and 00.000 seconds on April 1, 2012 in the UTC+9:00 time zone.
event	Event	The following character strings are output: ADD: Addition event. CHANGE: Modification event. DELETE: Deletion event. START: Starting event.

		STOP: Stopping event.
resourceType	Resource type	The following character strings are output: system: Platform vm: Virtual machine snapshot: Snapshot rdb: RDB slb: SLB
projectId	Project ID	The project ID is output.
bizSystemId	Platform ID	The platform ID is output.
menuId	Menu ID	The menu ID is output.
extendedOptions	Operation options	The operation options used by the platform are output.
userId	Supervisor	The user ID of the user responsible for the platform.
resourceId	Resource ID	The following values are output for each resource type: system: None vm: Virtual machine ID snapshot: Snapshot ID rdb: RDB ID slb: SLB ID
resourceIdentifier	Resource identifier	The following values are output for each resource type: system: None vm: Instance type snapshot: Snapshot option ID rdb: RDB option ID slb: SLB option ID
systemDiskImage	System disk image	The system disk image is output.
dataDiskType	Data disk type	The data disk type is output.
dataDiskNum	Number of data disks	The number of data disks is output.
snapshotSize	Snapshot size	The snapshot size is output.

## 3.5 Limit Management

---

This section explains limit management.

Cloud Services Management calculates usage charges on a daily basis based on the amount of use of platforms and the unit price that was set using menus. Limit management compares usage charges with the limit (threshold) set for each project and sends notifications regarding excess usage and limits the usage of resources in projects.

For details on how to enable and disable this function, refer to "[2.10.1 System Information](#)".

### 3.5.1 Configuring Limits

---

Use [Basic Information] in the [Project Management] window to configure a limit. The following two items can be configured for limit management.

#### Limit

Specify the upper limit of usage charges per month for a project.

## Threshold

Specify a percentage of the threshold value specified in [Limit]. When usage charges in the project exceed the specified percentage, an alert email is sent automatically.

In the [Project Management] window, the limit and the percentage of the usage charges currently used can be confirmed using [Percentage]. In [Usage Fee], usage charges calculated according to the use of platforms and services up until the previous day are displayed.

For details on how to operate the [Project Management] window, refer to the "FUJITSU Software Cloud Services Management User's Guide for Platform Provider".

## 3.5.2 Before a Limit Is Exceeded

---

When a usage charge is likely to reach [Limit] set for the project, the following notification is sent.

### Alert E-mail

After the usage charge is calculated by daily billing process, the usage charge is compared with [Threshold].

When the sum of usage charges for platforms and services which belong to a project exceeds the percentage specified in [Threshold], an alert email is sent automatically.

The destination of this email is the email address specified in the [Project Management] window.

### Warning Display

When platforms and services are added or modified, estimated usage charges of the added content are calculated. During this calculation, whether estimated charges exceed [Limit] is determined and if it will be exceeded, a warning is displayed.

Even if a warning is displayed, it is still possible to add or modify platforms and services.

When the above notifications are received, consider refraining from adding additional resources, increasing the value for [Limit], etc.

## 3.5.3 After a Limit Is Exceeded

---

When a usage charge exceeds [Limit] set for the project, it is no longer possible to add or modify platforms, add services, start virtual machine services, or any other operations which would incur usage charges.

In such cases, the buttons for such operations are no longer displayed, preventing the operations from being performed.



### Point

---

- When a limit of a project is modified, the modification becomes effective after the final approval for the modification request is granted. For this reason, even when a usage charge exceeds a limit, if additional platforms and services are necessary, increase the amount for [Limit].
  - Restriction of operations is canceled automatically after the monthly billing process is performed.
-

# Chapter 4 Maintenance

This chapter explains system maintenance of Cloud Services Management.

## 4.1 Logs

This section explains the logs that are output.

### 4.1.1 Audit Logs

Cloud Service Management outputs audit logs of all operations performed on resources, excluding reference operations.

Audit logs are output for operations performed from the Cloud Management Portal and using commands. Addition, modification, and deletion operations for which requests are submitted are logged to the audit log using the requester ID after all approval processes are complete and the corresponding resource operations have taken place.

The resource operations that are logged are as follows:

- Registration, modification, and deletion
  - Contracts
  - Menus
  - Platforms
  - Services
  - Organizations
  - Users
  - Projects
  - Accounting Code
- Addition and deletion
  - Key Pairs
- Deletion
  - Requests
- Starting, stopping, and snapshots
  - Services

#### 4.1.1.1 Log Settings

This section explains how to configure the audit log and the information that is output.

File Name

csm\_auditlog.xml

Storage Location

%FSCSM\_HOME%\conf

Setting Items

Setting Items	Value	Default Value	Description
File	<Output_file_name>	\${com.fujitsu.csb.home}/log/fscsm_audit.log	The output destination of the audit log.

Setting Items	Value	Default Value	Description
			<code>\${com.fujitsu.csb.home}</code> indicates the installation folder.
MaxFileSize	<The maximum size of the log file>	10 MB	Specifies the maximum file size for the audit log file. The file size can be specified using the combination of an integer greater than 0 and a unit (KB, MB, or GB).
MaxBackupIndex	<Number of generations of log files>	9	Specifies the number of generations of log files that can be saved. Specify an integer between 1 and 100.

#### Estimating Output Log Size

Depending on the user ID or resource ID, approximately 70 bytes are used for the logging of each operation. Estimate the total number of resource operations performed per day and then set the MaxFileSize and MaxBackupIndex so that the log file has enough space to record the expected number of operation events.

#### 4.1.1.2 Log Entry Format

Each entry is output in the following format:

```
"Time Operator/Requester Operation Success/Failure"
```

For command operations:

```
"Time Command name Operation Success/Failure"
```

Item	Content
Time	Outputs the date and time when the operation was performed in the format "yyyy/MM/dd HH:mm:ss.SSS".
Operator/Requester	Outputs the ID of the user who performed the operation or the user who requested the operation.
Operation	Outputs the operation and the target resource names.
Success/Failure	When a resource operation was successful, "SUCCESS" is output. When a resource operation failed, "FAILED" is output.

#### List of Operations

Operation	Content
A contract was created	create contract:[Contract ID]
A contract was modified	modify contract:[Contract ID]
A contract was deleted	delete contract:[Contract ID]
A menu was created	create menu:[Menu ID]
A menu was modified	modify menu:[Menu ID]
A menu was deleted	delete menu:[Menu ID]
A platform was created	create bizsystem:[Platform ID]
A platform was modified	modify bizsystem:[Platform ID]
A platform was deleted	delete bizsystem:[Platform ID]
A service was created	create service:[Service ID]

Operation	Content
A service was modified	modify service:[Service ID]
A service was deleted	delete service:[Service ID]
An organization was created	create org:[Organization ID]
An organization was modified	modify org:[Organization ID]
An organization was deleted	delete org:[Organization ID]
A user was created	create user:[User ID]
A user was modified	modify user:[User ID]
A user was deleted	delete user:[User ID]
A service was started	start service:[Service ID]
A service was stopped	stop service:[Service ID]
A snapshot was created	create snapshot:[Snapshot ID]
A snapshot was restored	restore snapshot:[Snapshot ID]
A snapshot was deleted	delete snapshot:[Snapshot ID]
A project was created	create project:[Project ID]
A project was modified	modify project:[Project ID]
A project was deleted	delete project:[Project ID]
An accounting code was created	create accountingcode:[accounting code]
An accounting code was modified	modify accountingcode:[accounting code]
An accounting code was deleted	delete accountingcode:[accounting code]
A request was deleted	delete: [Request ID]
A key pair was created	create keypair:[Platform ID]_[Key Pair Name]
A key pair was deleted	delete keypair:[Platform ID]_[Key Pair Name]

#### Log Output Example

```

2015/06/29 14:35:30.902 fscsm_user create user:op_user SUCCESS
2015/06/29 14:38:18.230 fscsm_user create user:op_manager FAILED
2015/06/29 15:29:43.361 op_manager create org: org_01 SUCCESS
2015/06/29 15:33:51.690 pl_manager create menu: menu_01 SUCCESS
2015/06/29 15:47:30.988 op_manager delete user: sv_manager SUCCESS
2015/06/29 15:49:49.692 op_manager modify user:biz_manager SUCCESS
2015/06/29 16:07:07.381 biz_manager_002 create bizsystem:1 SUCCESS
2015/06/29 16:11:26.194 biz_manager01 create bizsystem:2 SUCCESS
2015/06/29 16:16:19.288 biz_manager_002 modify user:biz_manager SUCCESS
2015/06/29 16:18:49.851 pl_manager modify menu: menu_01 SUCCESS
2015/06/29 4:19:18 PM.382 biz_manager_002 create bizsystem:3 SUCCESS
2015/06/29 16:21:49.945 pl_user modify menu: menu_01 SUCCESS
2015/06/29 16:25:22.274 biz_manager create service:vm-1-biz01 FAILED
2015/06/29 18:07:40.583 biz_manager create service:vm-1-gyoumu100 SUCCESS
2015/06/29 18:07:45.654 biz_manager start service: vm-1-gyoumu100 SUCCESS
2015/06/29 18:09:10.942 biz_manager create snapshot:vm-1-gyoumu100 SUCCESS

```

```
2016/02/05 09:11:21.617 fscsm_request delete request:56,57,58 SUCCESS
2016/02/05 10:00:00.000 user001 create bizsystem:platformA SUCCESS
2016/02/05 10:10:00.000 user002 create keypair:platformA_keypairA SUCCESS
2016/02/05 11:00:00.000 user002 create keypair:platformA_keypairB SUCCESS
2016/02/05 11:00:01.000 user002 delete keypair:platformA_keypairA SUCCESS
```

## 4.2 Backup and Restore

---

This section explains how to back up and restore the system.

There are two types of backup methods.

### Offline Backup

This backup method stops the services of this product and then performs backup of the system. As this method backs up and restores the assets of this product at a batch, it is necessary to stop the services when performing backup and restoration. Offline backup can be performed at the following timings:

- When installation of this product is completed
- When configurations are added to a coordination adapter
- When a configuration file is modified

For details on the procedures for performing offline backup and restore, refer to "[4.2.1 Offline Backup](#)".

### Online Backup

This backup method performs backup of Cloud Services Management resource information without stopping the services of this product.

Offline backup must be performed as a prerequisite to performing online backup.

For details on how to perform offline backup, refer to "[4.2.1.1 Backup](#)".



### Note

Backup operation using this method does not back up audit logs or configuration files.

As this method backs up the assets of this product dynamically, stopping of the services is not necessary when performing backup, but it is necessary when performing restoration. It is also necessary to stop the services when pre-configuring online backup.

As difference files are generated on a daily basis, pay attention to the remaining disk space when using this method.

Online backup utilizes the PITR (Point In Time Recovery) function of PostgreSQL. Specifically, it uses the following two backup methods, each of which collects a different range of information from the databases.

### Create base backups

Base backup backs up an entire database cluster (a group of files on which database data is recorded). Base backups are obtained using the `fscsm_basebackup create` command.

For details on the `fscsm_basebackup create` command, refer to "[5.2.14 Base Backup Operation Commands](#)".

### Difference Backup

Difference backup periodically backs up a Write Ahead Logging (WAL) file in which changes to the database are recorded. This method enables recovery of data content by reflecting changes that are recorded on the WAL file to the files backed up using base backup.

For details on the procedures for performing online backup and restore, refer to "[4.2.2 Online Backup](#)".

Under the following conditions, the disk space necessary for backup is approximately 1.0 GB for offline backup, 96 MB for each difference file generated every day for online backup, and approximately 900 MB for a base backup.

- The number of organizations: 100
- The number of users: 1,000
- The number of platforms: 300
- The number of services: 300
- The following operation is performed on a daily basis:
  - Power on and off of the all services



### Note

---

#### The environment in which backup and restore are performed

- When backup and restore are performed, the system environment must be the same at the time of backup and restoration. Therefore, backup and restore cannot be performed under the following condition:
    - When the source of backup and target for restore have different OSs
- However, backup and restore may be performed if the two systems are different versions of the same OS.
- When performing online backup, difference files are generated at the same interval as the scheduled execution of the file that performs the backup process. Watch the disk usage status and adjust the execution intervals if necessary.
- 

## 4.2.1 Offline Backup

---

This section explains how to back up and restore the system offline.

When using this product in the following configuration, approximately 1.0 GB of files are copied. Backup and restore take approximately 30 minutes each to complete.

- The number of organizations: 100
- The number of users: 1,000
- The number of platforms: 300
- The number of services: 300
- The following operation is performed on a daily basis:
  - Power on and off of the all services



### Point

---

The time taken for backup may vary depending on the disk performance of the file copy destination.

The time taken for restoration may vary depending on the disk performance at the file copy source.

---

### 4.2.1.1 Backup

To back up the databases and configuration for Cloud Services Management, perform the following procedure:

1. Stop the System

Stop the management server. For details on how to stop Cloud Services Management, refer to "[2.1.2 Stopping](#)".

2. Back up the Databases

Back up the content in each data dictionary for the databases used by the management server and the coordination adapter platform (APP).



```
%FSCSM_HOME%\db\CSMSYSTEM
%FSCSM_HOME%\db\CSMMETERINGLOG
%FSCSM_HOME%\db\CSMACCOUNTING
%FSCSM_HOME%\db\CSMAPP
```

Use your preferred method to back them up. An example is shown below.

### Example

Using Explorer, back up the content in each data dictionary to a compressed folder in ZIP format.

#### 3. Back up the logs

```
%FSCSM_HOME%\log
```

Back up the logs if necessary.

#### 4. Back up the configuration files

Configuration files are stored in the following two folders. Back up these folders.

```
%FSCSM_HOME%\conf
```

```
%FSCSM_HOME%\sys\conf
```

Use your preferred method to back them up.

#### 5. Back up the required software

Back up the required software for this product. For details on the procedure, refer to the manuals of the required software.

### Note

When user information is added or modified on this product, backup of SVOM, one of the required pieces of software, must be performed.

If a backup of SVOM has been created already and is available and there are no differences between the user information in it and the current user information in Cloud Service Management, the backup of SVOM is unnecessary.

#### 6. Start the System

To resume operation after backup, start the management server.

For details on how to start Cloud Services Management, refer to "[2.1.1 Starting](#)".

## 4.2.1.2 Restore

To restore the databases and configuration of Cloud Services Management, perform the following procedure:

#### 1. Stop the System

Stop Cloud Services Management. For details on how to stop Cloud Services Management, refer to "[2.1.2 Stopping](#)".

#### 2. Restore the Databases

Depending on the backup method that was used, back up all of the old files in the data dictionary and then place the data that was already backed up into the data dictionary.

After placing the data, check if full control permission of the folders corresponding to data dictionaries is granted to the OS user for database connection (fjsvcsmdb).

If full control permission is not granted, edit the access permission settings.

```
%FSCSM_HOME%\db\CSMSYSTEM
%FSCSM_HOME%\db\CSMMETERINGLOG
```

```
%FSCSM_HOME%\db\CSMAccounting
%FSCSM_HOME%\db\CSMAApp
```

### 3. Restore the log and configuration files

Depending on the backup method that was used, put the backup data under the log and configuration file folders after all old files under the log and configuration folders are saved.

### 4. Restore the required software

Restore the required software for this product. For details on the procedure, refer to the manuals of the required software.

### 5. Start the System

To resume operation after restoration, start the management server.

For details on how to start Cloud Services Management, refer to "[2.1.1 Starting](#)".

## 4.2.2 Online Backup

This section explains the procedure for configuring the online backup and restoration procedures.

Configuring online backup takes 10 to 20 minutes. Restoration takes approximately 30 minutes.



Time taken for restoration may vary depending on the disk performance at the file copy source.

### 4.2.2.1 Configuring Online Backup

1. When configuring online backup, collect base backups, specify a backup location for the WAL files, and add the execution schedule of the file that periodically performs backup of the WAL files.

Operation of this product must be stopped to prevent the resources to be backed up from being modified during the configuration operations of online backup.

Limit user access using the following operations:

- Inform platform provider users that the usage of this product will be stopped
- Block all access to the console of this product using the method appropriate for the environment
- Stop certain services of this product

Execute the following stop command:

```
net stop "FUJITSU Software Cloud Services Management Web Server(GUI) "
```

2. Stop services

Execute the following command to stop the services of this product:

```
net stop "FUJITSU Software Cloud Services Management DB Service(fjsvfscsmdb_FSCSMSYSTEM) "
```

3. Perform offline backup

Collect backup data of the entire system including the configuration files and audit logs.

For details on how to perform offline backup, refer to "[4.2.1.1 Backup](#)".

4. Prepare the backup file storage location for online backup

Create the storage destination for the files that will be backed up by the online backup operation.

Prepare an arbitrary folder and create the following folder structure in that folder:

```

<Backup storage folder>
|
|---CSMACCOUNTING
|   |
|   +--- wal
|
|---CSMMETERINGLOG
|   |
|   +--- wal
|
|---CSMSYSTEM
|   |
|   +--- wal
|
|---CSMAPP
|   |
|   +--- wal

```

For example, if a backup storage folder will be created at the following location:

```
F:\csm_backup\online
```

The following folder structure should be created in the folder:

```

F:\csm_backup\online
|
|---CSMACCOUNTING
|   |
|   +--- wal
|
|---CSMMETERINGLOG
|   |
|   +--- wal
|
|---CSMSYSTEM
|   |
|   +--- wal
|
|---CSMAPP
|   |
|   +--- wal

```

 **Note**

- Ensure that the backup storage location is a folder that is accessible using the privileges of the OS user for database connection (fjsvcsmdb).
- In order to prevent information that was backed up from being corrupted due to failure of the management server, specify another recording media or an external storage device for the backup location of the files.

5. Edit the online backup definition files

a. Online backup configuration information

Specify the backup storage folder that was created in step 4 in the online backup configuration file.

In addition, enable online backup.

For details on the online backup configuration information, refer to "[2.10.5 Online Backup Configuration Information](#)".

Backup data can be stored at locations other than local drives.

For the example of this procedure, assume the content of the online backup configuration file is as follows:

- When the backup location is a local drive

```
<properties>
  <entry key="csm.base.onlinebackup.directory">F:\csm_backup\online</entry>
  <entry key="csm.base.onlinebackup">true</entry>
</properties>
```

- When the backup location is a location other than a local drive

```
<properties>
  <entry key="csm.base.onlinebackup.directory">\\\\10.20.30.40\csm_backup\online</entry>
  <entry key="csm.base.onlinebackup">true</entry>
</properties>
```

b. The configuration file for the DB cluster "CSMACCOUNTING"

Edit the configuration file, specifying the backup folder that was created in step 4.

In addition, enable archive mode.

The file to edit is as follows:

```
%FSCSM_HOME%\db\CSMACCOUNTING\postgresql.conf
```

In the example of this procedure, modify as follows:

```
[Before Modification]
  #archive_mode = off
  #archive_command = 'copy "%p" "The directory for your backup files"'
[After Modification]
  archive_mode = on
  archive_command = 'copy "%p" "F:\csm_backup\online\CSMACCOUNTING\wal\%f"'
```

c. The configuration file for the DB cluster "CSMMETERINGLOG"

Edit the configuration file, specifying the backup folder that was created in step 4.

In addition, enable archive mode.

The file to edit is as follows:

```
File to edit: %FSCSM_HOME%\db\CSMMETERINGLOG\postgresql.conf
```

In the example of this procedure, modify as follows:

```
[Before Modification]
  #archive_mode = off
  #archive_command = 'copy "%p" "The directory for your backup files"'
[After Modification]
  archive_mode = on
  archive_command = 'copy "%p" "F:\csm_backup\online\CSMMETERINGLOG\wal\%f"'
```

d. The configuration file for the DB cluster "CSMSYSTEM"

Edit the configuration file, specifying the backup folder that was created in step 4.

In addition, enable archive mode.

The file to edit is as follows:

```
%FSCSM_HOME%\db\CSMSYSTEM\postgresql.conf
```

In the example of this procedure, modify as follows:

```
[Before Modification]
  #archive_mode = off
  #archive_command = 'copy "%p" "The directory for your backup files"'
```

```
[After Modification]
archive_mode = on
archive_command = 'copy "%p" "F:\\csm_backup\\online\\CSMSYSTEM\\wal\\%f"'
```

e. The configuration file for the DB cluster "CSMAPP"

Edit the configuration file, specifying the backup folder that was created in step 4.

In addition, enable archive mode.

The file to edit is as follows:

```
%FSCSM_HOME%\db\CSMAPP\postgresql.conf
```

In the example of this procedure, modify as follows:

```
[Before Modification]
#archive_mode = off
#archive_command = 'copy "%p" "The directory for your backup files"'
[After Modification]
archive_mode = on
archive_command = 'copy "%p" "F:\\csm_backup\\online\\CSMAPP\\wal\\%f"'
```

6. Add the schedule for the file that performs the backup process

Execute the following command as an OS administrator (It is not necessary to include line feeds in this command. When copying this command from the manual, delete line feeds before using it).

```
schtasks /create /tn FSCSM_onlinebackup_batch /ru Administrator /rp <Administrator password>
/tr "\"%FSCSM_HOME%\sys\bin\fscsm_archive_wal.bat\" \" /st 05:00:00 /sc DAILY
```

 **Note**

When changing the execution interval, configure the parameters for schtasks and operate the task scheduler directly. If the execution interval is too short, creation of files in the backup folder will be performed frequently, potentially leading to a lack of disk space.

7. Start the database services

Execute the following command to start certain services of this product:

```
net start "FUJITSU Software Cloud Services Management DB Service(fjsvfscsmdb_FSCSMAPP)"
```

8. Create base backups

Execute the following command to create base backups.

```
> %FSCSM_HOME%\bin\fscsm_basebackup create -comment "any comment"<RETURN>
INFO: fscsm0001: Command succeeded
```

Execute the following command and confirm that base backups have been created:

```
> %FSCSM_HOME%\bin\fscsm_basebackup list<RETURN>
version      time                comment
-----
1            2015-12-03 11:10  any comment
INFO: fscsm0001: Command succeeded.
```

9. Start services

Execute the following command to start the services of this product:

```
net start "FUJITSU Software Cloud Services Management Web Server(APP)"
```

10. Resume operation

Remove user access limitation and resume operation of this product.

## 4.2.2.2 Managing Base Backups During Operation

The number of files that are backed up by online backup increases over time and according to the usage of this product. This increase of backup files may stress the destination drive or partition and cause unexpected problems.

This product manages multiple versions of base backups and provides a command that deletes specified versions of base backups. Deleting old base backups that are no longer necessary for restoration using this command deletes all backup files from the corresponding period.

Disk space usage of the backup destination drive can be reduced by periodically collecting new base backups while deleting old base backups. Stopping services is not necessary.

To do this, perform the following procedure:

1. Collect a base backup

Execute the following command to create base backups.

```
> %FSCSM_HOME%\bin\fscsm_basebackup create -comment "2nd backup"<RETURN>
INFO: fscsm0001: Command succeeded
```

Execute the following command. A list of base backups is displayed. Check the list and confirm that base backups have been created. When no files are generated in the backup storage folder created in advance for online backup, the DB cluster configuration file is incorrect.

```
> %FSCSM_HOME%\bin\fscsm_basebackup list<RETURN>
version      time          comment
-----
          1   2015-12-03 11:10 any comment
          2   2016-01-13 11:10 2nd backup
INFO: fscsm0001: Command succeeded.
```

2. Determine the recovery target period

The list of base backups displayed in step 1 shows the version, collection completion time, and the comments specified during the creation of each base backup.

Determine a period to be the target of recovery and a period not to be recovered, based on the collection completion times and comments.

The explanation for this procedure is given based on an example in which the decision is made to "not recover data older than 11:10 on 2016-01-13".

3. Delete base backups that are not within the recovery target period of time

For the example of this procedure, base backup version "1", which was collected earlier than "2016-01-13 11:10", is deleted.

```
> %FSCSM_HOME%\bin\fscsm_basebackup delete -version 1<RETURN>
INFO: fscsm0001: Command succeeded.
```

Execute the following command and confirm that the specified version of the base backup has been deleted:

```
> %FSCSM_HOME%\bin\fscsm_basebackup list<RETURN>
version      time          comment
-----
          2   2016-01-13 11:10 2nd backup
INFO: fscsm0001: Command succeeded.
```

The above operation deletes the files that were backed up in the period between "2015-12-03 11:10", which is the time when collection of the base backups was completed, and "2016-01-13 11:10".



### Note

When collecting base backups, if the command is abnormally terminated or the OS is restarted, the collection of base backups is incomplete. In such cases, there may be folders of which backup has not been completed which are not displayed by the fscsm\_basebackup list command.

In the folder specified in the online backup configuration information file, if there are folders that have the numbers which are not displayed by the `fscsm_basebackup list` command, delete those folders using Explorer as the user with OS administrator privileges.

---

## Increasing timeout values

Depending on the environment at the backup destination, the base backup command may time out. In such cases, it is possible to increase the time out value.

To do this, perform the following procedure:

1. Stop services

Execute the following command to stop the services of this product:

```
net stop "FUJITSU Software Cloud Services Management DB Service(fjsvfscsmdb_FSCSMSYSTEM) "
```

2. Edit the online backup configuration information file

In the online backup configuration information file, add a configuration item for the timeout value.

For details on the online backup configuration information, refer to "[2.10.5 Online Backup Configuration Information](#)".

Add "`csm.base.onlinebackup.command.timeout`".

The default value of "`csm.base.onlinebackup.command.timeout`" is 30 minutes (1800).

For example, to extend the timeout to 40 minutes, the content of the online backup configuration file should be as follows:

```
<properties>
  <entry key="csm.base.onlinebackup.directory">F:\\csm_backup\\online</entry>
  <entry key="csm.base.onlinebackup">>true</entry>
  <entry key="csm.base.onlinebackup.command.timeout">2400</entry>
</properties>
```

3. Start services

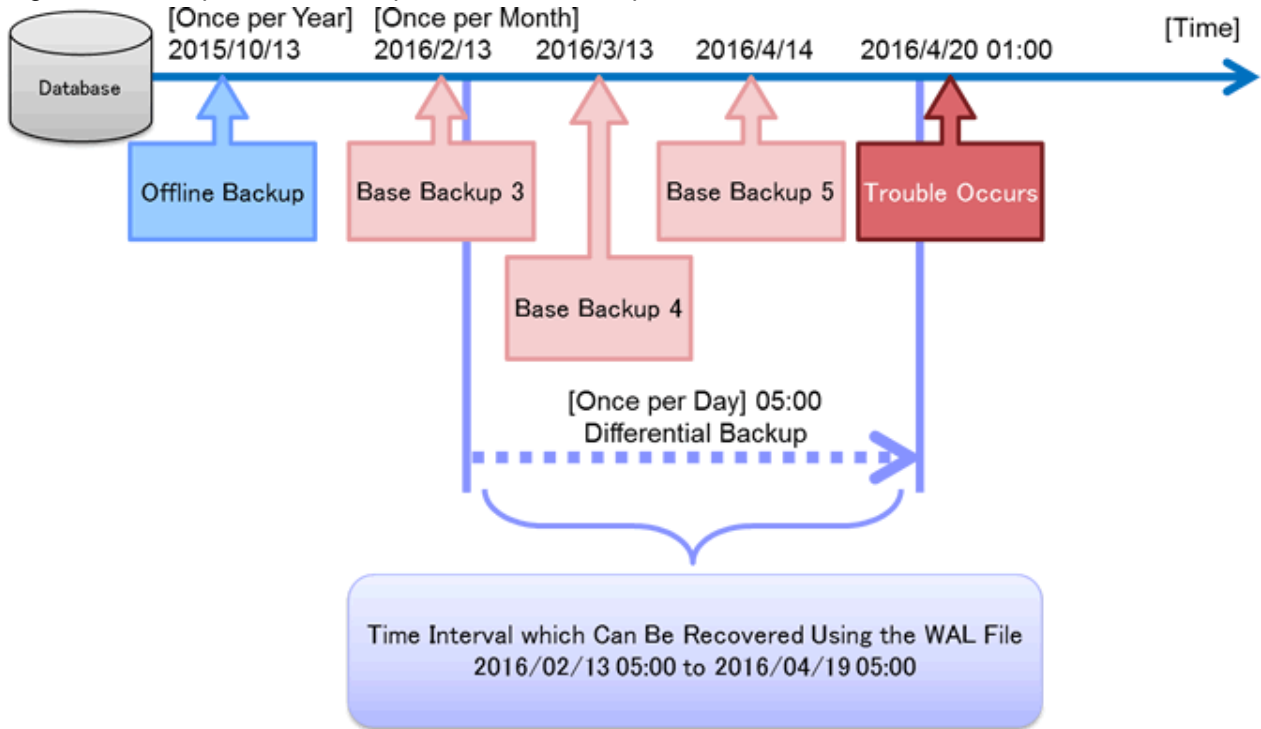
Execute the following command to start the services of this product:

```
net start "FUJITSU Software Cloud Services Management Web Server(APP) "
```

### 4.2.2.3 Restore from Online Backup

In environments where online backups are collected periodically, the period of the time in which the data can be recovered when necessary are described using the following example.

Figure 4.1 Example of the Backup Schedule and Scope of Recoverable Data



In the above illustrated example, base backup collection is performed once a month and differential backup is performed at 05:00 daily. Assuming that restore is performed after 01:00 on April 20, 2016, restore is possible of the data from any specified point in time between "2016/02/13 05:00" and "2016/04/19 05:00".

To restore from an online backup, perform the following procedure.

1. Restore from an offline backups

Set up this product so that the environment will be same as the one at the time of backup.

Restore the assets such as configuration files and required software from an offline backup if necessary.

### Point

If this product has been set up and the configuration files and required software have not been changed since an online backup, restoration from offline backup is not necessary.

Refer to the following procedure and restore the database.

2. Stop services

Stop the services of this product.

```
net stop "FUJITSU Software Cloud Services Management DB Service(fjsvfscsmdb_FSCSMSYSTEM) "
```

3. Select a base backup

Execute the following command to select a base backup to use.

```
> %FSCSM_HOME%\bin\fscsm_basebackup list
version    time          comment
-----
          3    2016-02-13 11:10 3rd backup
          4    2016-03-13 11:10 4th backup
          5    2016-04-14 11:10 5th reorganization
INFO: fscsm0001: Command succeeded.
```



The following part of this section explains the procedure for recovering the system to the state it was in at 05:00 of March 31, 2016 using base backup version 4.

#### 4. Back up database folders

Rename the data base folders of this product.

```
[Before Changing]
%FSCSM_HOME%\db\CSMMETERINGLOG
%FSCSM_HOME%\db\CSMACCOUNTING
%FSCSM_HOME%\db\CSMSYSTEM
%FSCSM_HOME%\db\CSMAPP
[After Changing] (examples with "_old" appended)
%FSCSM_HOME%\db\CSMMETERINGLOG_old
%FSCSM_HOME%\db\CSMACCOUNTING_old
%FSCSM_HOME%\db\CSMSYSTEM_old
%FSCSM_HOME%\db\CSMAPP_old
```

#### 5. Replace database folders

Copy the base backup stored at the backup file storage location for online backup as the database folder of this product.

After copying, check if full control permission is granted to the OS user for database connection (fjsvcsmdb) on the folders corresponding to data dictionaries.

If full control permission is not granted, edit the access permission settings.

Delete the "backup\_label" file in each of the base backup folders that were copied.

In the example of this procedure, the base backup folder to copy is as follows:

```
F:\csm_backup\online\00000004
```

##### a. Copying CSMMETERINGLOG

```
[Copy Target Folder]
F:\csm_backup\online\00000004\CSMMETERINGLOG
[Copy Destination Folder]
%FSCSM_HOME%\db\
```

```
[Status after Copy]
%FSCSM_HOME%\db\CSMMETERINGLOG
%FSCSM_HOME%\db\CSMMETERINGLOG_old
```

##### b. Copying CSMACCOUNTING

```
[Copy Target Folder]
F:\csm_backup\online\00000008\CSMACCOUNTING
[Copy Destination Folder]
%FSCSM_HOME%\db\
```

```
[Status after Copy]
%FSCSM_HOME%\db\CSMACCOUNTING
%FSCSM_HOME%\db\CSMACCOUNTING_old
```

##### c. Copying CSMSYSTEM

```
[Copy Target Folder]
F:\csm_backup\online\00000008\CSMSYSTEM
[Copy Destination Folder]
%FSCSM_HOME%\db\
```

```
[Status after Copy]
%FSCSM_HOME%\db\CSMSYSTEM
%FSCSM_HOME%\db\CSMSYSTEM_old
```

#### d. Copying CSMAPP

```
[Copy Target Folder]
F:\csm_backup\online\00000008\CSMAPP
[Copy Destination Folder]
%FSCSM_HOME%\db\
```

```
[Status after Copy]
%FSCSM_HOME%\db\CSMAPP
%FSCSM_HOME%\db\CSMAPP_old
```

### 6. Operations for WAL files

Create "pg\_xlog" folders in each destination folder and copy the target files to those folders.

#### a. Operation for CSMMETERINGLOG

```
[Copy Target Files]
Files in F:\csm_backup\online\CSMMETERINGLOG\wal
[Copy Destination Folder]
%FSCSM_HOME%\db\CSMMETERINGLOG\pg_xlog
```

#### b. Operation for CSMACCOUNTING

```
[Copy Target Files]
Files in F:\csm_backup\online\CSMACCOUNTING\wal
[Copy Destination Folder]
%FSCSM_HOME%\db\CSMACCOUNTING\pg_xlog
```

#### c. Operation for CSMSYSTEM

```
[Copy Target Files]
Files in F:\csm_backup\online\CSMSYSTEM\wal
[Copy Destination Folder]
%FSCSM_HOME%\db\CSMSYSTEM\pg_xlog
```

#### d. Operation for CSMAPP

```
[Copy Target Files]
Files in F:\csm_backup\online\CSMAPP\wal
[Copy Destination Folder]
%FSCSM_HOME%\db\CSMAPP\pg_xlog
```

### 7. Place recovery definitions.

Place the recovery definition in each database folder.

#### a. Placing in the CSMMETERINGLOG folder

```
[File to Place]
%FSCSM_HOME%\db\CSMMETERINGLOG\recovery.conf
```

Enter the following content in this file:

```
restore_command = 'copy "F:\\csm_backup\\online\\CSMMETERINGLOG\\wal\\%f" "%p"'
recovery_target_time = '2016-03-31 05:00:00 JST'
```

#### b. Placing in the CSMACCOUNTING folder

```
[File to Place]
%FSCSM_HOME%\db\CSMACCOUNTING\recovery.conf
```

Enter the following content in this file:

```
restore_command = 'copy "F:\\csm_backup\\online\\CSMACCOUNTING\\wal\\%f" "%p"'
recovery_target_time = '2016-03-31 05:00:00 JST'
```

c. Placing in the CSMSYSTEM folder

```
[File to Place]
%FSCSM_HOME%\db\CSMSYSTEM\recovery.conf
```

Enter the following content in this file:

```
restore_command = 'copy "F:\\csm_backup\\online\\CSMSYSTEM\\wal\\%f" "%p"'
recovery_target_time = '2016-03-31 05:00:00 JST '
```

d. Placing in the CSMAPP folder

```
[File to Place]
%FSCSM_HOME%\db\CSMAPP\recovery.conf
```

Enter the following content in this file:

```
restore_command = 'copy "F:\\csm_backup\\online\\CSMAPP\\wal\\%f" "%p"'
recovery_target_time = '2016-03-31 05:00:00 JST '
```

 Note

For recovery\_target\_time, specify a value based on the local time zone.

8. Start services

Start the services of this product.

```
net start "FUJITSU Software Cloud Services Management Web Server(APP)"
```

 Note

If the following services do not start or stop immediately after starting, check the recovery definition of each data base folder.

There may be errors in the definition for restore\_command.

- FUJITSU Software Cloud Services Management DB Service(fjsvfscsmdb\_FSCSMSYSTEM)
- FUJITSU Software Cloud Services Management DB Service(fjsvfscsmdb\_FSCSMACCOUNTING)
- FUJITSU Software Cloud Services Management DB Service(fjsvfscsmdb\_FSCSMMETERINGLOG)
- FUJITSU Software Cloud Services Management DB Service(fjsvfscsmdb\_FSCSMAPP)

## 4.2.3 Corrective Actions for Inconsistencies that Occur after Restore Operations

After restore is performed, there may be differences between the user authentication information managed by Cloud Services Management and the information managed by SVOM. Such difference affects user operations, for example, logging in to the Cloud Management Portal may not be possible. In such cases, perform the following procedure to ensure consistency of user information between this product and related products.

1. Output the user information of this product

Execute the user operation command (fscsm\_user export) to output the user information of this product.

For details on this command, refer to "5.2.2 User Operation Commands".



.....  
Ask the platform provider users to check if any of them cannot log in, or if there are any users whose passwords have reverted to an older one, and inform them that such problems will be addressed.  
.....

2. Output required software and user information

For environments not using Active Directory coordination, SVOM Idif information is output.

For environments using Active Directory coordination, contact the department in charge of the management of Active Directory to confirm that no data on Active Directory has been changed.

3. Compare and add user information

For environments not using Active Directory coordination, compare the information that was output in step 1 and step 2 and add any information which is not present to this product or SVOM.

For environments using Active Directory coordination, compare the information that was output in step 1 with the information on Active Directory, and add any missing information to this product.

4. Notify the users

Inform the platform provider users that the system has been recovered.

## 4.3 Data Collection Tool

---

When trouble occurs during system operation, the status of the system at the point when the trouble occurred can be collected using the data collection tool.

This section explains how to use the data collection tool.

1. From [Start] or the [Apps] menu, select [FJQSS(Data Collection Tool)] - [FUJITSU Software Cloud Services Management].
2. When the command prompt opens, follow the displayed instructions, type "Y", and then press the [Enter] key.
3. When data collection is completed, the folder to which the troubleshooting data has been output is displayed. Confirm that the troubleshooting data has been created in the displayed folder.
4. Press the [Enter] key to close the command prompt.
5. The following file is created in the output destination folder of troubleshooting data. Collect this file and contact Fujitsu support staff.

```
resultYYYYMMDDHHMMSS_1_1.cab  
(YYYYMMDDHHMMSS: The year, month, date, hour, minute, and second when the data was collected)
```

# Chapter 5 Command Reference

This chapter explains how to use the commands provided in Cloud Services Management.

## 5.1 Command Overview

This section provides an overview of the commands provided by Cloud Services Management.

### fscsm\_org

Performs addition, modification, deletion, display, and input XML file check of organization information. Using this command, batch addition and modification of multiple organization information can be performed. This command also outputs added organization information as files.

### fscsm\_user

Performs addition, modification, deletion, display, and input XML file check of user information. Using this command, batch addition and modification of multiple user information can be also performed. This command also outputs added user information as files.

### fscsm\_contract

Performs addition, modification, deletion, and display of contracts. This command also outputs added contracts as files.

### fscsm\_menu

Performs addition, modification, deletion, and display of menu information. This command also outputs added menu information as files.

### fscsm\_bizsystem

Performs addition, modification, deletion, and display of platform information. This command also outputs the added platform information as files.

### fscsm\_service

Displays service information. This command also outputs the information of added services as files.

### fscsm\_meteringexport

Outputs accumulated metering logs as files.

### fscsm\_chargeexport

Outputs the information about billing for the specified month as a file.

### fscsm\_currency

Configures the currency unit used for the charges to be invoiced.

### fscsm\_passwordset

Sets the password for access to the SVOM directory service.

### fscsm\_request

Deletes specified request information. This command also outputs request information as a file.

### fscsm\_project

Displays project information. This command also outputs the information of added projects as files.

### fscsm\_accountingcode

Performs addition, modification, deletion, and display of accounting code information. This command also outputs added accounting code information as files.

### fscsm\_basebackup

Performs collection and deletion of base backups of basic information of Cloud Services Management. This command also displays the information of base backups that have already been collected. It is necessary to define the storage folder for backup files in the configuration file beforehand. For details, refer to "[2.10.5 Online Backup Configuration Information](#)".

fscsm\_vendorcheck

Checks the format of cloud vendor definition files.

### Authority to Execute Commands

The above commands must be executed by a user with administrator privileges (Administrator) within the operating system.

The above commands do not depend on the authorities of users or organizations within Cloud Services Management. Therefore, no approval is required before execution.

### Command Execution Locations

The above commands must be executed on the management server in which Cloud Services Management is running.

The above commands are located in the following folder. Move to this folder to execute commands.

```
%FSCSM_HOME%\bin
```

## 5.2 How to Use Each Command

---

This section explains how to use individual commands. Some commands require XML files to limit the target data. For details on these XML files, refer to "5.3 Format of XML Files Used in Commands".

In this section, commands are described according to the following notational conventions:

- Italics: Indicates variables
- []: Indicates an omissible section
- |: Indicates that one of the options must be entered
- >: Indicates the cursor location in the command prompt
- <RETURN>: Press the Return key

For the messages displayed during command execution, refer to "FUJITSU Software Cloud Services Management Messages".

### 5.2.1 Organization Operation Commands

---

Command Name

fscsm\_org

Format

```
fscsm_org create -file input-file
```

```
fscsm_org modify -file input-file
```

```
fscsm_org delete -orgId organizationID
```

```
fscsm_org export [-orgId organizationID] -file output-file
```

```
fscsm_org import [-check result-file] -file input-file
```

```
fscsm_org list
```

Description

Performs addition, modification, deletion, batch addition, batch modification, and output of organization information.

This command also checks the organization information of files to be added.

## Subcommands

### create -file *input-file*

Adds organization information.

In *input-file*, enter the name of the file containing the organization information to be added. For details on the format of the file, refer to "5.3.1 Organization Information".

### modify -file *input-file*

Modifies organization information. Only the information of a single organization can be modified at one time.

In *input-file*, enter the name of the file containing the organization information to be modified. For details on the format of the file, refer to "5.3.1 Organization Information".

### delete -orgId *organizationID*

Deletes organization information.

In *organizationID*, specify the ID of the organization to be deleted.

### export [-orgId *organizationID*] -file *output-file*

Outputs organization information as an XML file.

-orgId *organizationID* can be omitted. If specified, only the information for that organization will be output. If not specified, the information for all organizations will be output.

In *output-file*, specify the file name using a character string containing alphanumeric characters, hyphens ("-"), underscores ("\_"), and periods ("."). For details on the format of the file, refer to "5.3.1 Organization Information".

When the specified file already exists, an error occurs.

### import [-check *result-file*] -file *input-file*

Performs batch addition and modification of organization information.

If -check *result-file* is specified, only the check of XML format, description format, and organization hierarchy information of the organization information to be added or modified is performed. To perform batch addition or modification, omit this parameter. If -check is omitted, when a failure of addition or modification is detected, the subsequent processes are not performed.

In *result-file*, enter the name of the file to which the check results will be output. If specified, the results of the check of *input-file* are output to the specified file. Specify an absolute path or a relative path.

In *input-file*, enter the name of the XML file containing the organization information to be added or modified as a batch. For details on the format of the XML file, refer to "5.3.1 Organization Information". If the specified organization information has not been added in Cloud Services Management, the information will be added. If the specified organization information has been added already, the information will be modified to the specified content.

If -check *result-file* is specified, the results of the check will be output in the following format:

```
"orgId, Result(Create/Modify/NotExist/Error) "
```

- Create: New addition
- Modify: Modification
- NotExist: The information is not in the input file but has been added in Cloud Services Management.
- Error:message: When there are errors in the input content, the error details are displayed using messages beginning with fscsm. For details and corrective actions, refer to "FUJITSU Software Cloud Services Management Messages".

If -check *result-file* is not specified, batch addition and modification will be performed. Execution results are output as files with the following names in the log folder:

```
fscsm_org_import_mmddhhmmss.log  
(mmddhhmmss: The month, date, hour, minute, and second when the command was executed)
```

Execution results of batch addition and modification are output in the following format:

```
"orgId, Result(Create/Modify/NotExist/Error) "
```

- Create: New addition
- Modify: Modification
- NotExist: The information is not in the input file but has been added in Cloud Services Management.
- Error:message: When there are errors in the input content, the error details are displayed using messages beginning with fscsm. For details and corrective actions, refer to "FUJITSU Software Cloud Services Management Messages".

#### list

Displays all added organization information in a prompt window.

The following items are displayed:

- Organization Name
- Organization ID
- Organization Short Name
- Description
- Parent organization ID

When the displayed organization has no parent organization, this item will be blank.

#### Example

- When adding organization information

```
>fscsm_org create -file addorg.xml<RETURN>
```

- When modifying organization information

```
>fscsm_org modify -file updorg.xml<RETURN>
```

- When deleting the organization information with organization ID 101

```
>fscsm_org delete -orgId 101<RETURN>
```

- When outputting the organization information of A Unit (Organization ID 101) as a file

```
>fscsm_org export -orgId 101 -file orgdata_A.xml<RETURN>
```

- When outputting all organization information as a file

```
>fscsm_org export -file orgdata_ALL.xml<RETURN>
```

- When checking the target organization information for batch addition

```
>fscsm_org import -check resultAdata.txt -file orgdata_ABC.xml<RETURN>
```

- When performing batch addition and modification

```
>fscsm_org import -file orgdata_ABC.xml<RETURN>
```

- When outputting organization information to the screen

```
>fscsm_org list<RETURN>
orgName      orgId  orgAbbreviation  comment                                     parentOrgId
-----
A Unit       101    A Unit           Comments for A Unit                       !root
B Unit       201    B Unit           Comments for B Unit                       !root
C Unit       301    C Unit           Comments for C Unit                       !root
D Division   10101  A)D Division    Comments for D Division                   101
```



## 5.2.2 User Operation Commands

---

### Command Name

fscsm\_user

### Format

```
fscsm_user create -file input-file
```

```
fscsm_user modify -file input-file
```

```
fscsm_user delete -userId userID
```

```
fscsm_user export [-orgId organizationID | -userId userID] -file output-file
```

```
fscsm_user import [-check result-file] -file input-file
```

```
fscsm_user list [-orgId organization/D]
```

### Description

Performs addition, modification, deletion, batch addition, batch modification, and output of user information.

This command also checks the user information of files to be added.

### Subcommands

#### create -file *input-file*

Adds user information.

In *input-file*, enter the name of the file containing the user information to be added. For details on the format of the file, refer to ["5.3.2 User Information"](#).

#### modify -file *input-file*

Modifies user information. Only the information of a single user can be modified at one time.

In *input-file*, enter the name of the file containing the user information to be modified. For details on the format of the file, refer to ["5.3.2 User Information"](#).

#### delete -userId *userID*

Deletes user information.

In *userID*, specify the ID of the user to be deleted.

#### export [-orgId *organizationID* | -userId *userID*] -file *output-file*

Outputs user information as an XML file.

*organizationID* and *userID* can be omitted. However, it is possible to narrow down the target user information by specifying either one of them.

In *organizationID*, specify the organization ID. To narrow down to the users belonging to operators and planners, specify "!mgr".

In *userID*, specify a user ID.

In *output-file*, specify the file name using a character string containing alphanumeric characters, hyphens ("-"), underscores ("\_"), and periods ("."). For details on the format of the file, refer to ["5.3.2 User Information"](#).

When the specified file already exists, an error occurs.

#### import [-check *result-file*] -file *input-file*

Performs batch addition and modification of user information.

If -check *result-file* is specified, only the consistency check of the XML format, description format, and organization information of the user information to be added or modified is performed. To perform batch addition or modification, omit this parameter. If -check is omitted, when a failure of addition or modification is detected, the subsequent processes are not performed.

In *result-file*, enter the name of the file to which the check results will be output. If specified, the results of the check of *input-file* are output to the specified file.

In *input-file*, enter the name of the file containing the user information to be added or modified as a batch. For details on the format of the file, refer to "5.3.2 User Information". If the specified user information has not been added in Cloud Services Management, the information will be added. If the specified user information has been added already, the information will be modified to the specified content.

If -check *result-file* is specified, the results of the check will be output in the following format:

```
"userId, orgId, Result(Create/Modify/NotExist/Error)"
```

- Create: New addition
- Modify: Modification
- NotExist: The information is not in the input file but has been added in Cloud Services Management.
- Error:message: When there are errors in the input content, the error details are displayed using messages beginning with fscsm. For details and corrective actions, refer to "FUJITSU Software Cloud Services Management Messages".

If -check *result-file* is not specified, batch addition and modification will be performed. Execution results are output as files with the following names in the log folder:

```
fscsm_user_import_mmddhhmmss.log  
(mmddhhmmss: The month, date, hour, minute, and second when the command was executed)
```

Execution results of batch addition and modification are output in the following format:

```
"userId, orgId, Result(Create/Modify/NotExist/Error)"
```

- Create: New addition
- Modify: Modification
- NotExist: The information is not in the input file but has been added in Cloud Services Management.
- Error:message: When there are errors in the input content, the error details are displayed using messages beginning with fscsm. For details and corrective actions, refer to "FUJITSU Software Cloud Services Management Messages".

#### list [-orgId *organizationID*]

Displays the added user information in a prompt window.

-orgId *organizationID* can be omitted. If specified, only the information of the users belonging to that organization will be output. If not specified, the information for all users will be output. To narrow down to the users belonging to operators and planners, specify "!mgr".

The following items are displayed in ascending order of user ID. For users with multiple roles, role IDs are displayed separated by commas (",").

- User ID
- User name
- Organization ID
- Role ID

#### Example

- When adding user information

```
>fscsm_user create -file adduser.xml<RETURN>
```

- When modifying user information

```
>fscsm_user modify -file upduser.xml<RETURN>
```

- When deleting the user information with user ID user-6

```
>fscsm_user delete -userId user-6<RETURN>
```

- When outputting the user information of A Unit (Organization ID is 101) as a file

```
>fscsm_user export -orgId 101 -file userdata_A.xml<RETURN>
```

- When outputting the user information with user ID user-6 as a file

```
>fscsm_user export -userId user-6 -file userdata_user-6.xml<RETURN>
```

- When outputting all user information as a file

```
>fscsm_user export -file userdata_ALL.xml<RETURN>
```

- When outputting the user information of A Unit (organization ID 101) to the screen

```
>fscsm_user list -orgId 101<RETURN>
userId      username      orgId      roleId
-----
user-1      Ichiro_Fujitsu  101      bizSysProv_manager
user-2      Jiro_Fujitsu   101      bizSysProv_manager
user-3      Saburo_Fujitsu  101      bizSysProv_user
```

- When outputting all user information to the screen

```
>fscsm_user list<RETURN>
userId      userName      orgId      roleId
-----
user-1      Ichiro_Fujitsu  101      bizSysProv_manager,operation_manager
user-2      Jiro_Fujitsu   101      bizSysProv_manager
user-3      Saburo_Fujitsu  101      bizSysProv_user
user-b1     Taro_Fuji      !mgr      operation_manager
```

## Information

For users belonging to operators and planners, the orgId is displayed as "!mgr".

Each role name corresponds to the following user type:

planEval_manager	Planners - Approver
planEval_user	Planners - Representative
operation_manager	Operators - Approver
operation_user	Operators - Representative
operation_admin	Operators - Administrator
bizSysProv_manager	Platform Providers - Approver
bizSysProv_user	Platform Providers - Representative

## 5.2.3 Contract Operation Commands

Command Name

fscsm\_contract

## Format

```
fscsm_contract create -file input-file
```

```
fscsm_contract modify -file input-file
```

```
fscsm_contract delete -contractId contractID
```

```
fscsm_contract export [-contractId contractID] -file output-file
```

```
fscsm_contract list
```

## Description

Performs addition, modification, deletion, and output of contracts.

## Subcommands

### create -file *input-file*

Adds a contract.

In *input-file*, enter the name of the file containing the contract to be added. For details on the format of the file, refer to "[5.3.3 Contracts](#)".

### modify -file *input-file*

Modifies a contract. Only a single contract can be modified at one time.

In *input-file*, enter the name of the file containing the contract to be modified. For details on the format of the file, refer to "[5.3.3 Contracts](#)".

### delete -contractId *contractID*

Deletes a contract.

In *contractID*, specify the ID of the contract to be deleted. If the specified contract is linked to a menu, an error occurs during deletion.

### export [-contractId *contractID*] -file *output-file*

Outputs contracts as an XML file.

*contractID* can be omitted. If specified, only the information of the specified contract will be output. If not specified, the information of all contracts will be output.

In *output-file*, specify the file name using a character string containing alphanumeric characters, hyphens ("-"), underscores ("\_"), and periods ("."). For details on the format of the file, refer to "[5.3.3 Contracts](#)".

When the specified file already exists, an error occurs.

### list

Displays all of the added contracts in a prompt window.

The following items are displayed in ascending order of contract ID.

- Contract ID
- Contract Name
- Vendor ID

## Example

- When adding a contract

```
>fscsm_contract create -file addcontract.xml<RETURN>
```

- When modifying a contract

```
>fscsm_contract modify -file updcontract.xml<RETURN>
```

- When deleting the contract with contract ID 515

```
>fscsm_contract delete -contractId 515<RETURN>
```

- When outputting the contract with contract ID 515 as a file

```
>fscsm_contract export -contractId 515 -file contdata_ROR.xml<RETURN>
```

- When outputting contracts to the screen

```
>fscsm_contract list<RETURN>
contractId      contractName      vendorId
-----
515             ror - contract of 2015  ror
521             aws - contract of 2015  aws
```

## 5.2.4 Menu Operation Commands

### Command Name

fscsm\_menu

### Format

```
fscsm_menu create -file input-file
```

```
fscsm_menu modify -file input-file
```

```
fscsm_menu delete -menuId menuID
```

```
fscsm_menu export [-menuId menuID | -contractId contractID] -file output-file
```

```
fscsm_menu list [-contractId contractID]
```

### Description

Performs addition, modification, deletion, and output of menu information.

### Subcommands

#### create -file *input-file*

Adds menu information.

In *input-file*, enter the name of the file containing the menu information to be added. For details on the format of the file, refer to ["5.3.4 Menu Information"](#).

#### modify -file *input-file*

Modifies menu information. Only the information of a single menu can be modified at one time.

In *input-file*, enter the name of the file containing the information of the menu to be modified. For details on the format of the file, refer to ["5.3.4 Menu Information"](#).



Before deleting an operation option or a configuration option, ensure that there are no platforms or services which are currently under request for addition or modification and which use the target option.

If an option which is in use is deleted, the billing of the affected platforms or services will not be calculated correctly.

`delete -menuId menuID`

Deletes menu information.

In *menuID*, specify the ID of the menu to be deleted. If the specified menu is linked to a platform, an error occurs during deletion.

`export [-menuId menuID | -contractId contractID] -file output-file`

Outputs menu information as an XML file.

Both *menuID* and *contractID* can be omitted. However, it is possible to narrow down the target menu information by specifying one of them.

In *menuID*, specify the menu ID. In *contractID*, specify the contract ID.

In *output-file*, specify the file name using a character string containing alphanumeric characters, hyphens ("-"), underscores ("\_"), and periods ("."). For details on the format of the file, refer to "5.3.4 Menu Information".

When the specified file already exists, an error occurs.

`list [-contractId contractID]`

Displays the added menu information in a prompt window.

*contractID* can be omitted. If specified, only the menu information linked to the specified contract will be output. If not specified, all menu information will be output.

The following items are displayed in ascending order of menu ID.

- Menu ID
- Menu Name
- Contract ID
- Status

## Example

- When adding menu information

```
>fscsm_menu create -file addmenu.xml<RETURN>
```

- When modifying menu information

```
>fscsm_menu modify -file updmenu.xml<RETURN>
```

- When deleting the menu information with menu ID ror-2015-001

```
>fscsm_menu delete -menuId ror-2015-001<RETURN>
```

- When outputting the menu information with menu ID ror-2015-001 as a file

```
>fscsm_menu export -menuId ror-2015-001 -file menudata_ROR2015001.xml<RETURN>
```

- When outputting the menu information with contract ID 515 as a file

```
>fscsm_menu export -contractId 515 -file menudata_ROR.xml<RETURN>
```

- When outputting the menu information with contract ID 515 to the screen

```
>fscsm_menu list -contractId 515<RETURN>
menuId          menuName          contractId        status
-----
ror-2015-001    SILVER            515               published
ror-2015-002    GOLD              515               hidden
```

- When outputting menu information to the screen

```
>fscsm_menu list<RETURN>
```

menuId	menuName	contractId	status
aws-2015-001	BRONZE	521	published
ror-2015-001	SILVER	515	published
ror-2015-002	GOLD	515	hidden

## 5.2.5 Platform Operation Commands

### Command Name

fscsm\_bizsystem

### Format

```
fscsm_bizsystem create -file input-file
```

```
fscsm_bizsystem modify -file input-file
```

```
fscsm_bizsystem delete -bizSystemId platformID
```

```
fscsm_bizsystem export [-bizSystemId platformID | -projectId projectID | -menuId menuID | -serviceId serviceID] -file output-file
```

```
fscsm_bizsystem list [-projectId projectID | -menuId menuID]
```

### Description

Performs addition, modification, deletion, and output of platform information.

### Subcommands

#### create -file *input-file*

Adds platform information.

In *input-file*, enter the name of the file containing the information of the platform to be added. For details on the format of the file, refer to "[5.3.5 Platform Information](#)".

#### modify -file *input-file*

Modifies platform information. Only the information of a single platform can be modified at one time.

In *input-file*, enter the name of the file containing the information of the menu to be modified. For details on the format of the file, refer to "[5.3.5 Platform Information](#)".

#### Delete -bizSystemId *platformID*

Deletes platform information.

In *platformID*, specify the ID of the platform to be deleted.

#### export [-bizSystemId *platformID* | -projectId *projectID* | -menuId *menuID* | -serviceId *serviceID*] -file *output-file*

Outputs platform information as an XML file.

*platformID*, *projectID*, *menuID*, and *serviceID* can be omitted, or by specifying either one the platform information can be filtered.

Specify a platform ID for *platformID*, a project ID for *projectID*, a menu ID for *menuID*, and a service ID for *serviceID*.

In *output-file*, specify the file name using a character string containing alphanumeric characters, hyphens ("-"), underscores ("\_"), and periods "."). For details on the format of the file, refer to "[5.3.5 Platform Information](#)".

When the specified file already exists, an error occurs.

`list [-projectId projectID | -menuId menuID]`

Displays the added platform information in a prompt window.

Both *projectID* and *menuID* can be omitted. However, it is possible to narrow down the target platform information by specifying one of them.

In *projectID*, specify a project ID. In *menuID*, specify a menu ID.

The following items are displayed in ascending order of platform ID.

- Platform ID
- Platform Name
- Project ID
- Menu ID

### Example

- When adding platform information

```
>fscsm_bizsystem create -file addbizsys.xml<RETURN>
```

- When modifying platform information

```
>fscsm_bizsystem modify -file updbizsys.xml<RETURN>
```

- When deleting the platform information with platform ID 533

```
>fscsm_bizsystem delete -bizSystemId 533<RETURN>
```

- When outputting the platform information with platform ID 533 as a file

```
>fscsm_bizsystem export -bizSystemId 533 -file bizsysdata_533.xml<RETURN>
```

- When outputting the platform information with menu ID aws-2015-001 as a file

```
>fscsm_bizsystem export -menuId aws-2015-001 -file bizsysdata_AWS.xml<RETURN>
```

- When outputting all platform information as a file

```
>fscsm_bizsystem export -file bizsysdata_ALL.xml<RETURN>
```

- When outputting platform information with the menu ID menu-20 to the screen

```
>fscsm_bizsystem list -menuId menu-20<RETURN>
bizSystemId      bizSystemName    projectId        menuId
-----
502              systemB          project-50       menu-20
801              systemG          project-50       menu-20
```

## 5.2.6 Service Output Commands

Command Name

`fscsm_service`

Format

```
fscsm_service export [-serviceId serviceID | -bizSystemId platformID ] -file output-file
```

```
fscsm_service list [-bizSystemId platformID]
```



## Description

Outputs service information.

## Subcommands

`export [-serviceId serviceID | -bizSystemId platformID] -file output-file`

Outputs service information as an XML file.

Both *serviceID* and *platformID* can be omitted. However, it is possible to narrow down the target service information by specifying one of them.

In *serviceID*, specify the service ID. In *platformID*, specify the platform ID.

In *output-file*, specify the file name using a character string containing alphanumeric characters, hyphens ("-"), underscores ("\_"), and periods ("."). For details on the format of the file, refer to ["5.3.6 Service Information"](#).

When the specified file already exists, an error occurs.

`list [-bizSystemId platformID]`

Displays the added service information in a prompt window.

*platformID* can be omitted. If specified, only the information for the specified platform will be output. If not specified, the information for all platforms will be output.

The following items are displayed in ascending order of service ID.

- Service ID
- Service Name
- Service type

## Example

- When outputting the service information with service ID 533-01 as a file

```
>fscsm_service export -serviceId 533-01 -file servicedata_533-01.xml<RETURN>
```

- When outputting the platform information with platform ID 533 to the screen

```
>fscsm_service list -bizSystemId 533<RETURN>
serviceId      serviceName      serviceType
-----
533-01         VM533-01        VM
533-02         VM533-02        VM
533-03         SLB533          SLB
533-04         RDB533          RDB
```

- When outputting all service information to the screen

```
>fscsm_service list<RETURN>
serviceId      serviceName      serviceType
-----
533-01         VM533-01        VM
533-02         VM533-02        VM
533-03         SLB533          SLB
533-04         RDB533          RDB
534-01         VM534-01        VM
```

## 5.2.7 Metering Log Output Command

### Command Name

`fscsm_meteringexport`

## Format

```
fscsm_meteringexport [-start startingdate] [-end endingdate] -file output-file [-format formattype]
```

## Description

Outputs a metering log. The log is output as a file in CSV or XML format.

In *startingdate*, specify the start date of the target period for which metering logs are to be output, in the format, YYYY-MM-DD. When omitted, the date of the oldest data in the metering log is regarded as the start date.

In *endingdate*, specify the end date of the target period for which metering logs are to be output, in the format, YYYY-MM-DD. When omitted, the day before the date of command execution is regarded as the end date.

In *output-file*, specify the file name using a character string containing alphanumeric characters, hyphens ("-"), underscores ("\_"), and periods ("."). This parameter cannot be omitted. If the specified file already exists, it will be overwritten.

In *formattype*, enter the file format of the file to be output. Specify "csv" to output in CSV format, or specify "xml" to output in XML format. This parameter can be omitted. When it is omitted, the log is output in CSV format.

## Example

- When outputting the information for May 2015 in the metering log as a CSV file

```
>fscsm_meteringexport -start 2015-05-01 -end 2015-05-31 -file meter201505.csv<RETURN>
```

- When outputting all information up until the end of 2014 in the metering log as an XML file

```
>fscsm_meteringexport -end 2014-12-31 -file mater2014.xml -format xml<RETURN>
```

## Output Format

When the metering log is output in CSV format, the content of the output file should look like the following:

```
# version, eventTime, event, resourceType, projectId, bizSystemId, menuId, extendedOptions, userId, resourceId, resourceIdentifier,
systemDiskImage, dataDiskType, dataDiskNum, snapshotSize
2, "2015-01-01 00:00:00.000+0900", "ADD", "system", "prj001", "bizsys001", "menu001", "optionA,optionB", "user001", "", "", "",
"", ,
2, "2015-01-01 01:00:00.000+0900", "ADD", "vm", "prj001", "bizsys001", "", "", "", "vm001", "type_small", "WS2012",
"type_middle", 1,
2, "2015-01-01 02:00:00.000+0900", "START", "vm", "prj001", "bizsys001", "", "", "", "vm001", "", "", "", ,
2, "2015-01-01 03:00:00.000+0900", "STOP", "vm", "prj001", "bizsys001", "", "", "", "vm001", "", "", "", ,
2, "2015-01-01 04:00:00.000+0900", "CHANGE", "vm", "prj001", "bizsys001", "", "", "", "vm001", "type_middle", "WS2012",
"type_middle", 1,
2, "2015-01-01 05:00:00.000+0900", "ADD", "slb", "prj001", "bizsys001", "", "", "", "slb001", "optionSLB", "", "", ,
2, "2015-01-01 05:00:00.000+0900", "ADD", "rdb", "prj001", "bizsys001", "", "", "", "rdb001", "optionRDB", "", "", ,
2, "2015-01-01 06:00:00.000+0900", "DELETE", "slb", "prj001", "bizsys001", "", "", "", "slb001", "", "", "", ,
2, "2015-01-01 06:00:00.000+0900", "DELETE", "rdb", "prj001", "bizsys001", "", "", "", "rdb001", "", "", "", ,
2, "2015-01-01 06:00:00.000+0900", "DELETE", "vm", "prj001", "bizsys001", "", "", "", "vm001", "", "", "", ,
2, "2015-01-01 07:00:00.000+0900", "DELETE", "system", "prj001", "bizsys001", "", "", "", "", "", "", "", ,
```

## 5.2.8 Billing Output Command

### Command Name

fscsm\_chargeexport

## Format

```
fscsm_chargeexport -dir output-directory [-month targetmonth] [-bizSystemId platformID] [-projectId projectID] [-code accountingcode] [-menuId menuID]
```

## Description

Outputs the billing data for the specified month as a CSV file.

In *output-directory*, specify a folder name using a character string containing alphanumeric characters, hyphens ("-"), and underscores ("\_"). This parameter cannot be omitted. Before executing this command, create an empty folder and specify it as the output folder. When the specified folder does not exist or is not empty, an error will occur.

In *targetmonth*, specify the year and month of the output target in the format, YYYY-MM. This parameter can be omitted. If omitted, the data for the most recent year and month for which billing data has been processed will be the target.

In *platformID*, specify the platform ID. This parameter can be omitted. If it is omitted, the billing data for all platforms will be the target.

In *projectID*, specify a project ID. This parameter can be omitted. If it is omitted, the billing data for all projects will be the target.

In *accountingcode*, specify the accounting code. This parameter can be omitted. If it is omitted, the billing data for all accounting codes will be the target.

Specify a menu ID for *menuID*. This parameter can be omitted. If it is omitted, the billing data for all menus will be the target.

## Example

- When outputting the monthly usage charges for May 2015 for the business system ID 533 as a file

```
>fscsm_chargeexport -dir .\usertmp\chargeex\biz\533\201505 -month 2015-05 -bizSystemId 533<RETURN>
```

- When outputting the monthly usage charges for May 2015 for the accounting code 533 as a file

```
>fscsm_chargeexport -dir .\usertmp\chargeex\biz\AccountABB\201505 -month 2015-05 -code ABB<RETURN>
```

## File Name and Output Content

The file name of the file to which billing data is output is determined based on the output unit, target year, and month.

### File for Each Platform

Refer to "Billing Details File" in ["3.2.3 Sending Billing"](#).

Table 5.1 List of Elements Output to File

Item Name	Output Value or Example
version	Version of file format
date	Target month. Each entry is output in the following format: <Target month><Accounting period>
accountingCode	Accounting Code
projectId	Project ID
menuName	Menu Name
bizSystemName	Platform Name
category	Category
breakdown	Breakdown For virtual machines, system disk images, or data disk images, multiple pieces of information divided by " " are output. - For virtual machines

	"Virtual machine   <Service ID>   <Instance type>" - For system disk images "Image   <Service ID>   <System disk image>" - For data disks "Data disk"   <Service ID>   <Data disk type>"
unitPrice[<Currency Symbol>]	Unit Price
unitPriceUnit	Unit of unit price
usage	Amount of usage
usageUnit	Unit of usage
charge[<Currency Symbol>]	Charge

#### Output Example

```
# version, date, accountingCode, projectId, menuName, bizSystemName, category, breakdown, unitPrice[()], unitPriceUnit, usage,
usageUnit, charge[()]
2, "2015-01(2015-01-01 - 2015-01-31)", "ACNT-001", "project001", "menu001", "bizsys001", "basicMenu", "Initial Costs", 2000,
"/Month", 2, "Month", 2000
2, "2015-01(2015-01-01 - 2015-01-31)", "ACNT-001", "project001", "menu001", "bizsys001", "basicMenu", "Basic Charges",
2000, "/Month", 2, "Month", 2000
2, "2015-01(2015-01-01 - 2015-01-31)", "ACNT-001", "project001", "menu001", "bizsys001", "extendedOption", "Backup", 500,
"/Month", 1, "Month", 500
2, "2015-01(2015-01-01 - 2015-01-31)", "ACNT-001", "project001", "menu001", "bizsys001", "extendedOption", "Standard
Monitoring", 500, "/Month", 1, "Month", 500
2, "2015-01(2015-01-01 - 2015-01-31)", "ACNT-001", "project001", "menu001", "bizsys001", "serviceOption", "virtualMachine|
server001|small", 30, "/Hour", 550, "Hour", 16500
2, "2015-01(2015-01-01 - 2015-01-31)", "ACNT-001", "project001", "menu001", "bizsys001", "serviceOption", "Image|server001|
win2012", 500, "/Month", 1, "Month", 500
2, "2015-01(2015-01-01 - 2015-01-31)", "ACNT-001", "project001", "menu001", "bizsys001", "serviceOption", "Data Disk|
server001|200GB", 1000, "/Number of disks * Month", 1, "Number of disks * Month", 2000
```

## 5.2.9 Unit of Currency Operation Commands

### Command Name

fscsm\_currency

### Format

```
fscsm_currency modify -code currencycode
```

```
fscsm_currency export -file output-file
```

### Description

Use this command to change the unit of currency to be used for billing in Cloud Services Management. This command also outputs the unit of currency currently being used.

### Subcommands

modify -code *currencycode*

Changes the unit of currency.

In *currencycode*, specify an ISO 4217 currency code. If a currency not contained in the following table is specified, the ISO 4217 code for the language (country) specified in the OS region format settings is displayed instead of the currency symbol. If you would like to display a symbol for such a currency instead of a code, specify a language (country) in which that currency is generally used in the region settings of your OS.

Table 5.2 Examples of Currency Codes

Currency Code	Unit of Currency	Currency Symbol	Number of Decimal Places
USD	United States Dollar	\$	2
JPY	Japanese Yen	¥	0
EUR	Euro	€	2
SGD	Singapore Dollar	S\$	2

`export -file output-file`

Outputs the information about the currently configured unit of currency as a text file.

In *output-file*, specify the file name using a character string containing alphanumeric characters, hyphens ("-"), underscores ("\_"), and periods ("."). When the specified file already exists, an error occurs.

Output Example

The information is output as shown below:

```
currency.code = USD
currency.symbol = $
currency.fraction.digits = 2
```

Example

- When changing the unit of currency to the Euro

```
>fscsm_currency modify -code EUR<RETURN>
```

- When outputting unit of currency information as a file

```
>fscsm_currency export -file currency.txt<RETURN>
```

## 5.2.10 Coordination Password Change Command

Command Name

fscsm\_passwordset

Format

```
fscsm_passwordset -svom password
```

Description

Provides the following operations:

`-svom password`

Sets the password for access to the SVOM directory service.

In *password*, specify a character string containing 8 to 64 alphanumeric characters and !#()-.@`{ }~.



To reflect configuration, restart Cloud Services Management. To restart services, perform "2.1.2 Stopping" followed by "2.1.1 Starting".

#### Example

- When setting the password for access to the SVOM directory service

```
>fscsm_passwordset -svom p@ssword!<RETURN>
```

## 5.2.11 Request Operation Commands

### Command Name

fscsm\_request

### Format

```
fscsm_request delete {-requestId | -date end-date} [-force]
```

```
fscsm_request export [-start start-date] [-end end-date] -dir output-directory
```

### Description

Deletes a submitted request. This command also outputs request information as a file.

### Subcommands

**delete** {-requestID *requestID* | -date *end-date* } [-force]

Deletes submitted requests.

It is necessary to specify either *requestID* or *end-date*.

In *requestID*, specify the ID of the request to be deleted.

In *end-date*, specify the most recent submission date of the target requests in the format, YYYY-MM-DD. Requests that were submitted on or before the specified date will be deleted.

-force can be omitted. When specified, all the corresponding requests will be deleted regardless of their statuses.

When omitted, the requests whose status is Waiting Processing will not be deleted, while the requests whose status is Approved, Rejected, Cancelled, or Failed will be deleted.

**export** [-start *start-date*] [-end *end-date*] -dir *output-directory*

Outputs submitted requests as a file.

In *start-date*, specify the start date of the target period for which requests are to be obtained, in the format, YYYY-MM-DD. When omitted, the oldest submission date of the existing requests is regarded as the start date.

In *end-date*, specify the end date of the target period for which requests are to be obtained, in the format, YYYY-MM-DD. When omitted, the date on which the command is executed is regarded as the end date.

In *output-directory*, specify the folder to which the file is to be output. This parameter cannot be omitted.

Specify the folder name using a character string containing alphanumeric characters, hyphens ("-"), and underscores ("\_").

When the specified file already exists, an error occurs. Before executing this command, create an empty folder and specify it as the output folder. When the specified folder does not exist or is not empty, an error will occur. Specify an absolute path or a relative path.

### File Name and Output Content

The file name should be in the following format:

```
<Submission date>_<Request ID>_<Target resource>_<Operation>.xml
```

In <Target resource>, one of the following is specified:

Target Resource	Specified Value
Organizations	org
Users	user
Project management	project
Menus	menu
Platforms	platform
Services	service

In <Operation>, one of the following is specified:

Operation	Specified Value
Addition	register
Modification	modify
Deletion	delete

For details on the format of the file, refer to "[5.3.7 Request Information](#)".

#### Example

- When deleting a request with request ID "123" which is under request

```
>fscsm_request delete -requestId 123 -force<RETURN>
```

- When deleting approved, rejected, canceled, or failed requests which were submitted on or before March 31, 2014

```
>fscsm_request delete -date 2014-03-31<RETURN>
```

- When outputting the requests that were submitted in the period from December 1, 2015 to December 31, 2015 as a file

```
>fscsm_request export -start 2015-12-01 -end 2015-12-31 -dir .\usertmp\201512<RETURN>
```



#### Information

Request output files can be used for the following purposes:

- For use as past operation logs by periodically outputting requests as files
- To confirm detailed information, such as the approvers of a request, that are not recorded in audit logs

## 5.2.12 Project Output Commands

#### Command Name

fscsm\_project

#### Format

```
fscsm_project export [-projectId projectID] [-member userID] [-bizSystemId platformID] [-serviceId serviceID] [-code accountingcode] [-history] -file output-file
```

```
fscsm_project list
```

#### Description

Use this command to output project information.

## Subcommands

`export` [-projectId *projectID*] [-member *userID*] [-bizSystemId *platformID*] [-serviceId *serviceID*] [-code *accountingcode*] [-history] -file *output-file*

Outputs project information as an XML file.

The target project information can be narrowed down by specifying arbitrary values for or omitting *projectID*, *userID*, *platformID*, *serviceID*, and *accountingcode*.

In *projectID*, specify a project ID. In *userID*, specify a user ID. In *platformID*, specify a platform ID. In *serviceID*, specify a service ID. In *accountingcode*, specify an accounting code.

-history can be omitted. When specified, project information containing accounting code history and deletion history is output.

In *output-file*, specify the file name using a character string containing alphanumeric characters, hyphens ("-"), underscores ("\_"), and periods ("."). For details on the format of the file, refer to "5.3.8 Project Information".

When the specified file already exists, an error occurs.

## list

Displays all of the added project information in a prompt window.

The following items are displayed:

- Project ID
- Project Name
- Project supervisor
- Accounting Code

## Example

- When outputting the information of a project with project ID projectA

```
>fscsm_project export -projectId projectA -file projectA.xml<RETURN>
```

- When outputting the information of the projects to which the user with user ID UserA has been added as a member

```
>fscsm_project export -member UserA -file project-userA.xml<RETURN>
```

- When outputting the information of a project with platform ID systemA101

```
>fscsm_project export -bizSystemId systemA101 -file projectA101.xml<RETURN>
```

- When outputting the information of a project with service ID serviceA10101

```
>fscsm_project export -serviceId serviceA10101 -file projectA10101.xml<RETURN>
```

- When outputting the information of all projects

```
>fscsm_project export -file projectall.xml<RETURN>
```

- When outputting the information of all projects to the screen

```
>fscsm_project list<RETURN>
projectId      projectName      projectAdminUserId  accountingCode
-----
projectA      A Project      admin-a             2001
projectB      B Project      admin-b             3010
projectC      C Project      admin-c             2015
```



## 5.2.13 Accounting Code Operation Commands

---

### Command Name

fscsm\_accountingcode

### Format

```
fscsm_accountingcode create -file input-file
```

```
fscsm_accountingcode modify -file input-file
```

```
fscsm_accountingcode delete -code accountingcode
```

```
fscsm_accountingcode export [-code accountingcode] -file output-file
```

```
fscsm_accountingcode list [-orgId organizationID]
```

### Description

Performs addition, modification, deletion, and outputting of accounting codes.

### Subcommands

#### create -file *input-file*

Adds accounting codes.

In *input-file*, enter the name of the file containing the accounting codes to be added. For details on the format of the file, refer to ["5.3.9 Accounting Code Information"](#).

#### modify -file *input-file*

Modifies accounting codes. Multiple accounting codes can be modified.

In *input-file*, enter the name of the file containing the accounting codes to be modified. For details on the format of the file, refer to ["5.3.9 Accounting Code Information"](#).

#### delete -code *accountingcode*

Deletes accounting codes.

In *accountingcode*, enter the accounting code to be deleted.

#### export [-code *accountingcode*] -file *output-file*

Outputs accounting code information as an XML file.

-Code *accountingcode* can be omitted. If specified, the information of the specified accounting codes will be output. If not specified, the information of all accounting codes will be output.

In *output-file*, specify the file name using a character string containing alphanumeric characters, hyphens ("-"), underscores ("\_"), and periods ("."). For details on the format of the file, refer to ["5.3.9 Accounting Code Information"](#).

When the specified file already exists, an error occurs.

#### list [-orgId *organizationID*]

-orgId *organizationID* can be omitted. If specified, the information of the specified organizations will be output. If not specified, the information of all organizations will be output in a prompt window.

The following items are displayed in ascending order of accounting code.

- Accounting Code
- Organization ID

### Example

- When adding accounting codes

```
>fscsm_accountingcode create -file addacccode.xml<RETURN>
```

- When modifying accounting codes

```
>fscsm_accountingcode modify -file updaccode.xml<RETURN>
```

- When deleting organization information with accounting code ABC

```
>fscsm_accountingcode delete -code ABC<RETURN>
```

- When outputting the information of accounting code "ABC" as a file

```
>fscsm_accountingcode export -code ABC -file accdata_A.xml<RETURN>
```

- When outputting all accounting code information as a file

```
>fscsm_accountingcode export -file orgdata_ALL.xml<RETURN>
```

- When outputting accounting codes to the screen

```
>fscsm_accountingcode list<RETURN>
code                               orgId
-----
ABC                                 101
ABD                                 101
ABE                                 101
B01                                 201
```

## 5.2.14 Base Backup Operation Commands

### Command Name

fscsm\_basebackup

### Format

```
fscsm_basebackup create -comment comment
```

```
fscsm_basebackup delete -version version
```

```
fscsm_basebackup list
```

### Description

Collects, deletes, and outputs lists of base backups of the software platform of Cloud Services Management. Pre-configurations are necessary in order to perform base backup operations. For details, refer to ["4.2.2.1 Configuring Online Backup"](#). In addition, it is necessary to define the storage folder for backup files in the configuration file. For details, refer to ["2.10.5 Online Backup Configuration Information"](#).

### Subcommands

#### create -comment *comment*

Collects a base backup.

In *comment*, enter a comment for the base backup. Specify a character string which contains 1 to 32 alphanumeric characters, hyphens ("-"), underscores ("\_"), periods ("."), blank spaces (" "), plus signs ("+"), slashes ("/"), asterisks ("\*"), equal signs ("="), ampersands("&"), percent signs("%"), colons (":"), and semicolons(";") and is enclosed by double quotes ("").

#### delete -version *version*

Delete a base backup.

In *version*, specify the version of the base backup to be deleted. The base backup can be checked by executing fscsm\_basebackup list.

#### list

Display the added base backup information in a prompt window.

The following items are displayed in ascending order of base backup version.

- Base backup version
- Base backup completion time
- Comment

#### Example

- When creating a base backup using a comment called "first"

```
>fscsm_basebackup create -comment "first"<RETURN>
```

- When deleting the base backup whose version is 3

```
>fscsm_basebackup delete -version 3<RETURN>
```

- When outputting backup information to the screen

```
>fscsm_basebackup list<RETURN>
version      time          comment
-----
1  2015-09-01 11:10 first
2  2016-01-13 11:10 2nd backup
```

## 5.2.15 Cloud Vendor Definition File Confirmation Command

### Command Name

fscsm\_vendorcheck

### Format

```
fscsm_vendorcheck [-file vendor_file]
```

### Description

Checks the format of cloud vendor definition files and displays the results in a prompt window.

In *vendor\_file*, specify a cloud vendor definition file.

When *vendor\_file* is specified, the format of the file is checked. In addition, the storage folder of the cloud vendor information file is checked for added files with a vendor ID which overlaps with that of the specified file.

If *vendor\_file* is omitted, a check is performed of the format of all files which have been added in the storage folder of the cloud vendor information files, and for overlapping vendor IDs.

The storage folder of cloud vendor definition files is as follows:

```
%FSCSM_HOME%\conf\vendors
```

For details on the format of the file, refer to "5.3.10 Cloud Vendor Information".

### Note

The format of values of parameter information (parameter elements) in cloud vendor definition files cannot be checked. Configure the cloud services and cloud management software according to the relevant specifications.

### Point

- If you want to check a file which has not been added to the storage folder of cloud vendor definition files, specify *vendor\_file* when executing the command.

- If you want to check files which have been added to the storage folder of cloud vendor definition files, omit *vendor\_file* when executing the command. If an added file is specified in *vendor\_file*, a check error occurs.

## Output Content

The following content should be output:

<File name>: "OK" or <Error message>

When there are errors in the specified file, the error details are displayed using messages beginning with fscsm. For details and corrective actions, refer to "FUJITSU Software Cloud Services Management Messages".

## Example

- When *vendor\_file* is specified

```
>%FSCSM_HOME%\bin\fscsm_vendorcheck -file D:\tmp\vendor\k5@default.xml<RETURN>
k5@default.xml: ERROR: fscsm1008: Invalid file exists.(name=k5@default.xml)
WARNING: fscsm3013: Failed to check partially.
```

- When *vendor\_file* is not specified

```
> %FSCSM_HOME%\bin\fscsm_vendorcheck<RETURN>
custom_a5.xml: ERROR: fscsm3011: Element was invalid value or format. (element: vendor
vendorId, value=AWS)
default_k5.xml: OK
default@k5.xml: ERROR: fscsm1008: Invalid file exists.(name=default@k5.xml)
my_a5.xml: ERROR: fscsm3011: Element was invalid value or format. (element: vendor vendorId,
value=A5)
my_aws.xml: ERROR: fscsm3011: Element was invalid value or format. (element: serviceOption
optionId, value=__KK__)
WARNING: fscsm3013: Failed to check partially.
```

## 5.3 Format of XML Files Used in Commands

This section explains the format of the XML files used when performing operations related to the information kept by Cloud Services Management.

In this section, element names and the contents of element in XML files are described as follows:

```
<Elementname>Element value</Elementname>
<Elementname Attribute1="Attribute 1" Attribute2="Attribute 2">Element value</Elementname>
```

Use any text editor to edit XML files.

The character code of the XML files must be UTF-8.

In XML conventions, line breaks and blanks are recognized as data. Therefore, do not insert any unnecessary line breaks or blank spaces when modifying an XML file.

In the table explained by this section, "can be omitted" refers to when there are no corresponding XML elements or attributes. When XML elements and attributes are omitted during modification, the values of the elements and attributes from before execution of the command are retained.

In addition, in this section, multiple resources can be specified at the same time during addition. Except for accounting codes, only one resource can be specified during modification.



### Note

Elements and attributes that are not used in standard XML are not read.

If an XML tag is written which contains no attributes, an empty element, for example, <comment/>, must be specified instead of an end tag.

According to XML conventions, specify the following escape characters:

Specified Character	Escape
<	&lt;
>	&gt;
&	&amp;
"	&quot;

### 5.3.1 Organization Information

Among the commands for organization information operations, the following four subcommands use XML:

- fscsm\_org create (Addition of organization information)
- fscsm\_org modify (Modification of organization information)
- fscsm\_org export (Export of organization information)
- fscsm\_org import (Batch addition, modification, and check of batch addition information of organization information)

The format of the XML file corresponding to the command above is explained below.

The elements of the XML must be specified using the following hierarchical structure:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<orgs>
  <org>
    <orgId>Organization ID</orgId>
    <orgAbbreviation>Abbreviation of the Organization Name</orgAbbreviation>
    <orgName>Organization Name</orgName>
    <parentOrgId>Organization ID of the Parent Organization</parentOrgId>
    <comment>Comment</comment>
    <customFields>
      <customField no="1">Organization Custom Field 1</customField>
      <customField no="2">Organization Custom Field 2</customField>
      <customField no="3">Organization Custom Field 3</customField>
      <customField no="4">Organization Custom Field 4</customField>
      <customField no="5">Organization Custom Field 5</customField>
    </customFields>
  </org>
</orgs>
```

Element (Element Name or Element Name and Attribute)	Required or Displayed			Specifiable Values During Addition or Modification
	Addition	Modification	Output	
Organization ID (orgId)	Yes	Yes *1	Yes	The ID must not overlap with the IDs of other organizations. Specify a unique value.  Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores ("_"), hyphens ("-"), and periods (".").
Organization Short Name (orgAbbreviation)	Yes	Yes	Yes	Specify a character string containing 1 to 64 characters.
Organization Name (orgName)	Yes	Yes	Yes	Specify a character string containing 1 to 64 characters.

Element (Element Name or Element Name and Attribute)	Required or Displayed			Specifiable Values During Addition or Modification
	Addition	Modification	Output	
Organization ID of Parent Organization (parentOrgId)	Yes	Yes	Yes	Specify the organization ID of an already added organization which is the parent of the created organization.  Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores ("_"), hyphens ("-"), and periods ("."). Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores ("_"), hyphens ("-"), and periods (".").  Use organization operation commands to obtain the organization ID of an existing organization.  Specify "!root" if no parent organization exists.  The number of levels in the organization hierarchy cannot exceed the maximum number set in the system information (default: 3, maximum: 5). In addition, an organization structure which creates a loop may not be specified.
Description (comment)	No	No	Yes	Specify a character string containing 0 to 256 characters.
Organization Custom Field N (customField no="N")	No	No	Yes	Specify a character string for the custom field.  Only the specification of custom fields to be created or modified is permitted.  Specify a character string containing 0 to 256 characters.  When specifying values for custom fields, be sure to specify a sequential number for N. The sequential number cannot be omitted and as many as 5 different numbers can be specified.  The content of each organization custom field is defined using <code>gui.org.customfield.label.&lt;n&gt;</code> , which is defined in the system information definition file. Specify the value for N according to the content of this definition.

The meanings of the entries listed under "Required or Displayed" are as follows:

Yes: Entry is required, or element is output.

No: Can be omitted.

-: Specification is not permitted, or element is not output.

\*1: Modification is not possible.

## 5.3.2 User Information

Among the commands that operate user information, the following three types of commands use XML:

- fscsm\_user create (Addition of user information)
- fscsm\_user modify (Modification of user information)
- fscsm\_user export (Export of user information)
- fscsm\_user import (Batch addition, modification, and check of batch addition information of user information)

The format of the XML file corresponding to the command above is explained below.

The elements of the XML must be specified using the following hierarchical structure:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<users>
  <user>
    <userId>User ID</userId>
    <orgId>Organization ID</orgId>
    <password>Password</password>
    <userName>User Name</userName>
    <roleIds>
      <roleId>operation_manager</roleId>
      <roleId>bizSysProv_manager</roleId>
    </roleIds>
    <mailAddress>Email Address</mailAddress>
    <phoneNumber>Contact Information</phoneNumber>
    <comment>User Comment</comment>
    <customFields>
      <customField no="1">User Custom Field 1</customField>
      <customField no="2">User Custom Field 2</customField>
      <customField no="3">User Custom Field 3</customField>
      <customField no="4">User Custom Field 4</customField>
      <customField no="5">User Custom Field 5</customField>
    </customFields>
  </user>
</users>
```

Element (Element Name or Element Name and Attribute)	Required or Displayed			Specifiable Values During Addition or Modification
	Addition	Modification	Output	
User ID (userId)	Yes	Yes *1	Yes	Specify a character string containing 1 to 320 alphanumeric characters, underscores ("_"), hyphens ("-"), periods ("."), and at marks ("@"). This field is case insensitive, so user IDs that only differ by the cases of the characters used will be recognized as the same user ID. For example, if "User" has been registered, then "user" cannot be registered.  The ID must not overlap with the IDs of other users. Specify a unique value.  When configuring the fscsm_config configuration file such that Active Directory coordination is used, it is necessary to register the same user in Active Directory. For the user ID, specify the login name used in the coordinating SVOM.
Organization ID (orgId)	Yes	Yes	Yes	Specify the organization ID of the organization to which the user to be created belongs.  Specify an organization ID by outputting the organization ID using <a href="#">"5.2.1 Organization Operation Commands"</a> .  When adding users belonging to operators or planners, specify "!mgr".
Password (password)	Yes	No	-	Specify a character string containing 8 to 64 alphanumeric characters, \"=[:*+,<>?/ and ASCII characters excluding blank spaces and control characters.  If this item is omitted during modification, the password is not modified.  When user information is output using <a href="#">"5.2.2 User Operation Commands"</a> , this element is not output.  When configuring the settings that use Active Directory coordination in the fscsm_config.xml configuration file, this specification is invalid.

Element (Element Name or Element Name and Attribute)	Required or Displayed			Specifiable Values During Addition or Modification	
	Addition	Modification	Output		
				Even if a password is specified during creation or modification, the password which was configured in advance is used.	
User Name (userName)	Yes	Yes	Yes	Specify a character string containing 1 to 64 characters.	
Role (roleId)	Yes	Yes	Yes	Specify one of the following:	
				Value	Description
				planEval_manager	Planners - Approver
				planEval_user	Planners - Representative
				operation_manager	Operators - Approver
				operation_user	Operators - Representative
				operation_admin	Operators - Administrator
				bizSysProv_manager	Platform Providers - Approver
				bizSysProv_user	Platform Providers - Representative
				Configuring multiple roleId elements enables dual roles. The combinations which can be configured are as described below.	
				Value	Description
				("+" indicates a dual role. When specifying XML, individually configure each value for the roleId element.)	
				planEval_manager + bizSysProv_manager	Planners - Approver and Platform Providers - Approver
				planEval_user + bizSysProv_user	Planners - Representative and Platform Providers - Representative
				operation_manager + bizSysProv_manager	Operators - Approver and Platform Providers - Approver
				operation_user + bizSysProv_user	Operators - Representative and Platform Providers - Representative
				operation_manager + operation_admin	Operators - Approver and Administrator
operation_user + operation_admin	Operators - Representative and Administrator				
operation_manager + bizSysProv_manager + operation_admin	Operators - Approver and Platform Providers - Approver and Operators - Administrator				
operation_user + bizSysProv_user + operation_admin	Operators - Representative and Platform Providers - Representative and Administrator				
The roles available during modification depend on the role before switching. Refer to " <a href="#">Table 5.3 Correspondence Table for Role Modification</a> ".					
Email Address (mailAddress)	Yes	Yes	Yes	Specify an email address to which notification about requests are sent.	



Element (Element Name or Element Name and Attribute)	Required or Displayed			Specifiable Values During Addition or Modification
	Addition	Modification	Output	
				Specify a character string which contains 1 to 256 characters and qualifies as a <code>"/^[w\.-]+@(?:[w\.-]+\.)+[w\.-]+\$/"</code> regular expression. If X is defined as a string which contains alphanumeric characters, hyphens (-), and underscores (_), and Y contains X and periods (.), the format of the regular expression is "Y@X.X".
Contact Information (phoneNumber)	Yes	Yes	Yes	Specify a phone number as contact information. Specify a character string containing 1 to 256 characters.
User Comment (comment)	No	No	Yes	Specify a user comment. Specify a character string containing 0 to 256 characters.
User Custom Field N (customField no="N")	No	No	Yes	Specify a character string for the custom field. Only the specification of custom fields to be created or modified is permitted. Specify a character string containing 0 to 256 characters. When specifying values for custom fields, be sure to specify a number for N. The number cannot be omitted and as many as 5 different numbers can be specified. The content of each user custom field is defined using <code>gui.user.customfield.label.&lt;n&gt;</code> , which is defined in the system information definition file. Specify the value for N according to the content of this definition.

The meanings of the entries listed under "Required or Displayed" are as follows:

Yes: Entry is required, or element is output.

No: Can be omitted.

-: Specification is not permitted, or element is not output.

\*1: Modification is not possible.

Table 5.3 Correspondence Table for Role Modification

Role Identifier	Role before Modification ("+ Indicates a Dual Role)	Role before Modification	Specifiable Roles (Roles are Indicated Using Role Identifiers. When Specifying an XML File, Configure a Role Type for Each roleId Element.)
A	planEval_manager	Planners - Approver	B
B	planEval_user	Planners - Representative	A
C	operation_manager	Operators - Approver	D, G, C+G, D+G
D	operation_user	Operators - Representative	C, G, C+G, D+G
E	bizSysProv_manager	Platform Providers - Approver	F, A+E, B+F, C+E, D+F, C+E+G, D+F+G
F	bizSysProv_user	Platform Providers - Representative	E, A+E, B+F, C+E, D+F, C+E+G, D+F+G
G	operation_admin	Operators - Administrator	C, D, C+G, D+G
A+E	planEval_manager + bizSysProv_manager	Planners - Approver and Platform Providers - Approver	E, F, B+F, C+E, D+F, C+E+G, D+F+G

Role Identifier	Role before Modification ("+ Indicates a Dual Role)	Role before Modification	Specifiable Roles (Roles are Indicated Using Role Identifiers. When Specifying an XML File, Configure a Role Type for Each roleId Element.)
B+F	planEval_user + bizSysProv_user	Planners - Representative and Platform Providers - Representative	E, F, A+E C+E, D+F, C+E+G, D+F+G
C+E	operation_manager + bizSysProv_manager	Operators - Approver and Platform Providers - Approver	E, F, A+E, B+F, D+F, C+E+G, D+F+G
D+F	operation_user + bizSysProv_user	Operators - Representative and Platform Providers - Representative	E, F, A+E, B+F, C+E, C+E+G, D+F+G
C+G	operation_manager + operation_admin	Operators - Approver and Administrator	C, D, G, D+G
D+G	operation_user + operation_admin	Operators - Representative and Administrator	C, D, G, C+G
C+E+G	operation_manager + bizSysProv_manager + operation_admin	Operators - Approver, Platform Providers - Approver and Administrator	E, F, A+E, B+F, C+E, D+F, D+F+G
D+F+G	operation_user + bizSysProv_user + operation_admin	Operators - Representative and Platform Providers - Representative and Administrator	E, F, A+E, B+F, C+E, D+F, C+E+G

### 5.3.3 Contracts

Among the commands for contract operations, the following three subcommands use XML:

- fscsm\_contract create (Addition of contracts)
- fscsm\_contract modify (Modification of contracts)
- fscsm\_contract export (Export of contracts)

The format of the XML file corresponding to the command above is explained below.

The elements of the XML must be specified using the following hierarchical structure:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<contracts>
  <contract>
    <comment>Comment</comment>
    <contractId>Contract ID</contractId>
    <contractName>Contract Name</contractName>
    <contractNo>Contract Number</contractNo>
    <contractPeriod>Contract Period</contractPeriod>
    <contractorContact>Contractor Contact Information</contractorContact>
    <contractorName>Contractor</contractorName>
    <maintenanceId>Maintenance Service ID</maintenanceId>
    <vendorId>Vendor ID</vendorId>
    <vendorPortalId>Vendor Portal ID</vendorPortalId>
    <usePermission>License_Agreement</usePermission>
  </contract>
</contracts>
```

Element (Element Name or Element Name and Attribute)	Required or Displayed			Specifiable Values During Addition or Modification
	Addition	Modification	Output	
Description (comment)	No	No	Yes	Specify a character string containing 0 to 256 characters.
Contract ID (contractId)	Yes	Yes *1	Yes	Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores (" _"), hyphens ("-"), and periods (".").  The ID must not overlap with the IDs of other contracts. Specify a unique value.
Contract Name (contractName)	Yes	Yes	Yes	Specify a character string containing 1 to 64 characters.
Contract Number (contractNo)	No	No	Yes	Specify a character string containing 0 to 64 characters.
Contract Period (contractPeriod)	No	No	Yes	Specify a character string containing 0 to 256 characters.
Contractor Contact Information (contractorContact)	No	No	Yes	Specify a phone number or an email address.  Specify a character string containing 0 to 256 characters.
Contractor (contractorName)	No	No	Yes	Specify a character string containing 0 to 64 characters.
Maintenance Service ID (maintenanceId)	No	No	Yes	Specify a character string containing 0 to 64 characters.  However, this element cannot be specified when <i>type</i> is set to "ror", "physical", or "vmware" in the cloud vendor definition file.
Vendor ID (vendorId)	Yes	Yes *1	Yes	Specify the vendor ID contained in the cloud vendor information.
Vendor Portal ID (vendorPortalId)	No	No	Yes	Specify a character string containing 0 to 64 characters.  However, this element cannot be specified when <i>type</i> is set to "ror", "physical", or "vmware" in the cloud vendor definition file.
User Agreement (usePermission)	No	No *2	Yes	Specify a character string containing 0 to 1024 characters.

The meanings of the entries listed under "Required or Displayed" are as follows:

Yes: Entry is required, or element is output.

No: Can be omitted.

-.: Specification is not permitted, or element is not output.

\*1: Modification is not possible.

\*2: When the value is omitted during modification, the value from before modification is deleted.

### 5.3.4 Menu Information

Among the commands for menu information operations, the following three subcommands use XML:

- fscsm\_menu create (Addition of menu information)

- fscsm\_menu modify (Modification of menu information)
- fscsm\_menu export (Output of menu information)

The format of the XML file corresponding to the command above is explained below.

The elements of the XML must be specified using the following hierarchical structure:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<menus>
  <menu menuName="Menu Name" menuId="Menu ID">
    <contractId>Contract ID</contractId>
    <unitPrices type="basicCharge">
      <unitPrice>Basic Charge</unitPrice>
    </unitPrices>
    <unitPrices type="initialCost">
      <unitPrice>Initial Cost</unitPrice>
    </unitPrices>
    <commentSummary>Description Summary</commentSummary>
    <commentDetail>Description Details</commentDetail>
    <icon>Icon</icon>
    <basicMenus>
      <basicMenu menuId="Basic Menu ID">Basic Menu Information</basicMenu>
    </basicMenus>
    <extendedOptions>
      <extendedOption optionId="Operation Option ID">
        <unitPrices>
          <unitPrice>Unit Price of Operation Option</unitPrice>
        </unitPrices>
      </extendedOption>
    </extendedOptions>
    <serviceOptions>
      <serviceOption optionId="Configuration Option ID">
        <optionType>Configuration Option Type</optionType>
        <unitPrices>
          <unitPrice>Unit Price of Configuration Option</unitPrice>
        </unitPrices>
      </serviceOption>
    </serviceOptions>
    <vendorUniqueAttribute>Vendor Unique Parameter</vendorUniqueAttribute>
    <releaseStartDate>Release Start Date</releaseStartDate>
    <releaseEndDate>Release End Date</releaseEndDate>
    <status>Status</status>
    <authLevel>Approval Level</authLevel>
  </menu>
</menus>
```

Element (Element Name or Element Name and Attribute)	Required or Displayed			Specifiable Values During Addition or Modification
	Addition	Modification	Output	
Menu Name (menu menuName)	Yes	Yes	Yes	Specify a character string containing 1 to 64 characters.
Menu ID (menu menuId)	Yes	Yes *1	Yes	Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores ("_"), hyphens ("-"), and periods (".").  The ID must not overlap with the IDs of other menus. Specify a unique value.

Element (Element Name or Element Name and Attribute)	Required or Displayed			Specifiable Values During Addition or Modification	
	Addition	Modification	Output		
Contract ID (contractId)	Yes	Yes *1	Yes	Specify the contract ID of an existing user. Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores ("_"), hyphens ("-"), and periods ("."). Use contract operation commands to obtain the ID of an existing contract.	
Types of Charges for the Basic Menu (unitPrices type)	Yes	Yes	Yes	Specify one of the following:	
				Value	Description
				basicCharge	Basic charge
initialCost	Initial cost				
Basic Charge (unitPrice)	Yes	Yes	Yes	Specify a numerical value 0 or greater. Specifiable values will vary based on the unit of currency.* 2  For prices which have yet to be specified (are awaiting discussion), specify "-1" or "-1.0000".	
Initial Cost (unitPrice)	Yes	Yes	Yes	Specify a numerical value 0 or greater. Specifiable values will vary based on the unit of currency.* 2  For prices which have yet to be specified (are awaiting discussion), specify "-1" or "-1.0000".	
Description Summary (commentSummary)	No	No	Yes	Specify a character string containing 0 to 256 characters.	
Description Details (commentDetail)	No	No	Yes	Specify a character string containing 0 to 1024 characters.	
Icon (icon)	Yes	Yes	Yes	Specify the name of a file found in the following folder. %FSCSM_HOME%\conf\images\ A character string containing 1 to 256 characters can be specified.	
Basic Menu ID (basicMenu menuId)	Yes	Yes *1	Yes	For menu-related contract information, the vendor ID is specified. Specify the basic menu ID (basicMenu menuId) defined in the cloud vendor definition file corresponding to this vendor ID. (This attribute must be specified for all menus mentioned in the cloud vendor definition file.)  Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores ("_"), hyphens ("-"), and periods (".").	
Basic Menu Information (basicMenu)	Yes	Yes	Yes	Specify a character string containing 1 to 256 characters.	
Operation Option ID (extendedOption optionId)	No *3	No *4	Yes	Specify optionID of the desired operation option according to the operation option information in extraOption.xml.  Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores ("_"), hyphens ("-"), and periods (".").  When specifying an operation option ID, specify the unit price of the operation option ID at the same time.	

Element (Element Name or Element Name and Attribute)	Required or Displayed			Specifiable Values During Addition or Modification	
	Addition	Modification	Output		
Unit Price of Operation Option (unitPrice)	No	No *4	Yes	Specify a numerical value 0 or greater. Specifiable values will vary based on the unit of currency.* 4 For prices which have yet to be specified (are awaiting discussion), specify "-1" or "-1.0000".	
Configuration Option ID (serviceOption optionId)	No	No *4	Yes	For menu-related contract information, the vendor ID is specified. Specify optionId defined in the cloud vendor definition file corresponding to this vendor ID. Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores (" _"), hyphens ("-"), and periods (" ."). When specifying a configuration option ID, specify the unit price of the configuration option ID at the same time.	
Configuration Option Type (optionType)	No	No *1 *4	Yes	Specify one of the following character strings:	
				Value	Description
				vm	Instance type
				image	System disk image
				disk	Additional data disk
				snapshot	Snapshot
				slb	SLB
rdb	RDB				
Unit Price of Configuration Option (unitPrice)	No	No *4	Yes	Specify a numerical value 0 or greater. Specifiable values will vary based on the unit of currency.* 2 For prices which have yet to be specified (are awaiting discussion), specify "-1" or "-1.0000".	
Vendor Specific Information (vendorUniqueAttribute)	Yes	Yes	Yes	For menu-related contract information, the vendor ID is specified. Specify id of deployParameter defined in the cloud vendor definition file corresponding to this vendor ID. If no deployParameter is defined, please specify an empty element. Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores (" _"), hyphens ("-"), and periods (" .").	
Published From (releaseStartDate)	No	No	Yes	Specify a date and time when publishing of the menu will be started.  Specify the value in the format, YYYY-MM-DD hh:mm:ss. A value in the following range can be specified:  Between 2000-01-01 00:00:00 and 3000-12-31 23:59:59 When omitted, 2000-01-01 00:00:00 is specified. Specify a date before releaseEndDate. When making no changes to the Published Until date, specify the date which was specified before the modification operation.	
Published Until (releaseEndDate)	No	No	Yes	Specify a date and time when publishing of the menu will end.  Specify the value in the format, YYYY-MM-DD hh:mm:ss. A value in the following range can be specified:	

Element (Element Name or Element Name and Attribute)	Required or Displayed			Specifiable Values During Addition or Modification						
	Addition	Modification	Output							
				Between 2000-01-01 00:00:00 and 3000-12-31 23:59:59 When omitted, 12/31/3000 11:59:59 PM is specified. Specify a date after the releaseStartDate. When making no changes to the Published Until date, specify the date which was specified before the modification operation.						
Status (status)	Yes	Yes	Yes	Specify one of the following character strings: <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>published</td> <td>The menu is published.</td> </tr> <tr> <td>hidden</td> <td>The menu is hidden.</td> </tr> </tbody> </table>	Value	Description	published	The menu is published.	hidden	The menu is hidden.
Value	Description									
published	The menu is published.									
hidden	The menu is hidden.									
Approval Level (authLevel)	Yes	Yes	Yes	Specify an integer (1 or larger).  The maximum specifiable value is the value of org.depth.max defined in the system information file. For details, refer to " <a href="#">2.10.1 System Information</a> ".  Specify the hierarchical levels of the organization which must approve the platform or service. If 1 is specified, approvals are required from the top organization.  When only approval of the project is required, specify "prj-manager_approval".  When no approval is required, specify "no_approval".						

The meanings of the entries listed under "Required or Displayed" are as follows:

Yes: Entry is required, or element is output.

No: Can be omitted.

-: Specification is not permitted, or element is not output.

\*1: Modification is not possible.

\*2: Specifiable values will vary based on the unit of currency. Export the unit of currency using the [5.2.9 Unit of Currency Operation Commands](#), and confirm the value of currency.fraction.digits.

Value of "currency.fraction.digits"	Input Value of UnitPrice Changes
0	11 or less digits of integer and 4 or less digits after the decimal point
1	10 or less digits of integer and 5 or less digits after the decimal point
2(Default)	9 or less digits of integer and 6 or less digits after the decimal point
3	8 or less digits of integer and 7 or less digits after the decimal point

\*3: This element is not included if it is omitted during addition.

\*4: If this element is omitted during modification, the content of the element from before modification is deleted.

## 5.3.5 Platform Information

Among the commands for platform operations, the following three subcommands use XML:

- fscsm\_bizsystem create (Addition of platform information)
- fscsm\_bizsystem modify (Modification of platform information)

- fscsm\_bizsystem export (Export of platform information)

The format of the XML file corresponding to the command above is explained below.

The elements of the XML must be specified using the following hierarchical structure:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<bizSystems>
  <bizSystem>
    <bizSystemId>Platform ID</bizSystemId>
    <bizSystemCode>Platform Code</bizSystemCode>
    <bizSystemName>Platform Name</bizSystemName>
    <menu menuId="Menu ID">
      <extendedOptions>
        <extendedOption optionId="Operation Option ID"/>
      </extendedOptions>
    </menu>
    <bizSystemAdmin>Supervisor ID</bizSystemAdmin>
    <projectId>Project ID</projectId>
    <comment>Comment of the Platform Information</comment>
    <auth>Key pair name</auth>
    <createDate>Addition Date of the Platform</createDate>
  </bizSystem>
</bizSystems>
```

Element (Element Name or Element Name and Attribute)	Required or Displayed			Specifiable Values During Addition or Modification
	Addition	Modification	Output	
Platform ID (bizSystemId)	Yes	Yes *1	Yes	Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores ("_"), hyphens ("-"), and periods (".").  The ID must not overlap with the platform IDs of the information of other platforms. Specify a unique value.
Platform Code (bizSystemCode)	Yes	Yes	Yes	Specify a character string containing 1 to 64 characters.
Platform Name (bizSystemName)	Yes	Yes	Yes	Specify a character string containing 1 to 64 characters.
Menu ID (menu menuId)	Yes	Yes *1	Yes	Specify the ID of an already added menu information.  Obtain an existing menu ID by executing menu operation commands.
Operation Option ID (extendedOption optionId)	No	No *2	Yes	Specify optionId of the operation option specified in the menu specified for the platform.  Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores ("_"), hyphens ("-"), and periods (".").
Supervisor ID (bizSystemAdmin)	Yes	Yes	Yes	Specify the user ID of an existing user.  Obtain the user ID of an existing user by executing user operation commands.  The user must belong to the project specified by projectId, and have the role of platform provider approver or platform provider.



Element (Element Name or Element Name and Attribute)	Required or Displayed			Specifiable Values During Addition or Modification
	Addition	Modification	Output	
Project ID (projectId)	Yes	Yes	Yes	Specify the project ID of an added project.  Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores (" _"), hyphens ("-"), and periods (".").
Description of the Platform (comment)	No	No	Yes	Specify a character string containing 0 to 256 characters.
Key Pair Name (auth)	No	No	Yes	When a key pair created using the Cloud Management Portal exists, the key pair name is output. Key pair names cannot be added or modified using commands. Even when a value is specified, the value is not reflected and the original value is retained.
Add Platform Date (createDate)	Yes	No *1	Yes	Specify the value in the format of YYYY-MM-DD.

The meanings of the entries listed under "Required or Displayed" are as follows:

Yes: Entry is required, or element is output.

No: Omission is always or sometimes permitted.

-: Specification is not permitted, or element is not output.

\*1: Modification is not possible.

\*2: If this element is omitted during modification, the content of the element from before modification is deleted.

## 5.3.6 Service Information

Among the commands for outputting services, the following subcommand uses XML:

- fscsm\_service export (Export of service information)

The format of the XML file corresponding to this command is explained below.

The elements of the XML are output using the following hierarchical structure:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<services>
  <service>
    <serviceId>Service ID</serviceId>
    <serviceName>Service Name</serviceName>
    <bizSystemId>Platform ID</bizSystemId>
    <serviceType>Service Type</serviceType>
    <instances>
      <instance>
        <instanceManagementId>Managed Object ID</instanceManagementId>
        <instanceTypeId>Instance Type</instanceTypeId>
        <status>Status of Virtual Machine</status>
        <systemdiskImage>System Disk Image</systemdiskImage>
        <systemdiskSize>System Disk Size</systemdiskSize>
        <datadiskNum>Number of Additional Data Disk</datadiskNum>
        <datadiskType>Type of Additional Data Disk</datadiskType>
        <datadiskSize>Size of Additional Data Disk</datadiskSize>
      </instance>
    </instances>
  </service>
</services>
```

```

        <deployment type="ipv4">Information Attached to Deployment</deployment>
    </deployments>
    <snapshots>
        <snapshot>
            <snapshotManagementId>Snapshot ID on the Cloud Service</snapshotManagementId>
            <snapshotName>Display Name of Snapshot</snapshotName>
            <comment>Comment for the Snapshot</comment>
            <snapshotDate>Creation Date of Snapshot</snapshotDate>
        </snapshot>
    </snapshots>
</instance>
</instances>
</service>
</services>

```

Element (Element Name or Element Name and Attribute)	Required or Displayed	Output details
	Output	
Service ID (serviceId)	Yes	The service ID is output.
Service Name (serviceName)	Yes	The service name is output.
Platform ID (bizSystemId)	Yes	The ID of the platform where the service is added is output.
Service Type (serviceType)	Yes	One of the following is output: - VM (Virtual Machine) - SLB - RDB
Managed Object ID (instanceManagementId)	Yes	The internal ID for the virtual machine is output.
Instance Type (instanceTypeId)	Yes	optionId of serviceOption which are optionType="vm" of the menu linked with the platform is output.
Virtual Machine Status (status)	Yes	One of the following is output: - running (operating) - stopped (stopped) - configure (being configured)
System Disk Image (systemdiskImage)	Yes	optionId of serviceOption which are optionType="image" of the menu linked with the platform is output.
System Disk Size (systemdiskSize)	Yes	The system disk size defined in the vendor definition file is output.
Number of Additional Data Disks (datadiskNum)	Yes	The number of data disks being used is output.
Type of Additional Data Disks (datadiskType)	Yes	optionId of serviceOption which are optionType="disk" of the menu linked with the platform is output.
Size of Additional Data Disks (datadiskSize)	Yes	The sizes of the data disks being used are output.

Element (Element Name or Element Name and Attribute)	Required or Displayed	Output details
	Output	
Information Attached to Deployment (deployment)	Yes	When type="ipv4", the private IP address allocated to the virtual machine is displayed.
Snapshot ID on the Cloud Service (snapshotManagementId)	Yes	The internal ID for the snapshot is output.
Display Name of Snapshot (snapshotName)	Yes	The snapshot name is output.
Snapshot Comment (comment)	Yes	The comment for the snapshot is output.
Date Created of Snapshot (snapshotDate)	Yes	The date when the snapshot was collected is output in the following format:  YYYY-MM-DDThh:mm:ss  *T is a character used for separating date and time.

The meanings of the entries listed under "Required or Displayed" are as follows:

Yes: Entry is required, or element is output.

### 5.3.7 Request Information

Among the commands for request operations, the following command uses XML:

- fscsm\_request export (output of request information)

The format of the XML file corresponding to this command is explained below.

The elements of the XML are output using the following hierarchical structure:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<requests>
  <request>
    <requestId>Request ID</requestId>
    <requestName>Request Name</requestName>
    <requestType>Request Type</requestType>
    <applicantId>Applicant ID</applicantId>
    <requestStatus>Status</requestStatus>
    <requestProcesses>
      <requestProcess no="1">
        <requestRoute>role:bizSysProv_user</requestRoute>
        <passedDate>2016-03-02 14:32:33</passedDate>
        <passedRoute>user:userA</passedRoute>
      </requestProcess>
      <requestProcess no="2">
        <requestRoute>Information of Users Waiting for Request Operation</requestRoute>
        <passedDate>Date and Time of Request Operation</passedDate>
        <passedRoute>User Who Performed Request Operation</passedRoute>
        <comment>Comment Input When Request Operation Was Performed</comment>
      </requestProcess>
    </requestProcesses>
    <uibody>Details</uibody>
  </request>
</requests>
```

Element (Element Name or Element Name and Attribute)	Displayed	Output details	
	Output		
Request ID (requestId)	Yes	The request ID.	
Request Name (requestName)	Yes	<p>The request name is output as described below.</p> <p>"Request for &lt;Operation&gt; &lt;Resource&gt;"</p> <p>In &lt;Resource&gt;, the following values are entered:</p> <ul style="list-style-type: none"> <li>- Menu</li> <li>- Platform</li> <li>- Service</li> <li>- Organization</li> <li>- User</li> <li>- Project</li> </ul> <p>In &lt;Operation&gt;, the following values are entered:</p> <ul style="list-style-type: none"> <li>- Adding</li> <li>- Modifying</li> <li>- Deleting</li> </ul>	
Request Type (requestType)	Yes	One of the following is output:	
		Configuration Value	Requested Resources
		menus	Menus
		bizSystems	Platforms
		services	Services
		orgs	Organizations
		users	Users
		projects	Projects
Request ID (applicantId)	Yes	A user ID of the requester.	
Status (requestStatus)	Yes	The current status of the request.	
		One of the following is output:	
		Configuration Value	Description
		running	Waiting processing
		completed	Approved
		canceled	Cancelled
		rejected	Rejected
failed	Failed		
Request Operation Number (requestProcess no)	Yes	<p>As many requestProcess elements are output as the number of requests and approval types required for those requests.</p> <p>Request operation numbers are numbered and displayed in order according to the approval flow.</p> <p>"1" indicates a request and "2" and subsequent numbers indicate an approval.</p>	

Element (Element Name or Element Name and Attribute)	Displayed	Output details	
	Output		
Information of Users Waiting for Request Operation (requestRoute)	Yes	Outputs the information of users for whom request operations are performed.	
		<ul style="list-style-type: none"> <li>- When requestProcess no is "1", the role ID of the requester is output in the following format in requestRoute: role: &lt;Role ID of the Requester&gt;</li> <li>- When requestProcess no is "2" or later, the output format of requestRoute depends on the user type of the approving user. The format is as indicated in the following table.</li> </ul>	
		Displayed Value	Approval User
		role: <Role ID>	User belonging to planners or operators with the corresponding role.  * When a request is made targeting multiple roles, these roles are output, separated using commas.
		org:<Organization ID>	User with the approver role of the corresponding organization
project:<Project ID>	Project manager of the corresponding project		
Date and Time of Request Operation (passedDate)	Yes	The date and time when a request was submitted or an approval was granted is output in the following format. This element is not output before the request is approved, rejected, or canceled.  YYYY-MM-DD hh:mm:ss	
User Who Performed Request Operation (passedRoute)	Yes	The ID of the user who performed request or approval is output as shown below. This element is not output before the request is approved, rejected, or canceled.  user:<User ID>	
Comment Input When Performing Request Operation (comment)	Yes	A comment entered during approval by the approving user. This element is not output before the request is approved, rejected, or canceled.	
Request Details (uibody)	Yes	<p>The details of the request are output in XML format.</p> <p>The XML format differs depending on the resource or operation targeted in the request, and it is same as the XML format used for the operation target resource for each resource.</p> <p>However, angle brackets in XML tags are output using the following escape characters:</p> <p>"&lt;": "&amp;lt;"</p> <p>"&gt;": "&amp;gt;"</p> <p>For details on the format of the XML, refer to the corresponding information in <a href="#">"5.3 Format of XML Files Used in Commands"</a>.</p>	

## 5.3.8 Project Information

Among the commands for outputting projects, the following command uses XML:

- fscsm\_project export (output of project information)

The format of the XML file corresponding to this command is explained below.

The elements of the XML are output using the following hierarchical structure:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<projects>
  <project>
    <projectId>Project ID</projectId>
    <projectName>Project Name</projectName>
    <projectAdminUserId>User ID of the Project Supervisor</projectAdminUserId>
    <accountingCode>Accounting Code</accountingCode>
    <mailAddress>Email Address</mailAddress>
    <members>
      <member userId="ID1 of the Users Who Use the Project" projectRoleId="User Role ID1"/>
      <member userId="ID2 of the Users Who Use the Project" projectRoleId="User Role ID2"/>
    </members>
    <quotas>
      <quota type="use">Whether to Configure a Limit</quota>
      <quota type="accounting">Limit</quota>
      <quota type="percentage">Percentage of Usage Charges for Which a Warning Email is Sent</
quota>
    </quotas>
    <usageCharge>Usage Charge in the Current Month</usageCharge>
    <comment>Project Comment</comment>
    <customFields>
      <customField no="1">Project Custom Field 1</customField>
      <customField no="2">Project Custom Field 2</customField>
      <customField no="3">Project Custom Field 3</customField>
      <customField no="4">Project Custom Field 4</customField>
      <customField no="5">Project Custom Field 5</customField>
    </customFields>
    <acntCalcStartDate>YYYY-MM-DD</acntCalcStartDate>
    <acntCalcEndDate>YYYY-MM-DD</acntCalcEndDate>
  </project>
</projects>
```

Element (Element Name or Element Name and Attribute)	Required or Displayed	Output details
	Output	
Project ID (projectId)	Yes	A project ID.
Project Name (projectName)	Yes	A project name.
User ID of the Project Supervisor (projectAdminUserId)	Yes	A user ID for this product of a user who is a project supervisor.
Accounting Code (accountingCode)	Yes	An accounting code configured in the project.
Email Address (mailAddress)	Yes	An email address configured in the project.
IDs of Users Who Use the Project (member userId)	Yes	A user ID in this product who has been granted usage authorities.

Element (Element Name or Element Name and Attribute)	Required or Displayed	Output details	
	Output		
		The same number of user IDs are output as the number of project members.	
User Role ID (member projectRoleId)	Yes	The role ID in the project possessed by a user who is a member using the project.	
		Value	Description
		project_manager	Project manager
		project_user	Project user
Whether to Configure a Limit (quota type=use)	Yes	The setting of a project usage limit. One of the following is output:	
		Configuration Value	Description
		true	Enabled
		false	Disabled
Limit (quota type=accounting)	Yes	The threshold of usage charges available for use in the project.	
Percentage of usage charges for which a warning email is sent (quota type=percentage)	Yes	The percentage of usage charges for the usage charge threshold of the project. When the charges used have exceeded the configured value, a warning email is sent.	
Usage Charge of the Present Month	Yes	The usage charge of the present month.	
Description of the Project (comment)	Yes	The description of the project is output.	
Project Custom Field N (customField no="N")	Yes	The values for the custom fields defined in the definition file of this product. * 1	
Start date and time of the accounting period of project usage charges (acctCalcStartDate)	Yes *2	The start date and time of the accounting period of project usage charges.	
		The date created of a project or the date modified of an accounting code is displayed in the format "YYYY-MM-DD hh:mm:ss".	
End date and time of the accounting period of project usage charges (acctCalcEndDate)	Yes *2	The end date and time of the accounting period of project usage charges.	
		The date deleted of a project or the date modified of an accounting code is displayed in the format "YYYY-MM-DD hh:mm:ss". When neither deletion nor accounting code modification is performed, an empty character string is output.	

The meanings of the entries listed under "Required or Displayed" are as follows:

Yes: Entry is required, or element is output.

No: Can be omitted.

-: Specification is not possible, or the element is not output.

\*1: The number in gui.project.customfield.label.<n> in the definition file of the system information is displayed on the GUI.

\*2: This is displayed only when the -history option is specified.

## 5.3.9 Accounting Code Information

Among the commands for accounting code information operations, the following three subcommands use XML:

- fscsm\_accountingcode create (Addition of accounting codes)
- fscsm\_accountingcode modify (Modification of accounting codes)
- fscsm\_accountingcode export (Output of accounting code information)

The format of the XML file corresponding to the command above is explained below.

The elements of the XML must be specified using the following hierarchical structure:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<accountingCodes>
  <accountingCode>
    <code>Accounting Code 01</code>
    <orgId>Organization ID of Organization 01</orgId>
    <comment>Comment1</comment>
  </accountingCode>
  <accountingCode>
    <code>Accounting Code 02</code>
    <orgId>Organization ID of Organization 01</orgId>
    <comment>Comment2</comment>
  </accountingCode>
  <accountingCode>
    <code>Accounting Code 03</code>
    <orgId>Organization ID of Organization 01</orgId>
    <comment>Comment3</comment>
  </accountingCode>
  <accountingCode>
    <code>Accounting Code 04</code>
    <orgId>Organization ID of Organization 02</orgId>
    <comment>Comment4</comment>
  </accountingCode>
</accountingCodes>
```

Element (Element Name or Element Name and Attribute)	Required or Displayed			Specifiable Values During Addition or Modification
	Addition	Modification	Output	
Accounting Code (code)	Yes	Yes *1	Yes	Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 64 alphanumeric characters, underscores ("_"), hyphens ("-"), colons (":"), plus signs ("+"), equal signs ("="), slashes ("/"), commas (","), and periods (".").  This code cannot overlap with another accounting code. Specify a unique value.
Organization ID (orgId)	No	No	Yes	Specify an already added organization ID for which the accounting code is configured.  - Addition  When adding an accounting code which is not configured for an organization, specify an empty character string as shown below.  <orgId></orgId>  - Modification



Element (Element Name or Element Name and Attribute)	Required or Displayed			Specifiable Values During Addition or Modification
	Addition	Modification	Output	
				<p>When modifying an accounting code with an organization ID already configured to one that is not configured for an organization, specify an empty character string as shown below.</p> <pre>&lt;orgId&gt;&lt;/orgId&gt;</pre> <p>When this element is omitted, the organization ID which is already configured is not modified.</p>
Comment (comment)	No	No	Yes	<p>Specify a character string containing 0 to 256 characters.</p> <p>When this element is omitted when performing a modification operation, the already configured comment is not modified.</p>

The meanings of the entries listed under "Required or Displayed" are as follows:

Yes: Entry is required, or element is output.

No: Can be omitted.

-.: Specification is not possible, or the element is not output.

\*1: Modification is not possible.

## 5.3.10 Cloud Vendor Information

Among the commands for cloud vendor operations, the following command uses XML:

- fscsm\_vendorcheck (Checking of cloud vendor definition files)

The format of the XML file corresponding to this command is explained below.

The elements of the XML must be specified using the following hierarchical structure:


```
<?xml version="1.0" encoding="UTF-8"?>
<vendor vendorId="Vendor ID" type="Vendor Type">
  <vendorName>Vendor Name</vendorName>
  <!-- Basic Menu -->
  <basicMenus>
    <basicMenu menuId="Basic Menu ID">
      <name>Basic Menu Name</name>
    </basicMenu>
  </basicMenus>
  <!-- instanceOptions -->
  <instanceOptions>
    <serviceOption optionId="Option ID">
      <name>Display Name</name>
      <parameters>
        <parameter key="Key">Parameter Information</parameter>
      </parameters>
      <defaultPrice>Unit Price</defaultPrice>
    </serviceOption>
  </instanceOptions>
  <!-- systemDiskImageOptions -->
  <systemDiskImageOptions>
    <serviceOption optionId="Option ID">
      <name>Display Name</name>
      <parameters>
        <parameter key="Key">Parameter Information</parameter>
      </parameters>
      <defaultPrice>Unit Price</defaultPrice>
    </serviceOption>
  </systemDiskImageOptions>
</vendor>
```


```


        <diskSize>Disk Size</diskSize>
    </serviceOption>
</systemDiskImageOptions>
<!-- dataDiskImageOptions -->
<dataDiskImageOptions>
    <serviceOption optionId="Option ID">
        <name>Display Name</name>
        <parameters>
            <parameter key="Key">Parameter Information</parameter>
        </parameters>
        <defaultPrice>Unit Price</defaultPrice>
        <diskSize>Disk Size</diskSize>
    </serviceOption>
</dataDiskImageOptions>
<!-- othersOptions -->
<othersOptions>
    <serviceOption optionId="Option ID">
        <name>Display Name</name>
    </serviceOption>
</othersOptions>
<!-- deployParameters -->
<deployParameters>
    <deployParameter id="Unique Parameter ID">
        <name>Display Name</name>
        <parameters>
            <parameter key="Key">Parameter Information</parameter>
        </parameters>
    </deployParameter>
</deployParameters>
</vendor>

```

Element (Element Name or Element Name and Attribute)		Required or Displayed	Output details	
		When Checking		
Vendor ID (vendor vendorId)		Yes	The vendor ID must not overlap with the IDs of other vendor information. Specify a unique value.  Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores (" _"), hyphens ("-"), and periods (".").	
Vendor Type (vendor type)		Yes	Specify a cloud vendor type.	
			Specify one of the following:	
			Value	Description
			aws	AWS
			azure	Azure
			ror	ROR
			k5	K5
vmware	VMware			
physical	Physical Servers			
Vendor Name (vendorName)		Yes	Specify a character string containing 1 to 64 characters.	
Basic Menu (basicMenus)	Basic Menu ID (basicMenu menuId)	No  *1	Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores (" _"), hyphens ("-"), and periods (".").	

Element (Element Name or Element Name and Attribute)		Required or Displayed	Output details
		When Checking	
	Display Name (name)		<p>The basic menu ID must not overlap with the basic menu IDs of other basic menus. Specify a unique value.</p> <p>The name of the basic menu displayed when creating a menu using the Cloud Management Portal.</p> <p>Specify a character string containing 1 to 64 characters, excluding control characters.</p>
Configuration Option (Virtual machine information) (instanceOptions)	Option ID (serviceOption optionId)	No *2	<p>The option ID must not overlap with the option IDs of other configuration options (virtual machine information). Specify a unique value.</p> <p>Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores ("_"), hyphens ("-"), and periods (".").</p>
	Display Name (name)		<p>The display name of the configuration options for virtual machines.</p> <p>Specify a character string containing 1 to 64 characters.</p>
	Parameter Information (parameter)		<p>The parameter used as a configuration option by Cloud Services Management itself, cloud services, and cloud management software when this option is selected during the addition of services.</p> <p>Specify an appropriate parameter key for the vendor type. For specifiable values, refer to "<a href="#">Optional parameter values</a>".</p>
	Unit Price (defaultPrice)		<p>The unit price displayed as the default value when this option is selected when adding a menu using the Cloud Management Portal.</p> <p>Specify zero or an integer up to nine digits in length and a decimal up to six digits in length.</p> <p>For a currency which has a subunit, the subunit part is configured as an integer.</p> <p> <b>Example</b></p> <p>.....</p> <p>When the currency is USD (subunit 2)</p> <ul style="list-style-type: none"> <li>- Integer: 9 digits</li> <li>- Decimal: 6 digits</li> </ul> <p>.....</p>
Configuration Option (System disk information) (systemDiskImageOptions)	Option ID (serviceOption optionId)	No *3	<p>The option ID must not overlap with the option IDs of other configuration options (system disk information). Specify a unique value.</p> <p>Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores ("_"), hyphens ("-"), and periods (".").</p>
	Display Name (name)		<p>The display name of the configuration options (system disk) for virtual machines.</p> <p>Specify a character string containing 1 to 64 characters, excluding control characters.</p>
	Parameter Information (parameter)		<p>The parameter used as a configuration option by Cloud Services Management itself, cloud services, and cloud management software when this option is selected during the addition of services.</p>

Element (Element Name or Element Name and Attribute)		Required or Displayed	Output details
		When Checking	
	Unit Price (defaultPrice)		<p>Specify an appropriate parameter key for the vendor type. For specifiable values, refer to "<a href="#">Optional parameter values</a>".</p> <p>The unit price displayed as the default value when this option is selected when adding a menu using the Cloud Management Portal.</p> <p>Specify zero or an integer up to nine digits in length and a decimal up to six digits in length.</p> <p>For a currency which has a subunit, the subunit part is configured as an integer.</p> <p> <b>Example</b></p> <p>.....</p> <p>When the currency is USD (subunit 2)</p> <ul style="list-style-type: none"> <li>- Integer: 9 digits</li> <li>- Decimal: 6 digits</li> </ul> <p>.....</p>
	Disk Size (diskSize)		<p>The value used by Cloud Services Management as the disk size (GB) of the system disk on a virtual machine when this option is selected during the addition of menus.</p> <p>This value is not reflected on the virtual machines which are deployed by cloud service and cloud management software. For the virtual machines to be deployed by cloud service and cloud management software, check the disk size (GB) of the system disk and specify that size as the value for this option.</p> <p>Specify an integer between 0 and 99999999.</p>
Configuration Option (Additional data disk) (dataDiskImageOptions)	Option ID (serviceOption optionId)	No *4	<p>The option ID must not overlap with the option IDs of other configuration options (additional data disk information). Specify a unique value.</p> <p>Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores ("_"), hyphens ("-"), and periods (".").</p>
	Display Name (name)		<p>The display name of the configuration options (additional data disk) for virtual machines.</p> <p>Specify a character string containing 1 to 64 characters, excluding control characters.</p>
	Parameter Information (parameter)		<p>The parameter used as a configuration option by Cloud Services Management itself, cloud services, and cloud management software when this option is selected during the addition of services.</p> <p>Specify an appropriate parameter key for the vendor type. For specifiable values, refer to "<a href="#">Optional parameter values</a>".</p>
	Unit Price (defaultPrice)		<p>The unit price displayed as the default value when this option is selected when adding a menu using the Cloud Management Portal.</p> <p>Specify zero or an integer up to nine digits in length and a decimal up to six digits in length.</p> <p>For a currency which has a subunit, the subunit part is configured as an integer.</p>

Element (Element Name or Element Name and Attribute)		Required or Displayed	Output details								
		When Checking									
			 <b>Example</b> ..... When the currency is USD (subunit 2) <ul style="list-style-type: none"> <li>- Integer: 9 digits</li> <li>- Decimal: 6 digits</li> </ul> .....								
	Disk Size (diskSize)		The value used by Cloud Services Management itself, cloud services, and cloud management software as the disk size (GB) of the system disk on a virtual machine when this option is selected during the addition of menus.  Specify an integer between 0 and 99999999.								
Configuration Option (Other option information) (othersOptions)	Option ID (serviceOption optionId)	No  *5	This element can be specified only when vendor type is aws or k5. For k5, only "snapshot" can be specified. Specify one of the following: <table border="1" data-bbox="858 925 1533 1104"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>slb</td> <td>When using SLB</td> </tr> <tr> <td>rdb</td> <td>When using RDB</td> </tr> <tr> <td>snapshot</td> <td>When using snapshots</td> </tr> </tbody> </table>	Value	Description	slb	When using SLB	rdb	When using RDB	snapshot	When using snapshots
	Value	Description									
slb	When using SLB										
rdb	When using RDB										
snapshot	When using snapshots										
	Display Name (name)		The display name of the configuration options (other) for virtual machines.  Specify a character string containing 1 to 64 characters, excluding control characters.								
Unique Parameter Information (deployParameters)	Unique Parameter ID (deployParameter id)	No  *6	The unique parameter ID must not overlap with the IDs of other unique parameter information. Specify a unique value.  Specify a character string beginning with a lower-case alphanumeric character and containing 1 to 32 alphanumeric characters, underscores ("_"), hyphens ("-"), and periods (".").								
	Display Name (name)		The display name for the individual management of specific parameter information to be passed to cloud service and cloud management software.  Specify a character string containing 1 to 64 characters, excluding control characters.								
	Parameter Information (parameter)		The parameter used by Cloud Services Management itself, cloud services, and cloud management software when performing deployment when this option is selected during the addition of services.  Specify an appropriate parameter key for the vendor type. For specifiable values, refer to " <a href="#">Optional parameter values</a> ".								

The meanings of the entries listed under "Required or Displayed" are as follows:

Yes: Entry is required, or element is output.

No: Can be omitted.

-: Specification is not possible, or the element is not output.

\*1: The basicMenu element in the basicMenus element can be omitted. When the basicMenu element is specified, menuID and name must be specified.

\*2: The serviceOption element in the instanceOptions element can be omitted. When the serviceOption element is specified, optionId, name, parameter, and defaultPrice must be specified.

\*3: The serviceOption element in the systemDiskImageOptions element can be omitted. When the serviceOption element is specified, optionId, name, parameter, defaultPrice, and diskSize must be specified.

\*4: The serviceOption element in the dataDiskImageOptions element can be omitted. When the serviceOption element is specified, optionId, name, parameter, defaultPrice, and diskSize must be specified.

\*5: The serviceOption element in the othersOptions element can be omitted. When the serviceOption element is specified, optionId and name must be specified.

\*6: The deployParameter element in the deployParameters element can be omitted. When the deployParameter element is specified, id and name must be specified.

Configuration options mentioned in \*1 through \*6 and unique parameter information cannot be specified when vendor type is "physical".

# Chapter 6 Troubleshooting

This chapter explains the troubles that may occur during the operation of Cloud Services Management or the control processes targeting cloud environments, and the corrective actions to take.

## 6.1 Investigating and Responding to Trouble

If an error occurs in the control processes targeting cloud environments after the approval of a request, an email corresponding to the error event is sent to the system administrator. Investigate the cause of the error according to the content of the email and reexamine the settings and the operation environment.

- Processing Errors Inside of Coordination Adapters
  - The email is sent to the address specified during the setup of the coordination adapter. For details, refer to the explanation of APP\_ADMIN\_MAIL\_ADDRESS in "Setup of the Management Server and the Coordination Adapter Platform (APP)" in the "FUJITSU Software Cloud Services Management Installation Guide".
  - The request status changes to approved.

### 6.1.1 Processing Errors Inside of Coordination Adapters

When a processing error occurs or is detected inside a coordination adapter, a processing error email is sent.

Investigate the cause of the error using the following procedure:

1. Confirm the subscription ID of the processing error email.

The subscription ID is included in the title (subject) of the processing error email.

2. View access and error logs.

In the access and error logs, search for the subscription ID confirmed in step 1.

3. Investigate the cause of the error and take corrective action.

From the logs searched in step 2, investigate the cause of the error and take appropriate corrective action.

#### Email Subject

```
<Header> <Subscription ID> <Error Message>
```

In the header, a value corresponding to the operation type is configured.

In Subscription ID, one of the following value formats is configured.

Virtual Machine Operation Type	Format
Virtual machines	<Service ID> <Cloud Type> <Date and Time>
Creation of Snapshots	<Service ID> <Cloud Type> <Date and Time>
Restoration of Snapshots, Deletion of Snapshots	<Service ID> <Cloud Type> <Snapshot ID> <Date and Time>
Key Pairs	<Platform ID> <Cloud Type> <Date and Time>

In the individual components of the format for the Subscription ID, the following values are configured:

- Service ID: The service ID entered in the [Add Service] window
- Platform ID: The platform ID entered in the [Add Platform] window

- Cloud Type: A cloud type is displayed in the format, ess.xxxxxx.  
In xxxxxx, aws, k5, ror, azure, or vmware is configured.
- Date and Time: The date and time when the error occurred is displayed in the format, yyymmddhhmmssSSS.

For the error message, an overview of the error is configured.

## Email Body

The body of the email contains the error message and detailed content. The email is sent using the following format:

```
Subject:
Provisioning process for subscription 'fjhvmulaw ess.aws 20160229172725787'aborted

-----
Dear user,

The provisioning process for subscription 'fjhvmulaw ess.aws 20160229172725787' for customer '!mgr'
has been aborted (instance: 'aws-xxxxxxx-yyy-zzzzzzzz-aaaaaaaaaa'),

Reported problem: AWS returned the following error: Unable to execute
HTTP request: xxx.xx-xxxxxxxx-1.xxxxx.com
```

### Information

The URL of the Browser Interface for Management of the Coordination Adapter Platform is contained in the email body.

For details on the Browser Interface for Management of the Coordination Adapter Platform, refer to "[Appendix B Operation of the Browser Interface for Coordination Adapter Base Management](#)".

## Access Logs

The access logs of all coordination adapters are output to the following file:

```
%FSCSM_HOME%\SWCTMG\glassfish3\glassfish\domains\app-domain\logs\app-core.log
```

### Information

When the size of an access log exceeds 10 MB, old information is saved as a file with a serial number appended to the file name.

```
app-core.log.1
```

A log in the following format is output:

```
[02/08 10:28:28] [http-thread-pool-6081(5)] INFO Create instance for organization for subscription
ServiceName002_userId_20160208102820.001.
```

## Error Logs

Detailed information of the content that is output at the log levels "WARN" and "ERROR" in an access log is output to another file as an error log.

Error logs of coordination adapters are output to the following location.

```
%FSCSM_HOME%\SWCTMG\glassfish3\glassfish\domains\app-domain\logs
```

Individual log files are created for each coordination adapter.



- AWS

```
app-aws.log
```

- Azure

```
app-azure.log
```

- ROR

```
app-ror.log
```

- K5

```
app-k5.log
```

- VMware

```
app-vmware.log
```

## Information

When the size of an error log exceeds 10 MB, old information is saved as a file with a serial number appended to the file name.

```
app-ror.log.1
```

A log in the following format is output:

```
[12/08 16:59:50] [__ejb-thread-pool15] ERROR Error while checking instance status  
org.oscm.app.v1_0.exceptions.AuthenticationException: User does not belong to the correct  
organization.  
at  
rg.oscm.app.v1_0.service.APPAuthenticationServiceBean.authenticateUser(APPAuthenticationServiceBean.  
java:  
196)  
at  
org.oscm.app.v1_0.service.APPAuthenticationServiceBean.getAuthenticatedTMForController(APPAuthentica  
tion  
ServiceBean.java:116)  
at  
org.oscm.app.v1_0.service.__EJB31_Generated__APPAuthenticationServiceBean__Intf____Bean__.getAuthent  
icated  
TMForController(Unknown Source)  
at org.oscm.app.v1_0.service.APPlatformServiceBean.authenticate(APPlatformServiceBean.java:149)  
at org.oscm.app.v1_0.intf.__APPlatformService_Remote_DynamicStub.authenticate(org/oscm/app/v1_0/  
intf/__APPlat  
formService_Remote_DynamicStub.java)  
at org.oscm.app.v1_0.intf.__APPlatformService_Wrapper.authenticate(org/oscm/app/v1_0/intf/  
__APPlatformService_  
Wrapper.java)
```

The following are possible causes of the error:

- Issues in the management server settings
  - The required parameters are not specified in the cloud vendor information.
  - Inappropriate values of parameters are specified in the cloud vendor information.
- Problems in the communication between the coordination adapter and cloud
  - During setup of the coordination adapter, the information for connecting to the coordinating cloud was set incorrectly.
  - During setup of the coordination adapter, the information for connecting to an external proxy was set incorrectly.

- Error occurring on the cloud side
  - A resource (server name, etc.) that must be unique is already being used.
  - The number of resources that can be created on the cloud has reached its upper limit.

### 6.1.1.1 Errors Related to Environment Settings for Coordination Adapters

#### For AWS

- When a proxy server for external connections is not correctly configured to connect to a cloud

```
Unable to execute HTTP request: <HTTP_server_name>
```

Confirm the following:

- The connection information of the proxy server for external connections is configured correctly.
- The proxy server is up and running.

#### For Azure

- When no subscription files are added

```
An error has occurred. detail=Subscription file is not found. path=<Folder Name>
```

It is necessary to add a subscription file for connecting to Azure.

For the procedure for adding subscription files, refer to "Configuring Azure Connection Information (Only when Performing Azure Coordination)" in the "FUJITSU Software Cloud Services Management Installation Guide".

- When a proxy server for external connections is not correctly configured to connect to a cloud

```
An error has occurred. detail=<HTTP_server_name>
```

Confirm the following:

- The connection information of the proxy server for external connections is configured correctly.
- The proxy server is up and running.

#### For ROR

- When the parameters of a coordination adapter for a cloud are not correctly configured

```
Authorization failed for the user[admin_].
```

Check the parameters that were specified using the setup command of the coordination adapter.

- When configurations to connect to a cloud have not been performed correctly

```
Command failed: ListLPlatform Message: Stream closed
```

Confirm the following:

- The connection information of the proxy server for external connections is configured correctly.
- The proxy server is up and running.
- The host name of and port number for the cloud specified using the setup command of the coordination adapter are correctly configured.

#### For K5

- When the parameters of a coordination adapter for a cloud are not correctly configured

```
The request you have made requires authentication.
```

Check the parameters that were specified using the setup command of the coordination adapter.

- When a proxy server for external connections is not correctly configured to connect to a cloud

```
Command failed: POST https://<K5_server_name>/v3/auth/tokens Message: <HTTP_server_name>
```

Confirm the following:

- The connection information of the proxy server for external connections is configured correctly.
- The proxy server is up and running.
- The user ID and password of the cloud specified using the setup command of the coordination adapter are correctly configured.

## For VMware

- When the parameters of a coordination adapter for a cloud are not correctly configured

```
VMwareClient connect Failed to login. URL: <URL_to_be_connected> UserId: <User ID>
```

Check the parameters that were specified using the setup command of the coordination adapter.

- When a proxy server for external connections is not correctly configured to connect to a cloud

```
Unable to tunnel through proxy. Proxy returns "HTTP/1.1 407 Proxy Authentication Required"
```

Confirm the following:

- The connection information of the proxy server for external connections is configured correctly.
- The proxy server is up and running.
- The user ID and password of the cloud specified using the setup command of the coordination adapter are correctly configured.

## Common

- When a coordination adapter for the cloud has not been set up

```
The controller configuration is missing the following parameter(s): <Parameter Name>
```

Confirm that the coordination adapter and certificates have been correctly set up.

- When email transmission fails because connection to the SMTP server cannot be made

```
Failure during error mail notification for service instance '<Image ID>' with message 'Mail could not be sent. [Cause: Unknown SMTP host: <SMTP Server Name>]'
```

Confirm the following:

- The SMTP server settings specified using the setup command of the coordination adapter platform (APP) and the management server are correct.
- The SMTP server is running.
- When login to a virtual machine cannot be performed

The correct password may have not been sent because the "OS\_TYPE" of the cloud vendor definition file and the OS type of the image do not match.

In this case, no logs are output.

When the OS types do not match, recreate the virtual machine.

## 6.1.1.2 Errors Related to Environment Settings for the Management Server

## For K5

- When the maximum number of virtual machines available for use in a K5 project is exceeded

```
Max servers have been deployed to all of k5 projects.
```

Delete unnecessary virtual machines. Alternatively, increase the number of virtual machines available for use on the cloud and then modify the value of the "PROJECT\_MAX\_VM" parameter of the K5 coordination adapter.

## Common

- When the required parameters are not specified in the cloud vendor definition file

```
The '<Parameter Name>' is mandatory.
```

Check the configured content in the cloud vendor definition file. For details on required parameters, refer to "[2.10.2 Cloud Vendor Information](#)".

- When an invalid value is specified for a parameter in the cloud vendor definition file

```
'<Parameter Name> <Parameter Value>' does not exist
```

A value that does not exist on the cloud may be specified in the cloud vendor definition file. Check the information on the cloud and correct the parameter in the cloud vendor definition file.

## 6.1.1.3 Errors on the Cloud

### For AWS

- When resources on a cloud are insufficient

```
The account already has the maximum number of pipelines allowed: account=<accountId>, maximum number of pipelines=<maximum>
```

This problem occurs when there are insufficient resources on a cloud when creating a virtual machine.

Check the amount of free space of the resources on the cloud. When there are insufficient resources, delete unnecessary resources (such as virtual machines that have already been created) and create a virtual machine again.

- When the number of additional block devices that can be specified on a cloud is exceeded

```
The number of block device is larger than the number of additional block device name.
```

Check the range of the parameter specifiable on the cloud and then specify the parameter value.

In addition, when an error occurs during the reconfiguration of virtual machines, additional block devices that are not attached to virtual machines may remain on the cloud. Delete the disks that are not attached using the management console of the cloud and then perform reconfiguration again.

- When the creation of a snapshot is attempted while a virtual machine is running

```
EC2 instance is not in the stopped state.
```

Before performing the reconfiguration of virtual machines and the creation and restoration of snapshots, virtual machines must be stopped in advance.

Stop the virtual machine and then create the snapshot.

### For Azure

- When the number of additional block devices that can be specified on a cloud is exceeded

```
Too many data disks specified for virtual machine '<Virtual Machine Name>'. The maximum number of data disks currently permitted is '<Upper Limit>'. The current number of data disks is '<Parameter Value>'. The operation is attempting to add 1 additional data disks.
```

Check the range of the parameter specifiable on the cloud and then specify the parameter value.

- When the maximum size of additional block devices that can be specified on a cloud is exceeded

```
The specified disk size value of '<Parameter Value>' GB is invalid. Disk size must be between '<Specified Range>'.
```

Check the range of the parameter specifiable on the cloud and then specify the parameter value.

In addition, when an error occurs during the reconfiguration of virtual machines, additional block devices that are not attached to virtual machines may remain on the cloud. Delete the disks that are not attached using the management console of the cloud and then perform reconfiguration again.

## For ROR

- When resources on a cloud are insufficient

```
Selectable VM host not found. (not enough CPU or memory available)
```

This problem occurs when there are insufficient resources on a cloud when creating a virtual machine.

Check the amount of free space of the resources on the cloud. When there are insufficient resources, delete unnecessary resources (such as virtual machines that have already been created) and create a virtual machine again.

- When the number of additional block devices that can be specified on a cloud is exceeded

```
Command failed: CreateDisk Response Code: <HTTP Status Code> Status: VALIDATION_ERROR Message: '<Disk Name>' The vdisks' number can't exceed the max number of disks according to the image Id assigned.
```

Check the range of the parameter specifiable on the cloud and then specify the parameter value.

In addition, when an error occurs during the reconfiguration of virtual machines, additional block devices that are not attached to virtual machines may remain on the cloud. Delete the disks that are not attached using the management console of the cloud and then perform reconfiguration again.

- When two or more virtual machines are defined in an L-Platform template

```
Specified virtual system template ID '<Template ID>' has '<Number of Virtual Machines>' servers. It must have only one.
```

Define only one virtual machine in an L-Platform template.

## For K5

- When resources on a cloud are insufficient

```
Virtual server '<Virtual Machine Name>' is in error state.
```

This problem occurs when there are insufficient resources on a cloud when creating a virtual machine.

Check the amount of free space of the resources on the cloud. When there are insufficient resources, delete unnecessary resources (such as virtual machines that have already been created) and create a virtual machine again.

- When the number of additional block devices that can be specified on a cloud is exceeded

```
communication error. (jp-east-1b :status=<Error Code> :{"overLimit": {"message": "VolumeLimitExceeded: Maximum number of volumes allowed (50) exceeded", "code": <Error Code>}})
```

Check the range of the parameter specifiable on the cloud and then specify the parameter value.

In addition, when an error occurs during the reconfiguration of virtual machines, additional block devices that are not attached to virtual machines may remain on the cloud. Delete the disks that are not attached using the management console of the cloud and then perform reconfiguration again.

- When the creation of a snapshot is attempted while a virtual machine is running

```
In server state ACTIVE, cannot create snapshot.
```

Before performing the reconfiguration of virtual machines and the creation and restoration of snapshots, virtual machines must be stopped in advance.

Stop the virtual machine and then create the snapshot.

- When there are no K5 projects on a cloud

```
The request you have made requires authentication.
```

Create a virtual machine specifying a valid K5 project. Or create a K5 project on the cloud.

## For VMware

- When resources on a cloud are insufficient

```
Actions inspectTaskResult File <unspecified filename> is larger than the maximum size supported by datastore '<unspecified datastore>'
```

This problem occurs when there are insufficient resources on a cloud when creating a virtual machine.

Check the amount of free space of the resources on the cloud. When there are insufficient resources, delete unnecessary resources (such as virtual machines that have already been created) and create a virtual machine again.

- When the number of additional block devices that can be specified on a cloud is exceeded

```
A specified parameter was not correct: unitNumber
```

Check the range of the parameter specifiable on the cloud and then specify the parameter value.

In addition, when an error occurs during the reconfiguration of virtual machines, additional block devices that are not attached to virtual machines may remain on the cloud. Delete the disks that are not attached using the management console of the cloud and then perform reconfiguration again.

- When no resource pools have been created on a cloud

```
Resourcepool not found.
```

Check whether resource pools have been created on the cloud. If no resource pools have been created, create one.

## Common

- When creation of a virtual machine does not complete

This refers to a case where the status of a virtual machine does not change from "deploying". In this case, confirm the following:

- Check the log for the coordination adapter. If an error message is displayed, take corrective action according to the error content (the log for the management server is not output).
- Check the status of the virtual machine from the portal of the cloud. If the process for creation of the virtual machine does not complete, contact the support center or take corrective action for the corresponding cloud.
- When consistency of management information is not ensured between Cloud Services Management and a cloud, perform recovery referring to "[6.2 Ensuring Consistency of Management Information](#)".



### Note

The content of the error messages for AWS, Azure, and K5 described here may change when the functions of each cloud service are updated.

Once the problem is identified, take the necessary actions to solve it and then confirm that the error no longer occurs.



For the parameters set in the cloud vendor information, refer to "[2.3.1 Cloud Preparations](#)". For configuring cloud vendor information, refer to "[2.10.2 Cloud Vendor Information](#)".

For details regarding the setup of coordination adapters, refer to "Setup of Coordination Adapters" in the "FUJITSU Software Cloud Services Management Installation Guide".

Use the management consoles of each cloud services to confirm their respective configurations.

For details on the Browser Interface for Management of the Coordination Adapter Platform, refer to "[Appendix B Operation of the Browser Interface for Coordination Adapter Base Management](#)".

Collect troubleshooting data and contact the Fujitsu support staff if the problem cannot be identified or the trouble cannot be resolved by the above actions.



For details regarding the collection of troubleshooting data, refer to "[4.3 Data Collection Tool](#)".

#### 6.1.1.4 Errors Related to Coordination Adapters

##### Common

- When emails from a coordination adapter are not received, and the platform providers receive a completion notification (error) email  
In the Cloud Management Portal, if a virtual machine is still in the status from before an operation was performed, a platform provider should perform the relevant operation again.

### 6.1.2 When the Services of This Product Do Not Start

---

When the services of this product do not start, the cause may be one of the following:

- The OS user for database connection (fjsvcsmdb) does not exist.
- There are no security settings that allow the OS user for database connection (fjsvcsmdb) to log on as a service.
- Access permissions for the folders used by the OS user for database connection (fjsvcsmdb) are inappropriate.
- The password for the OS user for database connection (fjsvcsmdb) has been changed.

This section explains how to address the causes of each of the above cases.

#### 6.1.2.1 When the OS User for Database Connection (fjsvcsmdb) Does Not Exist

Perform recovery using the following procedure:

1. Create the OS user for database connection (fjsvcsmdb). For the password, set the value according to the security policy for the OS being used.
2. For the user that was created in step 1, configure security so that the user can log on as a service.
  - a. From [Administrative Tools] in the Windows Control Panel, open [Local Security Policy].
  - b. In the [Local Security Policy] window, select [Security Settings] - [Local Policies] - [User Rights Assignment].
  - c. With [User Rights Assignment] displayed, double-click the "Logon as a service" policy.
  - d. In the [Logon as a service Properties] window, select the [Local Security Setting] tab and then click the [Add User or Group] button.

- e. In the [Enter the object names to select] field in the [Select Users or Groups] window, enter the user name that was configured in step 1.
  - f. In the [Select Users or Groups] window, click the [OK] button.
  - g. In the [Logon as a service Properties] window, click the [OK] button.
3. Edit the access permissions for the folders corresponding to the data dictionaries for the OS user for database connection (fjsvcsmdb). For each of the following folders, right-click the folder and select [Properties] - [Security] from the menu, then edit the access permissions for the OS user for database connection (fjsvcsmdb) to allow full control of that folder.

```
%FSCSM_HOME%\db\CSMSYSTEM
%FSCSM_HOME%\db\CSMMETERINGLOG
%FSCSM_HOME%\db\CSMACCOUNTING
%FSCSM_HOME%\db\CSMAPP
```

4. Configure the logon information on the services.
- a. From [Administrative Tools] in the Windows Control Panel, open [Services].
  - b. In the [Services] window, select each of the following services and right-click it. Select [Properties] and then select the [Log on] tab to display it. In the [Password] and [Confirm password] fields, enter the password which was configured in step 1 and then click the [OK] button.
    - FUJITSU Software Cloud Services Management DB Service(fjsvfscsmb\_FSCSMSYSTEM)
    - FUJITSU Software Cloud Services Management DB Service(fjsvfscsmb\_FSCSMACCOUNTING)
    - FUJITSU Software Cloud Services Management DB Service(fjsvfscsmb\_FSCSMETERINGLOG)
    - FUJITSU Software Cloud Services Management DB Service(fjsvfscsmb\_FSCSMAPP)
5. Start the services of Cloud Services Management.
- For details on how to start Cloud Services Management, refer to "[2.1.1 Starting](#)".

### 6.1.2.2 When There Are No Security Settings that Allow the OS User for Database Connection (fjsvcsmdb) to Log on as a Service

Perform step 2 and 5 in "[6.1.2.1 When the OS User for Database Connection \(fjsvcsmdb\) Does Not Exist](#)".

### 6.1.2.3 When Access Permissions of the Folders Used by the OS User for Database Connection (fjsvcsmdb) Are Inappropriate

Perform step 3 and 5 in "[6.1.2.1 When the OS User for Database Connection \(fjsvcsmdb\) Does Not Exist](#)".

### 6.1.2.4 When the Password for the OS User for Database Connection (fjsvcsmdb) Has Been Changed

Perform step 4 and 5 in "[6.1.2.1 When the OS User for Database Connection \(fjsvcsmdb\) Does Not Exist](#)".

## 6.1.3 When the Services of This Product Do Not Stop

---

When the services of this product do not stop, the stop process of the web server service may still be in the stopping status.

Confirm the problem and perform recovery using the following procedure.



## Confirmation method

1. From [Administrative Tools] in the Windows Control Panel, open [Services].
2. In the [Services] window, confirm the status of the service named "FUJITSU Software Cloud Services Management Web Server(APP)".

If the status is "stopping", perform the recovery procedure below.

If the status is something other than "stopping", collect troubleshooting data and contact Fujitsu support staff.

## Recovery procedure

1. Execute the following command using the command prompt:

```
"%FSCSM_HOME%\SWCTMG\glassfish3\bin\asadmin" stop-domain app-domain
```

2. Stop the services of Cloud Services Management.

For details on how to stop Cloud Services Management, refer to "2.1.2 Stopping".

# 6.2 Ensuring Consistency of Management Information

Discrepancies may occur between the management information on Cloud Services Management and the status of the cloud service in the following cases:

- When backup/restore of Cloud Services Management is performed according to the manual.
- When services on the cloud or cloud management products are operated directly.
- When trouble occurs in a process of Cloud Services Management.

In such cases, perform the following corrective actions to reconcile the management information on Cloud Services Management and the service status on the cloud service.

There are two types of management information of Cloud Services Management:

- Cloud Management Portal
- Coordination Adapters

### Point

The information about the services managed by the Cloud Management Portal can be output using the `fscsm_service export` command. Check the correspondence relationship between the exported XML file and the resources on the cloud service and cloud management products.

The information managed by coordination adapters can be confirmed using "[Appendix B Operation of the Browser Interface for Coordination Adapter Base Management](#)".

For details on the `fscsm_service export` command, refer to "[5.2.6 Service Output Commands](#)".

## Cloud Services Exist which have No Management Information

If any services exist that have no corresponding management information (on both the Cloud Management Portal and coordination adapters), use the management console of the cloud service to delete these excess services.

If any services exist that have no corresponding management information on the Cloud Management Portal, delete the corresponding management information on the coordination adapters. In addition, use the management console of the cloud service to delete these excess services.

## Management Information Exists which has No Cloud Service

If management information exists on both the Cloud Management Portal and coordination adapters but there is no corresponding service on the cloud, ask a platform provider to request the deletion of the service using the Cloud Management Portal. However, if an administrator user has been created, the deletion can be requested using that user.

If management information exists on the coordination adapters but there is no corresponding service on the cloud, delete the management information on the coordination adapters.

### Note

The deletion request will cause an error because there is no corresponding service on the cloud. However, the management information will be deleted in Cloud Services Management even in such case.

## Service Configurations are Different

If the service configurations are different, ask a platform provider to request the modification of the service using the Cloud Management Portal. However, if an administrator user has been created, the modification can be requested using that user.

### Note

When an error occurs while configuring services, additional block devices that are not attached to virtual machines may remain. Before requesting modification of services, delete the disks that are not attached using the management console of the cloud.

### Point

The content of the modification request will not necessarily match the configuration on the cloud. The configuration on the cloud will be modified according to the modification request.

## 6.3 Adjusting Billing Charges

---

Cloud Services Management calculates billing based on the management information. Adjust the charges billed to platform providers if there were any periods in which services were unavailable due to situations such as maintenance and trouble.

## 6.4 Platform Management

---

This section explains troubles that may occur during operations related to platforms.

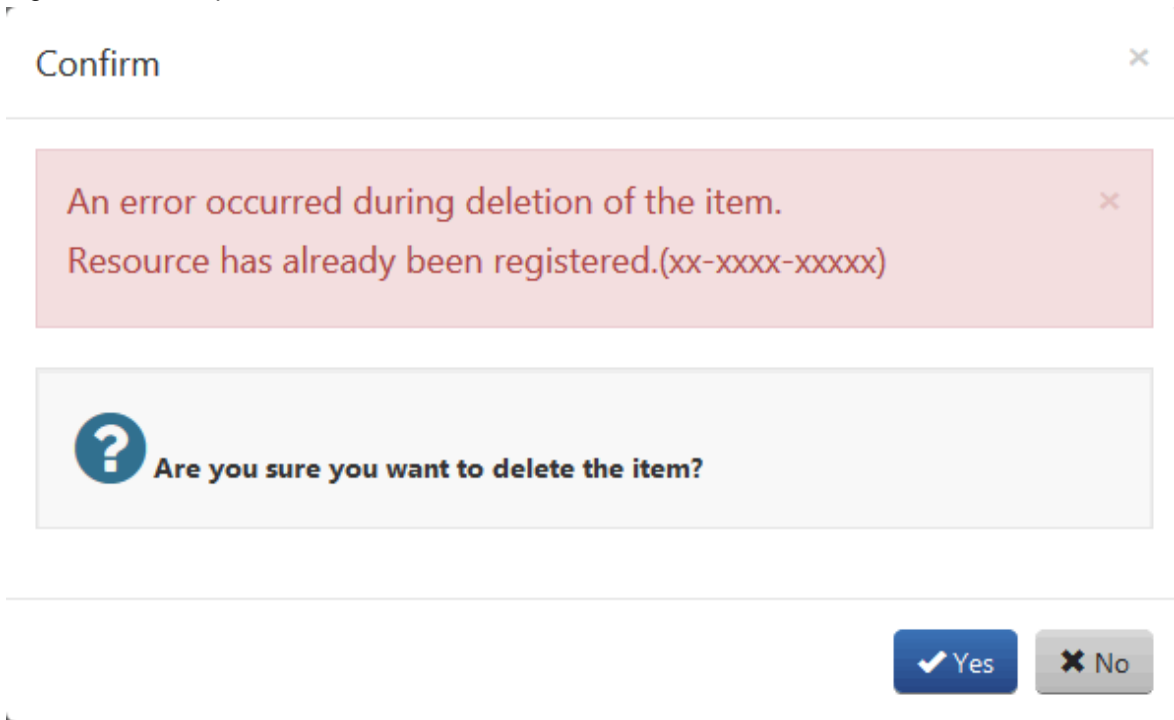
### 6.4.1 Unable to Delete Platform

---

In some cases, a platform cannot be deleted and the following message is displayed when you try to delete the platform from the [Platform Details] window in the [Platform Management] menu of the Cloud Management Portal, even though there are no services displayed in [Services].

```
An error occurred during deletion of the item.  
Resource has already been added.(<Service ID>)
```

Figure 6.1 Error upon Deletion of Platform



**Cause**

Service information which was not added successfully may not be successfully deleted due to a network error or other reasons, causing the information to remain in the system.

**Corrective Action**

Delete the platform using the command found in "5.2.5 Platform Operation Commands".

## 6.5 Ensuring Consistency of User Information When Coordinating Authentication with Active Directory

User authentication is provided by this product using the CAS of SVOM. For the directory service, the directory service provided with SVOM or Active Directory can be specified.

When using the directory service provided with SVOM, user operation information from this product is coordinated with SVOM, which updates the entries of user information on the directory service.

When using Active Directory, which is not provided with this product, user operation information from this product is not coordinated. For this reason, when adding or modifying users, perform the operation on both this product and Active Directory. If a user is not added to either program, login to Cloud Services Management will fail and problems will occur when performing resource operation as shown in the table below.

Table 6.1 Conditions for Logging in to Cloud Services Management

		Entry in Directory Service	
		Yes	None
Cloud Services Management User Information	Yes	Logging in to Cloud Services Management is possible. (Normal)	Logging in to Cloud Services Management is not possible.  Corrective action: Add a user entry to the directory service. Or, delete user information in Cloud Services Management.

	None	Logging in to Cloud Services Management is possible. However, menus cannot be operated.  Corrective action: Add user information to Cloud Services Management.	Logging in to Cloud Services Management is not possible.
--	------	--	--

### Requirements for Matching User Information between Cloud Services Management and Active Directory

The following information must be the same when added:

- Cloud Services Management: User ID (userId)
- The login name of the coordinating SVOM

When using Active Directory as the directory service of SVOM, it is necessary to add the same user information in Cloud Services Management and Active Directory. In userId, specify the login name of the coordinating SVOM.

Planners or platform providers users can add, modify, and delete the users belonging to their department or organization. Take appropriate actions to prevent inconsistencies between the information on Cloud Services Management and Active Directory. For example, operators can notify planners or platform providers regarding user IDs to add or add the same users on Active Directory prior to the final approval.

# Appendix A Operation of RDBs and SLBs

This appendix explains the startup procedure for the operation of RDBs and SLBs.

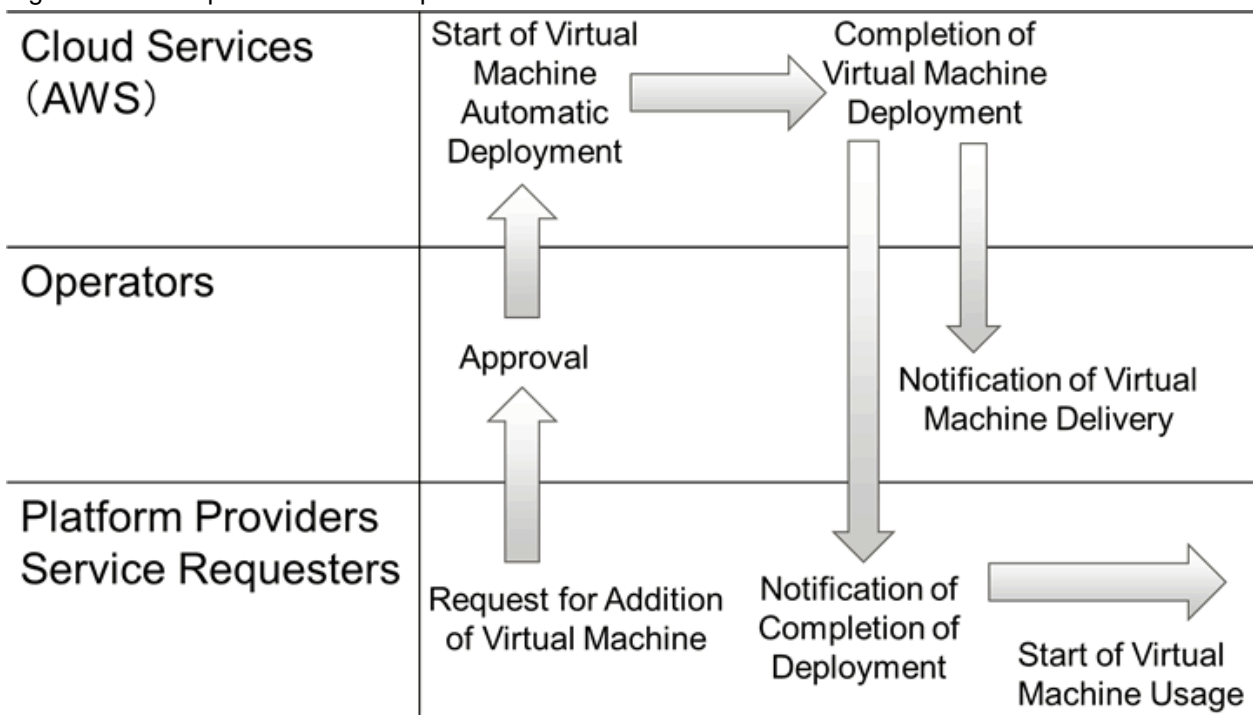
In this product, only the menus of platforms which were added using AWS contracts can use RDB or SLB services.

The startup of RDBs or SLBs is different from that of virtual machines.

## A.1 Startup Procedure for Operation of RDBs and SLBs

Virtual machine instances are automatically deployed after approval is received for the request for addition made using the Cloud Management Portal. However, RDBs and SLBs are not automatically deployed after approval is received.

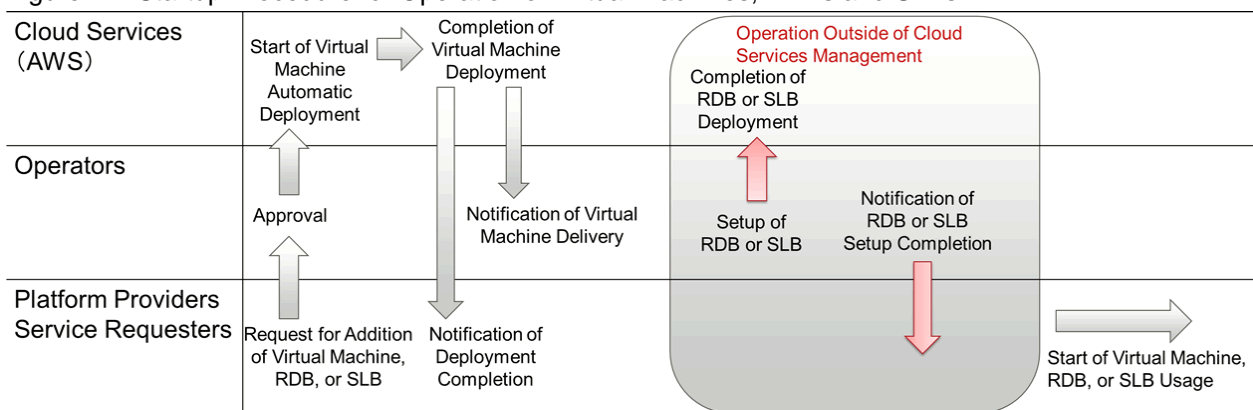
Figure A.1 Startup Procedure for Operation of Virtual Machines



If an RDB or SLB is requested at the same time as a virtual machine, deployment of the RDB or SLB is completed after an operator sets up the RDB or SLB environments using the cloud portal (AWS console).

After that, operators notify the service requester belonging to platform providers that the deployment of the RDB or SLB is complete, and platform providers are able to start operating the RDB or SLB.

Figure A.2 Startup Procedure for Operation of Virtual Machines, RDBs and SLBs



# Appendix B Operation of the Browser Interface for Coordination Adapter Base Management

This appendix explains how to operate the Browser Interface for Coordination Adapter Base Management.

The Browser Interface for Coordination Adapter Base Management is the interface for managing the statuses of coordination adapters. Use this interface to operate and confirm the statuses of coordination adapters when discrepancies occur between the information on the Cloud Management Portal and the coordination adapters.

After receiving an error notification email from a coordination adapter or the Cloud Management Portal, check the error content and take corrective action. After taking corrective action, perform the following operation using the Browser Interface for Coordination Adapter Base Management.



See

For details on types of error notification emails and actions to take for each error type, refer to "Chapter 6 Troubleshooting".

1. Confirm the user key (1000) and password (BSS\_USER\_PWD) for accessing management server domains (API domains and GUI domains).

For the password (BSS\_USER\_PWD), refer to "List of Parameters Configured Automatically during Setup" in the "FUJITSU Software Cloud Services Management Installation Guide".

2. Access the following URL using a web browser to open the Browser Interface for Coordination Adapter Base Management for each service controller.

In <server>, specify the host name or IP address of the management server for Cloud Services Management. In <port>, specify the HTTP listener port for the APP domain.

- AWS

```
http://<server>:<port>/oscm-app/controller/?cid=ess.aws
```

- Azure

```
http://<server>:<port>/oscm-app/controller/?cid=ess.azure
```

- ROR

```
http://<server>:<port>/oscm-app/controller/?cid=ess.ror
```

- K5

```
http://<server>:<port>/oscm-app/controller/?cid=ess.k5
```

- VMware

```
http://<server>:<port>/oscm-app/controller/?cid=ess.vmware
```

3. In the login window, specify the user key and password that were confirmed in step 1 to log in.
4. After logging in, the services managed by the coordination adapter are displayed.
5. Confirm that the target services are displayed.

In this window, all information of virtual machines, snapshots, and key pairs is displayed.

Correspondence relationships between the services displayed in the cloud management portal and the services in the Browser Interface for Coordination Adapter Base Management are as follows:

- For Virtual Machines
    - Cloud Management Portal: [Managed Object ID] displayed as the detailed information of virtual machines in [Services] in the [Platform Details] window
    - Browser Interface for Coordination Adapter Base Management: The value in the [Instance ID] column displayed in the window
  - For Snapshots
    - Cloud Management Portal: [ID] in the [Snapshot] window displayed when the [Operation] - [Snapshot] button for virtual machines is clicked in [Services] in the [Platform Details] window
    - Browser Interface for Coordination Adapter Base Management: The value in the [Instance ID] column displayed in the window
  - For Key Pairs
    - Cloud Management Portal: [Platform ID] in [Details] in the [Platform Details] window
    - Browser Interface for Coordination Adapter Base Management: The character string starting from the top of the [Subscription] column displayed in the window
6. From the [Action] column for a target service, select the coordination adapter, and then [DELETE].

 **Note**

Do not perform any operations besides [DELETE]

7. Click the [Execute] button to perform the operation.