FUJITSU

**ServerView Resource Orchestrator
Cloud Edition V3.0.0**

User's Guide
for Tenant Administrators

Windows/Linux

Preface

Purpose

This document explains how to operate the ROR Console provided by ServerView Resource Orchestrator (hereafter referred to as "this product").

Target Readers

This document is intended for users who display and operate the L-Platforms of the tenants they own, manage user information, or use the operation status to monitor resources.
It is assumed that these users have a general knowledge of server virtualization software products and directory services such as Active Directory and LDAP.

Organization

This manual is composed as follows:

Notational Conventions

The notation in this manual conforms to the following conventions.

- When using Resource Orchestrator and the functions necessary differ due to the necessary basic software (OS), it is indicated as follows:

[Windows]	Sections related to Windows
[Linux]	Sections related to Linux

- Reference destinations are shown enclosed by quotation marks (" ").

- Window, dialog, menu, tab, and button names are indicated using bold text.

Documentation Road Map

The following manuals are provided with Resource Orchestrator. Please refer to them when necessary:

Manual Name	Abbreviated Form	Purpose
ServerView Resource Orchestrator Cloud Edition V3.0.0 Setup Guide	Setup Guide CE	**Please read this first.** Read this when you want information about the purposes and uses of basic functions, and how to install Resource Orchestrator.
ServerView Resource Orchestrator Cloud Edition V3.0.0 Installation Guide	Installation Guide CE	Read this when you want information about how to install Resource Orchestrator.
ServerView Resource Orchestrator Cloud Edition V3.0.0 Operation Guide	Operation Guide CE	Read this when you want information about how to operate systems that you have configured.
ServerView Resource Orchestrator Cloud Edition V3.0.0 User's Guide for Infrastructure Administrators (Resource Management)	User's Guide for Infrastructure Administrators (Resource Management) CE	Read this when you want information about how to operate the GUI (resource management) used by infrastructure administrators and dual-role administrators.
ServerView Resource Orchestrator Cloud Edition V3.0.0 User's Guide for Infrastructure Administrators	User's Guide for Infrastructure Administrators CE	Read this when you want information about how to operate the GUI (for operations other than resource management) used by infrastructure administrators and dual-role administrators.
ServerView Resource Orchestrator Cloud Edition V3.0.0 User's Guide for Tenant Administrators	User's Guide for Tenant Administrators CE	Read this when you want information about how to operate the GUI used by tenant administrators.
ServerView Resource Orchestrator Cloud Edition V3.0.0 User's Guide for Tenant Users	User's Guide for Tenant Users CE	Read this when you want information about how to operate the GUI used by tenant users.
ServerView Resource Orchestrator Cloud Edition V3.0.0 Reference Guide for Infrastructure Administrators (Resource Management)	Reference Guide (Resource Management) CE	Read this when you want information about commands used by infrastructure administrators and dual-role administrators to manage resources, messages output by the system, and how to perform troubleshooting.
ServerView Resource Orchestrator Cloud Edition V3.0.0 Reference Guide for Infrastructure Administrators	Reference Guide CE	Read this when you want information about commands used by infrastructure administrators and dual-role administrators for purposes other than resource management.
ServerView Resource Orchestrator Cloud Edition V3.0.0 Messages	Messages CE	Read this when you want detailed information about the corrective actions for displayed messages.

In some cases, this document may refer to the Virtual Edition manuals shown below. Please refer to them when necessary:

Manual Name	Abbreviated Form	Purpose
ServerView Resource Orchestrator Virtual Edition V3.0.0 Setup Guide	Setup Guide VE	Read this when you want information about the purposes and uses of basic functions, and how to install Resource Orchestrator.
ServerView Resource Orchestrator Virtual Edition V3.0.0 Installation Guide	Installation Guide VE	Read this when you want information about how to install Resource Orchestrator.

Manual Name	Abbreviated Form	Purpose
ServerView Resource Orchestrator Virtual Edition V3.0.0 Operation Guide	Operation Guide VE	Read this when you want information about how to operate systems that you have configured.
ServerView Resource Orchestrator Virtual Edition V3.0.0 User's Guide	User's Guide VE	Read this when you want information about how to operate the GUI.
ServerView Resource Orchestrator Virtual Edition V3.0.0 Command Reference	Command Reference	Read this when you want information about how to use commands.
ServerView Resource Orchestrator Virtual Edition V3.0.0 Messages	Messages VE	Read this when you want detailed information about the corrective actions for displayed messages.

Abbreviations

The following abbreviations are used in this manual:

Abbreviation	Products
Windows	Microsoft(R) Windows Server(R) 2008 Standard Microsoft(R) Windows Server(R) 2008 Enterprise Microsoft(R) Windows Server(R) 2008 R2 Standard Microsoft(R) Windows Server(R) 2008 R2 Enterprise Microsoft(R) Windows Server(R) 2008 R2 Datacenter Microsoft(R) Windows Server(R) 2003 R2, Standard Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition Windows(R) 7 Professional Windows(R) 7 Ultimate Windows Vista(R) Business Windows Vista(R) Enterprise Windows Vista(R) Ultimate Microsoft(R) Windows(R) XP Professional operating system
Windows Server 2003	Microsoft(R) Windows Server(R) 2003 R2, Standard Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition
Linux	Red Hat(R) Enterprise Linux(R) 5 (for x86) Red Hat(R) Enterprise Linux(R) 5 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.1 (for x86) Red Hat(R) Enterprise Linux(R) 5.1 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.2 (for x86) Red Hat(R) Enterprise Linux(R) 5.2 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.3 (for x86) Red Hat(R) Enterprise Linux(R) 5.3 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.4 (for x86) Red Hat(R) Enterprise Linux(R) 5.4 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.5 (for x86) Red Hat(R) Enterprise Linux(R) 5.5 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.6 (for x86) Red Hat(R) Enterprise Linux(R) 5.6 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.7 (for x86) Red Hat(R) Enterprise Linux(R) 5.7 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.2 (for x86) Red Hat(R) Enterprise Linux(R) 6.2 (for Intel64)

Abbreviation	Products
VMware	VMware vSphere(R) 4 VMware vSphere(R) 4.1 VMware vSphere(R) 5
RHEL5-Xen	Red Hat(R) Enterprise Linux(R) 5.4 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.4 (for Intel64) Linux Virtual Machine Function
RHEL-KVM	Red Hat(R) Enterprise Linux(R) 6.2 (for x86) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.2 (for Intel64) Virtual Machine Function

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Month/Year Issued, Edition	Manual Code
November 2011, First Edition	J2X1-7614-01ENZ0(00)
January 2012, 1.1 Edition	J2X1-7614-01ENZ0(01)
January 2012, 1.2 Edition	J2X1-7614-01ENZ0(02)
February 2012, 1.3 Edition	J2X1-7614-01ENZ0(03)
March 2012, 1.4 Edition	J2X1-7614-01ENZ0(04)
April 2012, 1.5 Edition	J2X1-7614-01ENZ0(05)

Editing Record

Additions and changes	Section	Edition
An article relating to operating the **Resource** tab of the ROR Console was added.	1.5.4	1.1 Edition
An article relating to the use rate for two or more resource pools was modified.	3.1, 3.3	
An article relating to L-Platform and L-Server search was added.	4.2	
An article relating to the display name of configuration information was modified.	4.4	
The term "logical node" was changed to "L-Server".	4.4	
An article relating to RHEL-KVM was added.	Chapter 4, Chapter 5, Chapter 6	
An article relating to image collection was added.	6.3.8	
An article relating to the priority of the task was added.	7.2, 7.3	
An article relating to the dashboard chart icon was modified.	3.2	1.2 Edition
A 'point' relating to dashboard chart toggling was added.	3.2	
The configuration for sections and sub-sections was modified.	Chapter 4	
A table for description of CI list item was added.	4.2	
An article relating to batch power supply operations was added.	5.4.4.2 6.3.2, 6.3.10, 6.3.11, 6.3.13	
An article relating to usage fee (the estimated price) was added.	6.2.1, 6.2.2, 6.3.11, 6.3.13	
An article relating to overcommit (Hyper-V) was added or modified.	6.3.12	
A 'note' relating to CPU performance, CPU reserve performance, memory size, or memory reserve size was added.	6.3.13	
An article relating to status confirmation of subscriptions was added.	7.1	
The window and article for the **Form** panel was added.	7.1, 7.2, 7.3	
An article relating to accounting was added to subscription assessments.	7.3	
The date format used on tenant management windows was modified.	8.2, 8.6	
A point relating to password modification notifications was revised.	8.7	
Red Hat(R) Enterprise Linux(R) 6.2 was added as product for the abbreviations Linux and RHEL-KVM.	Preface	1.3 Edition
An article relating to image collection was modified.	6.3.8	
A 'note' relating to image collection was added.	6.3.8	
A 'note' relating to L-Platform cancellation was added.	6.3.12	
A 'note' relating to pop-up blocker was added.	6.5	
A 'note' relating to Dashboard Display was added.	3.2	1.4 Edition
An article relating to display alert list was added.	3.4	
A 'note' relating to L-Platform reconfiguration was modified.	6.3.11	

Additions and changes	Section	Edition
An article relating to user ID information was modified.	8.3	
A note was added to the explanation of "sdattim" which was added on the CSV output table.	4.2.1	1.5 Edition
The term "LDAP operation settings" was changed to "directory services operation settings".	8.1, 9.1	
An article relating to user ID information was modified.	8.3	
An explanation on "Migration" was added.	Glossary	

Contents

Chapter 1 Overview

This chapter explains the ROR Console.

1.1 Users

The ROR Console has the following users:

- Infrastructure Administrator

- Tenant Administrator

- Tenant user

Refer to "Glossary" for details on these roles.

1.2 Function List

This section explains the functions provided by ROR Console.

ROR Console has two parts: "operation windows for tenant administrators and tenant users" and "operation windows for infrastructure administrators".

Windows intended for Tenant Administrators and tenant users are provided for L-Platform and user information operations. These windows are configured by Tenant Administrators themselves, and have been provided to reduce the Infrastructure Administrator workload.

Operation windows and dashboard windows intended for Infrastructure Administrators are also provided for L-Platform and user information operations. These windows are provided to enable Infrastructure Administrators to display and operate all L-Platform and tenant information and to access important information quickly.

The ROR Console displays are customized for the user's role, to provide appropriate functions to each user. For example, tabs that the current user cannot operate are not displayed.

Figure 1.1 ROR Console
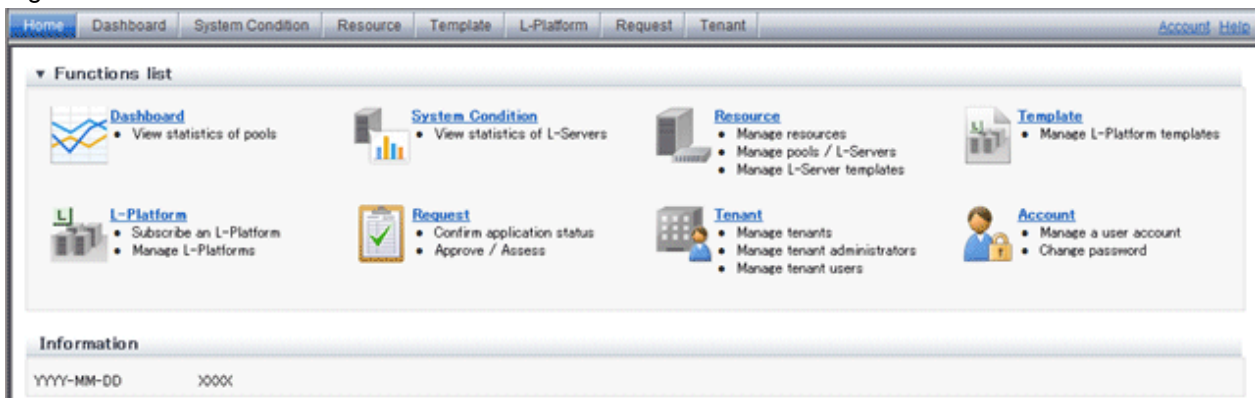
The table below shows the functions provided by the ROR Console.

These functions correspond to the tabs displayed at the top of the ROR Console.

Function	Overview	Infrastructure Administrator	Tenant Administrator	Tenant user
Home	The window displayed immediately after login to the ROR Console. A function list and notifications are displayed.	Yes	Yes	Yes
Dashboard	Displays the resource pool usage status	Yes	Yes	No

Function	Overview	Infrastructure Administrator	Tenant Administrator	Tenant user
System Condition	Displays L-Server performance information and configuration information	Yes	Yes	Yes
Resource	A window for managing the resource pool and the relationship of resources to L-Server	Yes	No	No
Template	A window for managing L-Platform Templates	Yes	Yes	No
L-Platform	A window for managing L-Platform	Yes	Yes	Yes
Request	A window for assessing and approving L-Platform usage applications and other applications from tenant users	Yes	Yes	Yes
Tenant	A window for managing tenants and users belonging to tenants	Yes	Yes	No
Account	A window for changing a logged in user's information and password	Yes	Yes	Yes
Help	Displays this product's manual	Yes	Yes	Yes

Yes: Displayed (However, some functions may not be displayed according to the user's access rights.)

No: Not displayed

Refer to Chapter 2, "Home", and subsequent chapters for details on these functions.

However, refer to the "User's Guide for Infrastructure Administrators (Resource Management) CE" for information on the "Resource" function.

1.3 Flow of Operations

This section explains the flow of operations using the ROR Console, from construction to operation, maintenance, and monitoring.

Flow from Construction to Operation (Tenant Administrator)
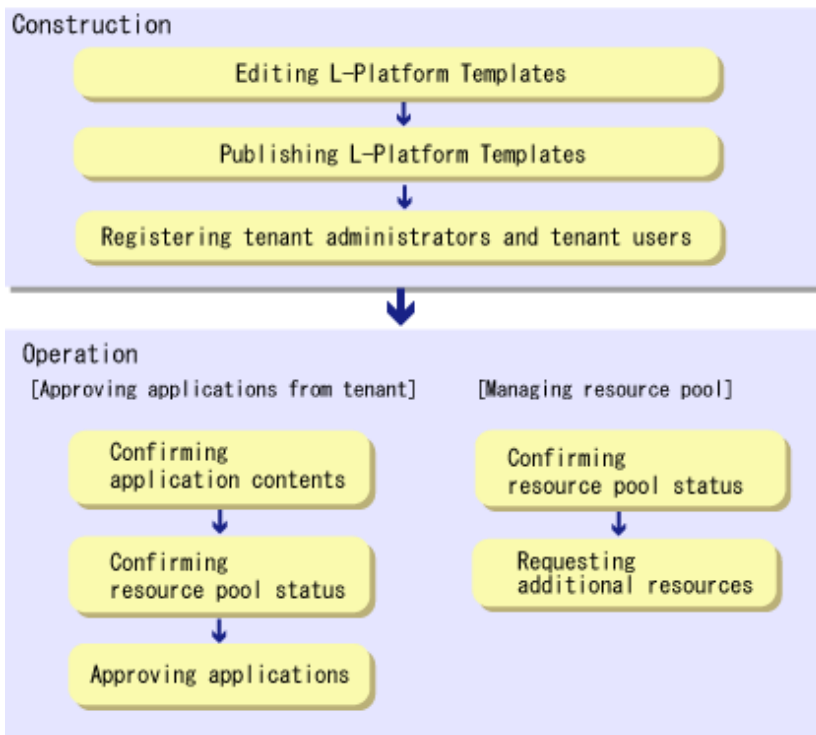
Construction

1. Editing L-Platform Templates
   If a tenant-specific L-Platform Template is required, edit an L-Platform Template based on an existing L-Platform Template.
   Refer to "5.3.4 Editing L-Platform Template" for details.

2. Publishing L-Platform Templates
   Publish the L-Platform Template to tenant users.
   Refer to "5.3.6 Publishing and Hiding L-Platform Template" for details.

3. Registering Tenant Administrator and tenant users
   Register the Tenant Administrator and tenant users.
   Refer to "8.3 Registering a User" for details.

Operation

[Approving Applications from Tenant]

Follow the procedure below if the application process when there are an effective case and approval.

1. Confirming application contents
   Check the content of applications from the Tenant Administrator and tenant users.
   Refer to "7.1 Checking an Application Status" for details.

2. Confirming resource pool status
   Check the resource pool usage status in order to confirm whether or not the requested necessary resources can be guaranteed.
   Refer to "Chapter 3 Dashboard" for details.

3. Approving applications
   Approve the content of applications from the Tenant Administrator and tenant users.
   Refer to "7.3 Approving an Application" for details.

[Managing Resource Pool]

1. Confirming resource pool status
   Check the resource pool usage status to confirm that there are sufficient unused resources in the resource pool.
   Refer to "Chapter 3 Dashboard" for details.

2. Requesting additional resources
   If required, ask the Infrastructure Administrator for additional resources.

1.4 Display

This section explains how to display the ROR Console.

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The ROR Console runs on any of the following browsers:

- Windows(R) Internet Explorer(R) 8

- Windows(R) Internet Explorer(R) 9

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How to Display the ROR Console

Follow the steps below to display the ROR Console:

1. Start the Web browser.

2. Specify the URL of the ROR Console. Check the URL of the ROR Console with your system administrator.
   The following shows the format of the URL.

   ```
   https://<host name of admin server>:<port number>/
   ```

3. The login window is displayed. Enter your user ID and password to log in.

   Figure 1.2 Login Window
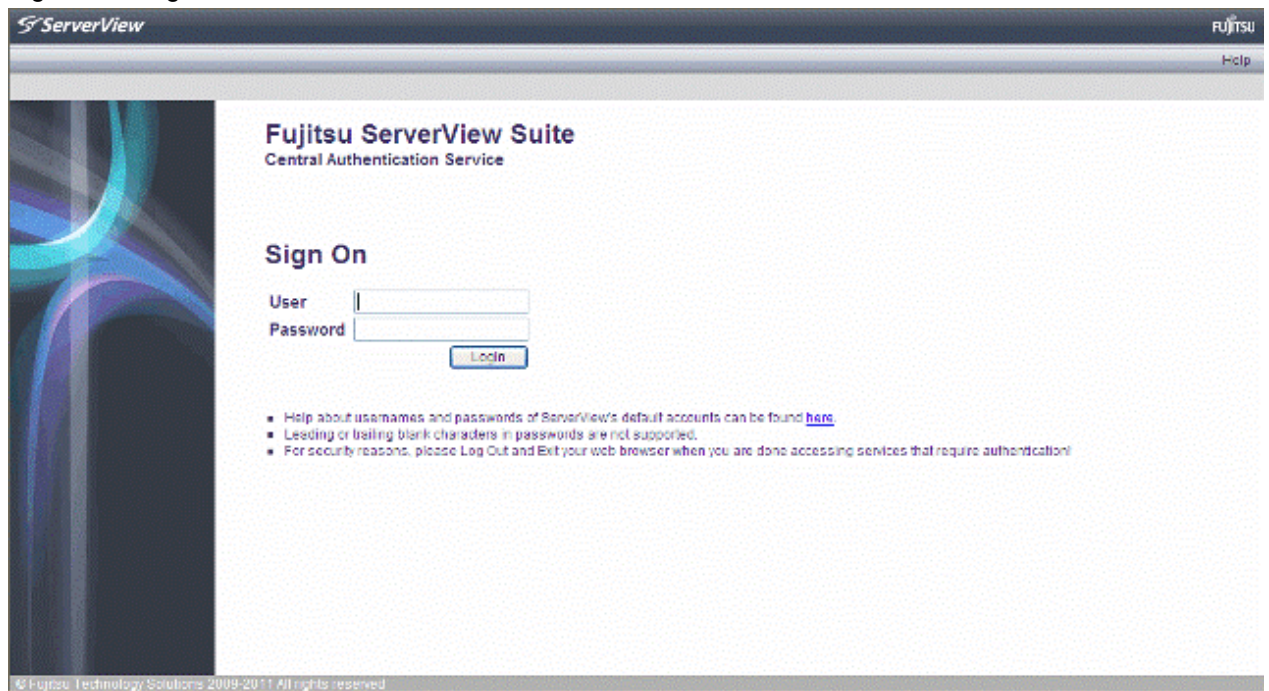
4. The ROR Console is displayed.

Logout

Follow the steps below to logout.

1. Click the **Logout** link at the upper-right of the ROR Console to log out. A window is displayed, confirming log out from ROR Console. Click the **OK** button to log out.

Figure 1.3 Logout Confirm Window
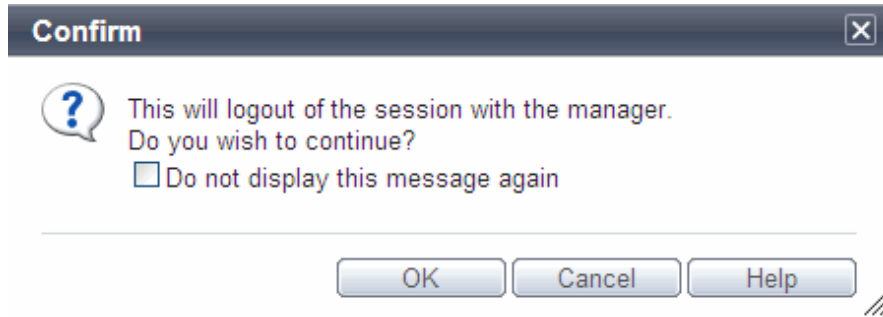
2. The logout window is displayed, close the browser.

Figure 1.4 Logout Window
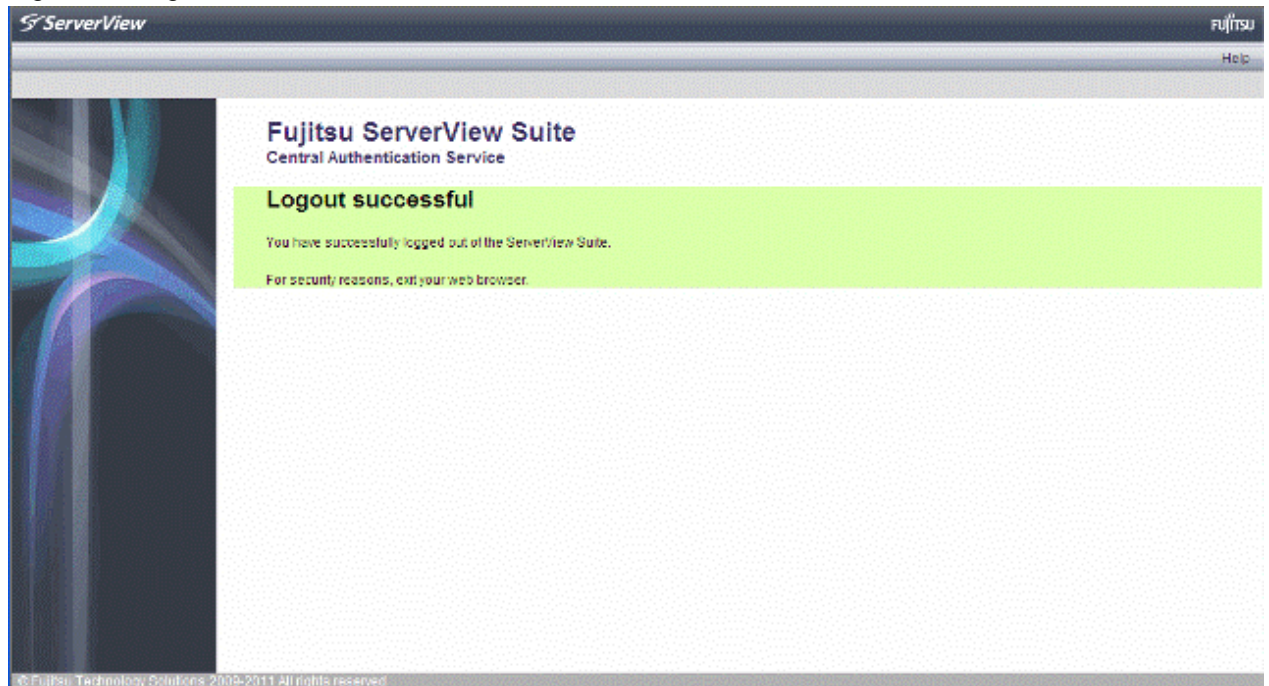
1.5 Notes on Use of the ROR Console

This section explains the notes on the use of the ROR Console.

1.5.1 Surrogate Pair Characters

Surrogate pair characters cannot be used on the ROR Console.

1.5.2 Web Browser Settings

The following settings must be specified for the Web browser before using the ROR Console:

- Enable cookies.

- Enable JavaScript

- Use SSL 3.0 and TLS 1.0

- Specify either one of the following for the Web browser pop-up blocker:

    - Disable the pop-up blocker

    - Add the URL of the ROR Console to the **Address of web site to allow** setting.
      Check with the system administrator for the URL of the ROR Console.

1.5.3 ROR Console Operations

When logging in to the ROR console, a window displaying the message

"Internet Explorer cannot display the webpage" may be displayed.

Description

This problem can occur as a result of the following combinations of OS and web browsers being used.

Windows XP SP3 + Internet Explorer 8

Windows Server 2003 + Internet Explorer 8

Windows Server 2008 + Internet Explorer 8

Corrective Action

Take one of the following corrective actions.

- Connect using a combination of OS and web browser not listed above

- When this problem occurs, reload the page on your web browser

- Specify the IP address, not an FQDN, in the URL used for connection

1.5.4 Operation of the [Resource] Tab of the ROR Console

When Hiding Displayed Resource Information in the [Resource] Tab of the ROR Console, after a Certain Length of time (after Regular Update of Resources), the Display of Resource Information that was Updated may Collapse.

Description

While updating the window of the [Resource] tab of the ROR console, if resource information is hidden or another tab switched to, update will continue to be performed for the hidden area.

At that time, because the browser cannot handle modification of the size of the window being updated or the coordinate information, after a certain length of time (after regular update of resources), the display of resource information that was updated may collapse.

Corrective Action

Perform the following corrective actions:

- When there is update information for resources

  Update will be performed automatically during the regular update.

- When there is no update information for resources

  Click the page switch button of the resource information.

- When there is no update information for resources, and no page switch button for the resource information

  Select a different resource from the tree.

Chapter 2 Home

This chapter explains the ROR Console Home window.

2.1 Home Window Display

This section explains the ROR Console Home window display.

When the ROR Console is started, the Home window is displayed. Refer to section "1.4 Display" for information on how to start the ROR Console.

The elements of the Home window are explained below.
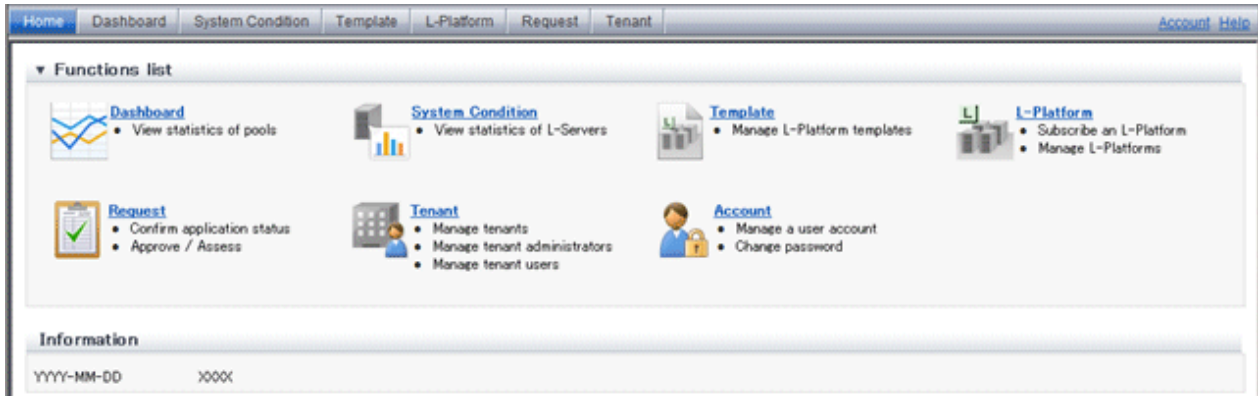
- Functions list

  The functions list displays the items that can be operated using ROR Console tabs.

  Click the ▼ icon or the ▶ icon to toggle Display/Hide.

- Information

  Information from the System Administrator and Infrastructure Administrator is displayed.

Chapter 3 Dashboard

This chapter explains how to use dashboard operations.

3.1 Dashboard Overview

The Dashboard can be used to monitor resource pool use.

This section provides an overview of the Dashboard.

Dashboard window

The Dashboard displays charts for each of the following resource pools:

- VM pool (CPU)

- VM pool (memory)

- Storage pool

- Network pool

- Server pool (*1)

- Address pool (*1)

*1: Only displayed if physical servers are registered to the server pool.

Resource pool types

There are two types of resource pool:

- Infrastructure administrator: Global pools

- Tenant Administrator: Local pools managed by the Tenant Administrator

Items displayed in charts

The following items are displayed in each of the resource pool charts:

- Vertical axis: Resource pool use rate (%)

- Horizontal axis: Date and time (initial value within three months)

- Polyline graph: If there are multiple resource pools, the five with the highest use rate (the five with the highest total values of the series) are displayed.

3.2 Dashboard Display

Perform the following steps to display the Dashboard:

1. From the ROR Console, select the **Dashboard** tab.

   Charts are displayed for use rate of each resource pool.
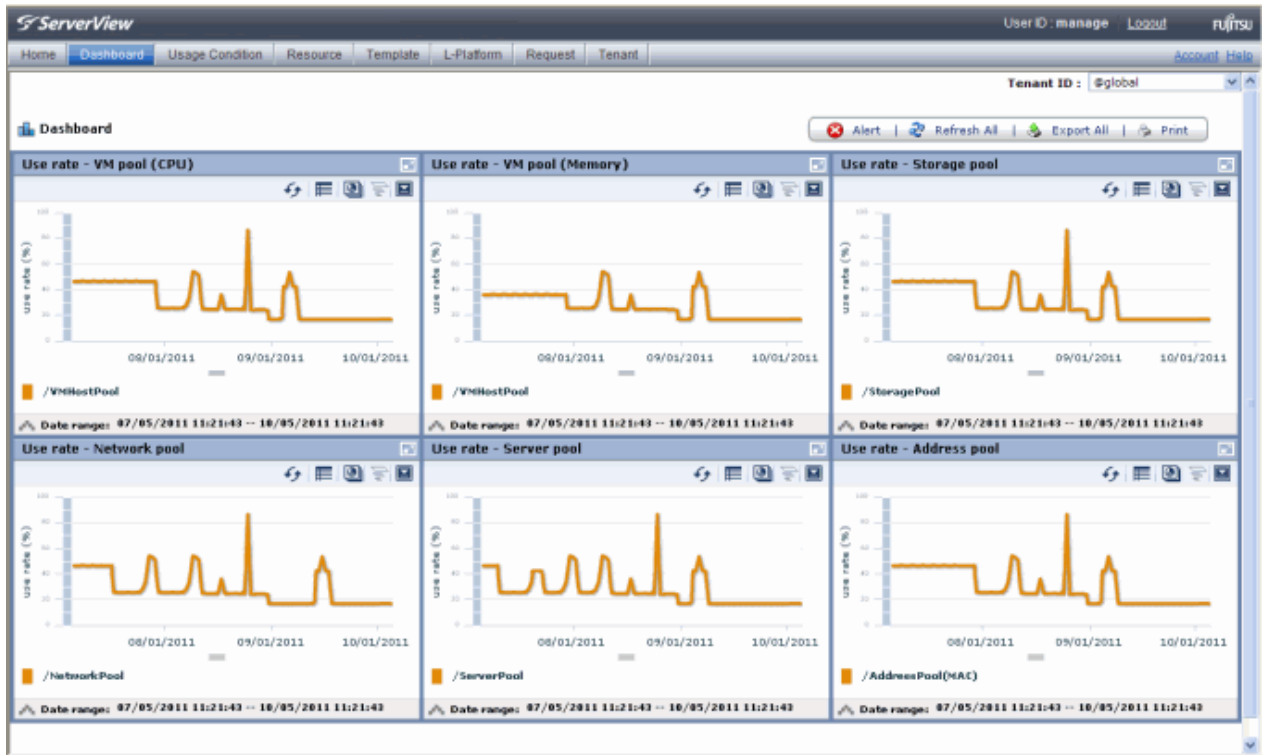
   The following table lists the six types of charts available.

Chart	Explanation
VM pool (CPU)	Displays the VM pool (CPU) use rate of each pool as polyline graphs. Always displayed.
VM pool (memory)	Displays the VM pool (memory) use rate of each pool as polyline graphs. Always displayed.
Storage pool	Displays the storage pool use rate of each pool as polyline graphs. Always displayed.
Network pool	Displays the network pool use rate of each pool as polyline graphs. Always displayed.
Server pool	Displays the server pool use rate of each pool as polyline graphs. This is only displayed if physical servers are registered to the server pool.
Address pool	Displays the address pool use rate of each pool as polyline graphs. This is only displayed if physical servers are registered to the server pool.

   The table below shows the icons displayed in charts.

Icon	Explanation
	Displays the relationship chart menu Selects the relationship chart for either "Use state" or "Allocatable L-Servers".
	Switches between the use rate chart and the relationship chart.
	Updates the chart with the most recent information

Icon	Explanation
☰	Toggles between table and polyline graph displays
☑	Displays a list of functions The following functions may be used: - Refresh: Updates the chart to the latest information. - Change table/graph: Switches between the table and the graph. - Drill up: If the relationship chart is displayed, this function will switch to the use rate chart. - Comments: Comments related to charts can be registered. Related comments can also be referred to. - Export CSV: Data from the displayed chart can be output as a CSV file. - Configure: The chart's appearance can be modified temporarily. Modified content will not be saved.
▣	Enlarges the chart display

2. Display detailed information in other charts.

   If required, display detailed information in other charts.
   Refer to "3.3 Chart Display" for details of the information displayed in other charts.
   The table below shows how to display detailed information.

Item	Display method	Contents displayed
Relationship chart	Click the relationship chart icon (🔲) and select the chart to display from the drop-down menu.	Displays a relationship chart in which the focus is switched to a display of resource pool absolute values or similar. The chart displayed varies depending on the resource pool. For example, the overall amount and used amount are displayed for the selected resource pool.

A window example is shown below.

Use state - VM pool (CPU) [GHz]		
	USED	TOTAL
/VMHostPool	7.3	30.7

Date range: 10/07/2011 11:47:32
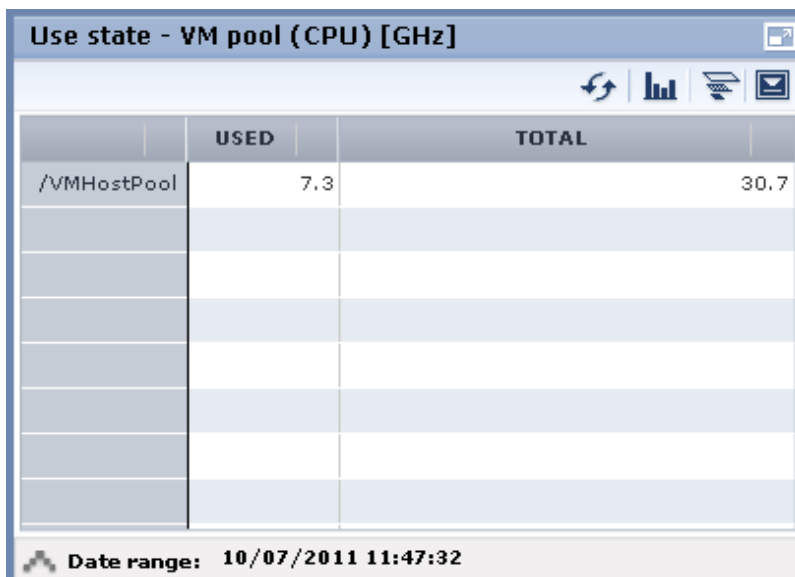
 Point

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When returning to the use rate window from the relationship chart window, click on the icon to move the displayed slider to the top.

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 Note

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- If the Dashboard window is left open in a Web browser, the connection to the dashboard server may time-out and an error may display in the window. If this occurs, close the Web browser, and then display the Dashboard window again.

- If the Dashboard window is already displayed at one machine and the same user ID is used at a different machine to log in to the ROR Console and display the Dashboard window, Dashboard window operations will no longer be possible from the first machine. If this occurs, close the Web browser displaying the Dashboard window and the ROR Console, and then restart the Dashboard window display operation.

- If the administrator changes the setting of the Dashboard while the ROR console window is displayed, the following messages are displayed.

    - The graph cannot be displayed.

    - The table cannot be displayed.

    - Failed to display Analytics screen.

    - The Analytics Server is not started.

    - The connection to the Analytics Server failed.

    - Session is invalid.

    - Unexpected error has occurred.

    If this occurs, refresh the window of the Web browser or close the Web browser and then display the Dashboard window again. When the same message is displayed, try it again a few minute later.

- When a linked service is stopped, just a border may be displayed, or the display may indicate that there is no data. Contact the Tenant Administrator.

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3.3 Chart Display

This section explains the charts for each resource pool.

The resource pool charts display resource pool use rates as polyline graphs for each resource pool. If there are multiple resource pools, the use rates of the display periods of each of the resource pools are added together, and the top five are displayed in order, starting with the one with the highest total.

A VM pool (CPU) window example is shown below.

Use rate - VM pool (CPU)

use rate (%)

/VMHostPool

Date range: 07/05/2011 11:21:43 -- 10/05/2011 11:21:43
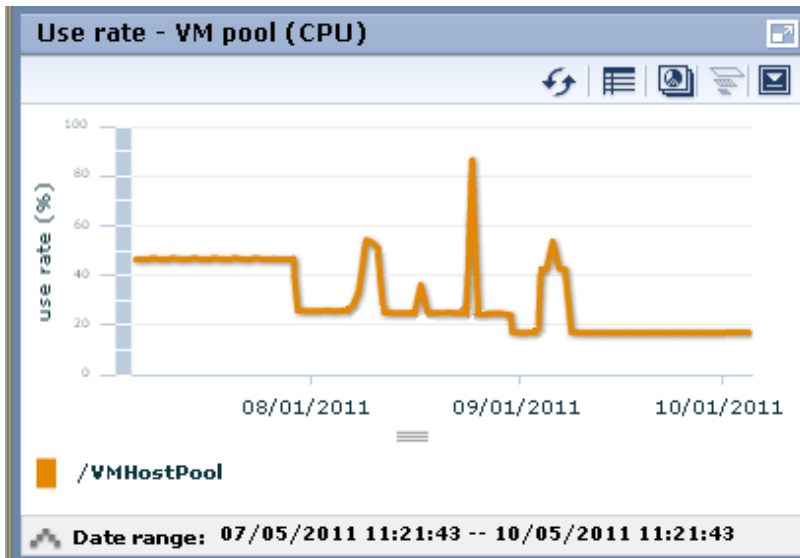
Detailed information can be displayed in other charts in the resource pool charts.

The table below shows the detailed information and usage scenarios. Refer to Step 2 under "3.2 Dashboard Display" for the operation method.

The table below shows the other charts.

	Display format	Detailed information	Usage scenario
Relationship chart (Usage state)	Table	Displays the total amount and the used amount of the resource pool. The units are as follows: - VM pool (CPU): GHz - VM pool (memory): GB - Storage pool: GB - Network pool: Number of networks - Server pool: Number of physical servers - Address pool: Number of addresses	Use this chart to check the number values (absolute values) for the used amount and number of networks/servers/addresses.
Relationship chart (Allocatable L-Servers) (*1)	Table	Displays the number of L-Servers that can be deployed to the resource pool (*2)	If there is insufficient free space or too few servers, use this chart to check the number of L-Servers that can be deployed.

*1: The relationship chart that displays the number of deployable L-Servers is not displayed for network pools and address pools. L-Servers can be deployed even if the network pool and address pool are exhausted.

*2: For all storage pools that have thin provisioning function enabled, zero is displayed as the number of L-Servers that can be deployed, regardless of the L-Platform Template type. Specify thin provisioning function enable/disable separately for each storage pool.

VM pool (CPU) relationship chart windows is shown below.

- Example: The number values (absolute values) for the used amount and number is shown below.
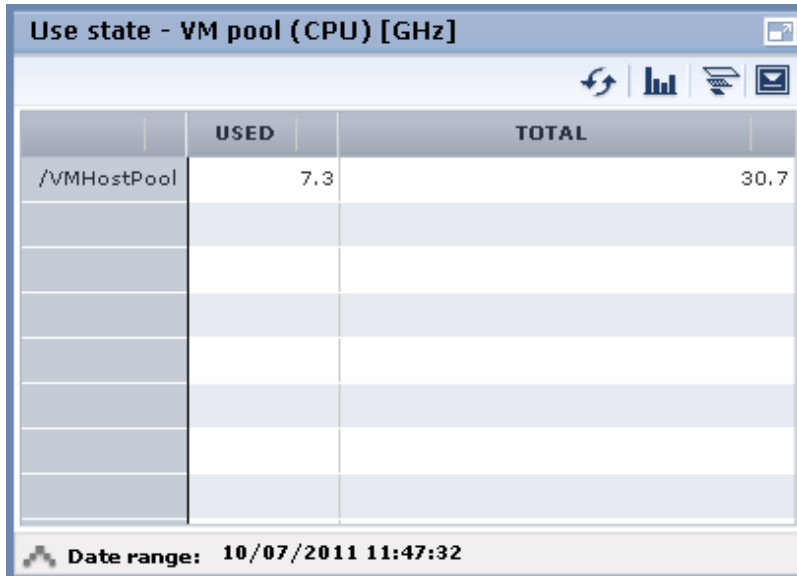
- Example: L-Servers that can be deployed is shown below.
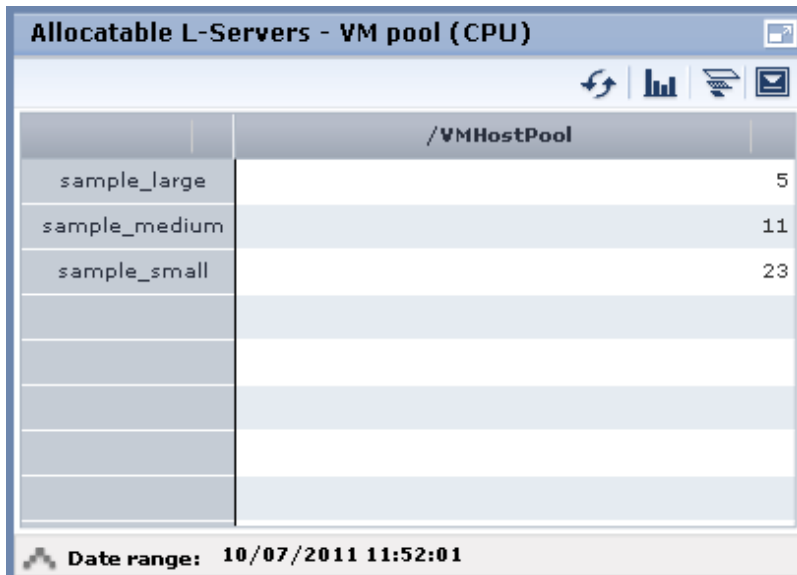
3.4 Alert List Display

When the **Alert** button is clicked from the Dashboard window, the Alert list (all) window will be displayed.
This window will not be used to display the local pools managed by the tenant administrators, since they cannot be the target of the alert settings.

Chapter 4 System Condition

This chapter explains how to monitor system condition.

📒 Note

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The following message may be displayed during monitoring of system condition:

> The authority error occurred. Closing the browser.

This error occurs if, for example, the same user ID is used to log in from a different client. In this case, log in again correctly.

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4.1 System Condition Display Range

The system condition can display the following information for the tenant belonging to the Tenant Administrator:

- CPU utilization

- Disk R/W Usage

- Disk R/W count

- Memory usage

- Network usage

📒 Note

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For tenants

- The above information is not displayed for L-Servers incorporated in the system using the L-Server import function of this product.

- Disk R/W usage, disk R/W count, memory usage, and network usage are not displayed if the virtualization software is Hyper-V. However, if the dynamic memory setting is enabled, memory usage is displayed.

- Disk R/W usage is not displayed if the virtualization software is RHEL5-Xen.

- Disk R/W usage is not displayed if the virtualization software is RHEL-KVM.

- Network usage is not displayed if the physical L-Server is Linux.

For VM hosts

- Network usage is not displayed if the VM host virtualization software used is either RHEL5-Xen or RHEL-KVM.

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4.2 L-Platform System Condition Display

Perform the following steps to display the L-Platform system condition:

1. From the ROR Console, select the **System Condition** tab.

    The **System Condition** window is displayed.

2. In the **System Condition** window, select the **Tree Display** tab.

The configuration of all owned tenants is displayed in the tree at the left.
At **View**, the "Tenant" showing a tree configuration is displayed as fixed. At **Record**, "Observed" - indicating the record type - is displayed as fixed.
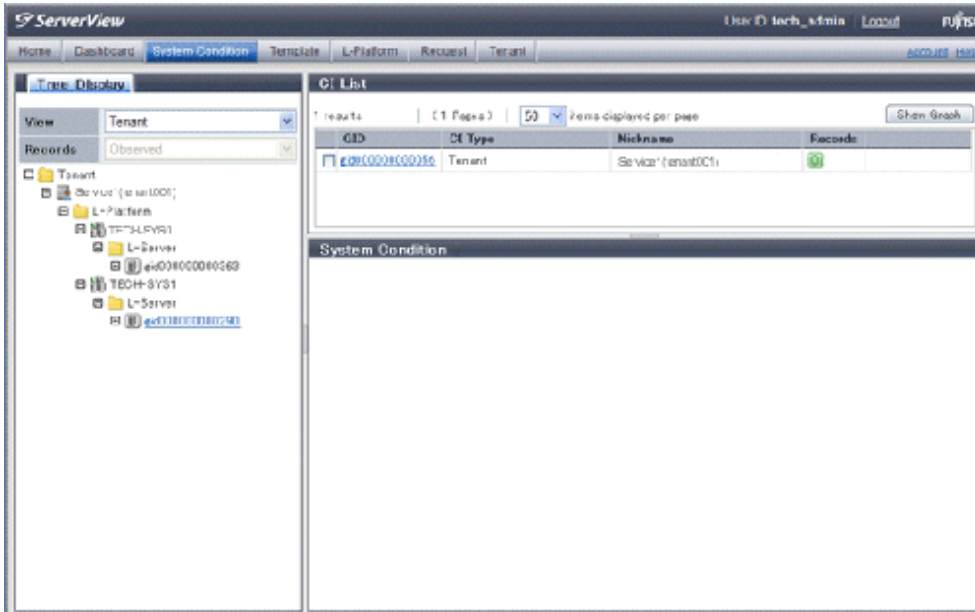
P Point
. . . .
If there are a large number of L-Platforms, expand the tree of the tenant in the pane on the left, then use the browser's "find on this page" feature to find the L-Platform while the L-Platform list is displayed.
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3. From the tree at the left, select the L-Platform for which to display the system condition.

The selected L-Platform is displayed in the CI list on the right.
If the "L-Platform" folder is selected in the tree, all L-Platforms under the folder are displayed in the CI list.

If an L-Server is selected in the tree, information about the selected server is displayed in the CI list.

The L-Platforms and L-Servers under each folder in the tree are displayed in descending order based on their update date and time.

4. Select an L-Platform in the CI list, and then click the **Show Graph** button.

The system condition is displayed in the lower part of the CI list. Refer to "4.2.1 System Condition Display" for details on the displayed system condition.

The table below explains the displayed items.

Item	Explanation
GID	Displays the identifier set by the system to identify the configuration item. If the CI list GID link is clicked, the configuration information of the target tenant, L-Platform or L-Server is displayed in a separate window. Refer to 4.2.2 Configuration Information Display" for the displayed configuration information.
CI Type	The CI types are as follows: - Tenant: If a tenant is selected - L-Platform: If an L-Platform is selected - L-Server: If an L-Server is selected

Item	Explanation
Nickname	Displays the display name of the configuration item. The following display names are displayed in accordance with the CI type: - For the tenant CI type: The tenant name determined during tenant registration ("tenant name (tenant ID)") - For the L-Platform CI type: The L-Platform subscription name set during L-Platform subscription - For the L-Server CI type: The L-Server name set during L-Platform subscription or L-Platform reconfiguration ("server name (host name)")
Record	Displays the type of records held by the configuration item. [0], indicating the actual information, is displayed.

🖝 Note

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Clicking the CI list column headers to sort the columns is effective only for the range displayed in that page. The sorting specification is reset when the next or previous page is displayed. Sorting spanning multiple pages is not available.

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4.2.1 System Condition Display

The system condition of the L-Platforms selected in the system condition window CI list is displayed as a graph at **System Condition** in the lower part of the window. Up to five L-Servers can be displayed at once in the graphs. If more than five L-Servers are selected, the first five are displayed.

The system condition contents can be switched by clicking the **System Condition** tabs.

The table below shows the contents under the **System Condition** tabs.

Tab name	Display content (*1)	Graph type	Display interval	Display interval switching (*2)
Total	Totals for each status	Vertical bar graph	30 minutes, starting from the current time	Not possible
CPU	CPU utilization	Horizontal polyline graph	One hour/day/month/year from the current time	Possible
Disk	Disk R/W Usage (*3)	Horizontal polyline graph	One hour/day/month/year from the current time	Possible
	Disk R/W count (*4)	Horizontal polyline graph	One hour/day/month/year from the current time	Possible
Memory	Memory usage (*5)	Horizontal polyline graph	One hour/day/month/year from the current time	Possible
Network	Network usage (*6)	Horizontal polyline graph	One hour/day/month/year from the current time	Possible
All	Overview of all the above statuses	Horizontal polyline graph	One hour/day/month/year from the current time	Possible

*1: Information is displayed using a different color for each L-Server.

*2: The display interval can be switched to a shorter interval by clicking the data plotting area of a horizontal polyline graph, or switched to a longer interval by clicking outside the data plotting area.

*3: Disk usage and network usage are not displayed if the virtualization software is Hyper-V and RHEL5-Xen.

*4: The disk R/W count is not displayed if the virtualization software is Hyper-V and RHEL-KVM.

*5: The memory usage is not displayed if the virtualization software is Hyper-V. However, it is displayed if the dynamic memory setting is enabled.

*6: The network usage is not displayed if the virtualization software is Hyper-V and the physical L-Server is Linux.

Note

- Information obtained from virtualization software is displayed in the system condition. Virtual Memory usage is not included.

- The system condition data is not reflected in the display until collection at the fixed intervals shown below is completed.
  Check the display after the fixed intervals shown below.

  Note that, if the contents are empty after a fixed interval, the connection destination L-Platform may be stopped. Contact the Tenant Administrator.

Tab name	Display period (*)	Collection time required before displaying
Total	30 days	one whole day (from 0:00 to 23:59)
CPU Disk Memory Network	one hour	ten whole minutes (from 0 minutes to 9 minutes)
	one day	one whole hour (from 0 minutes to 59 minutes)
	one month/one year	one whole day (from 0:00 to 23:59)

  *: The display period in each tab except for Total tab can be selected from one hour, one day, one month, or one year.

- System condition data is not displayed if the power is off at the monitored L-Server.

- If the CPU utilization status continues at 100% at the monitored L-Server, data collection timing may be delayed and an error of about one second may occur. This may cause CPU utilization (average value for a specified unit of time) to exceed 100%.
  Take into account the possibility of data errors when using this display.

  Example:
  If a monitored L-Server has one CPU and is displayed in units of one hour, the value in the system condition graphs and CSV file data may be displayed as 100.03% (60.02 minutes (near equal 3601 seconds)/60 minutes) even though the upper limit for CPU utilization is 100%.

Display examples for the **Total** tab and the **All** tab are shown below.

- **Total** tab
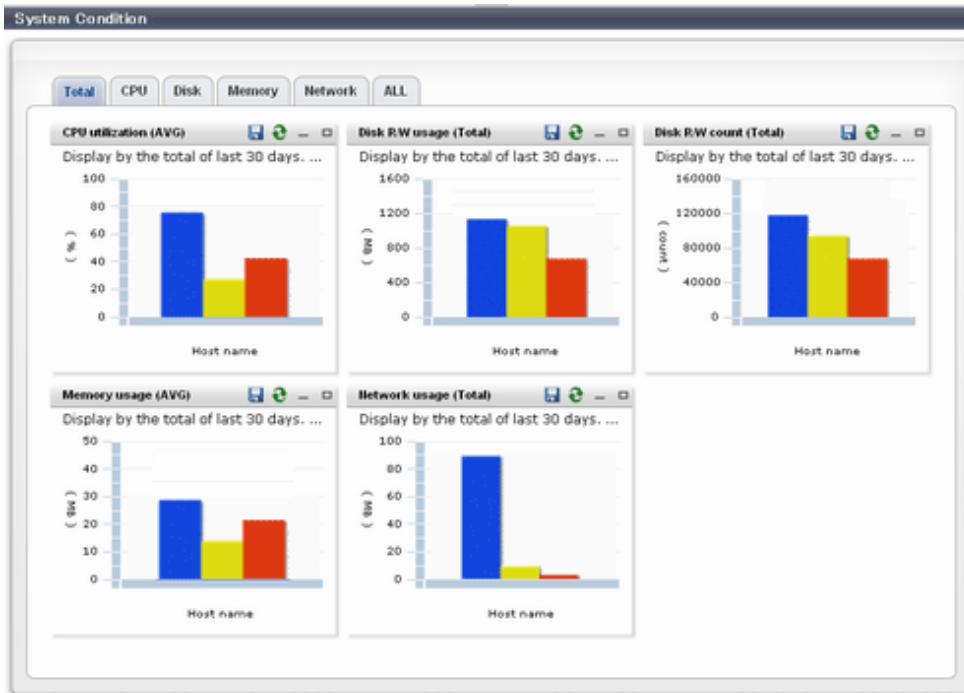
- **All** tab
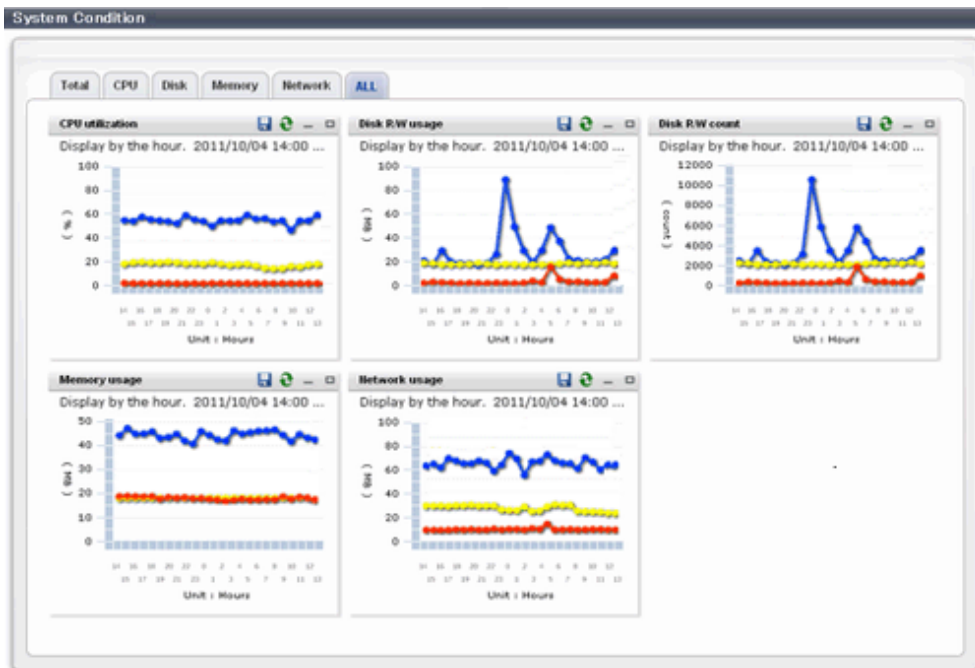
At each tab, the following icons displayed in the title bar can be used:

Icon	Tool tip	Explanation
⟳	Update	Updates the displayed contents
💾	Download CSV file	Downloads the graph data in CSV format
—	Minimize	Minimizes the specified window
▢	Maximize	Maximizes the specified window

Icon	Tool tip	Explanation
⌐	Restore	Restores the maximized window

The table below shows the CSV file items if data is downloaded from each graph.

Note that the CSV file encoding is Shift-JIS.

Graph type	Column name	Explanation	Unit	Description
CPU utilization	sdattim	Collection start time (*1)		yyyy/MM/dd HH:mm:ss
	resrcid	Resource ID		- in case of physical servers and Windows: "#" + CPU number or _Total - in case of physical servers and Linux: CPU number or _Total - in case of Hyper-V: VM name + ":Hv VP" + virtual Processer number
	recid	Record ID		Output any of the following - WIN_CPUBUSY - UX_CPUBUSY - VMW_GCPU - HV_VCPU - XEN_CPU - KVM_CPU
	consintl	Interval time	second	- in case of interval time is 10 minutes: 600 - in case of 1 hour: 3600 - in case of 24 hour: 86400
	coverage	Data coverage	(0 to 1)	
	cpupcent	CPU utilization	%	Output only in case of physical servers and Windows/Linux Processer utilization
	vmgcused	CPU utilization	%	Output only for VMware Physical CPU utilization consumed per resource pool or a virtual machine
	physres	Physical CPU information or virtual CPU information		Output only for VMware
	ptrtim	CPU utilization	%	Output only for Hyper-V Utilization of virtual processors allocated to a virtual machine and consumed by hypervisor code
	xenpcused	CPU utilization	%	Output only for RHEL5-Xen CPU utilization (total utilization of virtual CPUs set in the domain)

Graph type	Column name	Explanation	Unit	Description
	xencpun	Number of virtual CPUs in the domain	number	Output only for RHEL5-Xen
	Nickname	VM name		Output only for VMware/Hyper-V/ RHEL5-Xen
	kvmcpupcent	CPU utilization	%	Output only for RHEL-KVM CPU utilization (total utilization of virtual CPUs set in the domain)
	kvmcpus	Number of virtual CPUs in the domain		Output only for RHEL-KVM
Disk R/W Usage	sdattim	Collection start time (*1)		yyyy/MM/dd HH:mm:ss
	resrcid	Resource ID		- in case of physical servers and Windows: drive name or _Total - in case of physical servers and Linux: device name
	recid	Record ID		Output any of the following - WIN_PHYDISKBUSY - UX_DISKBUSY - VMW_DISK - KVM_DISK
	consintl	Interval time	second	- in case of interval time is 10 minutes: 600 - in case of 1 hour: 3600 - in case of 24 hour: 86400
	coverage	Data coverage	(0 to 1)	
	preadbyt	Disk read usage	bytes	Output only for Windows
	pwritbyt	Disk write usage	bytes	Output only for Windows
	iokreads	Disk read usage	Kbytes	Output only for Linux
	iokwrite	Disk write usage	Kbytes	Output only for Linux
	vmdmbread	Disk read usage	Mbytes	Output only for VMware Disk read usage for virtual machine and storage device units
	vmdmbwrt	Disk write usage	Mbytes	Output only for VMware Disk write usage for virtual machine and storage device units
	Nickname	VM name		Output only for VMware/Hyper-V/ RHEL5-Xen
	kvmdiskblockrdby	Disk read usage	bytes	Output only for RHEL-KVM Disk read usage in the domain
	kvmdiskblockwrby	Disk write usage	bytes	Output only for RHEL-KVM Disk write usage in the domain
Disk R/W count	sdattim	Collection start time (*1)		yyyy/MM/dd HH:mm:ss

Graph type	Column name	Explanation	Unit	Description
	resrcid	Resource ID		- in case of physical servers and Windows: drive name or _Total - in case of physical servers and Linux: device name
	recid	Record ID		Output any of the following - WIN_PHYDISKBUSY - UX_DISKBUSY - VMW_DISK
	consintl	Interval time	second	- in case of interval time is 10 minutes: 600 - in case of 1 hour: 3600 - in case of 24 hour: 86400
	coverage	Data coverage	(0 to 1)	
	preadsec	Disk read count		Output only for Windows Physical disk read operation count
	pwritsec	Disk write count		Output only for Windows Physical disk write operation count
	ioreads	Disk read count		Output only for Linux read count
	iowrite	Disk write count		Output only for Linux write count
	vmdreads	Disk read count		Output only for VMware Disk read count for virtual machine and storage device units
	vmdwrites	Disk write count		Output only for VMware Disk write count for virtual machine and storage device units
	vbdrd	Disk read count		Output only for RHEL5-Xen Virtual block device read count
	vbdwr	Disk write count		Output only for RHEL5-Xen Virtual block device write count
	Nickname	VM name		Output only for VMware/Hyper-V/ RHEL5-Xen
Memory usage	sdattim	Collection start time (*1)		yyyy/MM/dd HH:mm:ss
	resrcid	Resource ID		- in case of physical servers and Windows: MEMORY - in case of physical servers and Linux: FREEMEM
	recid	Record ID		Output any of the following - WIN_MEMORY - UX_MEMFREE - VMW_MEM - HV_DMEM_VM

Graph type	Column name	Explanation	Unit	Description
				- XEN_MEM - KVM-MEM
	consintl	Interval time		- in case of interval time is 10 minutes: 600 - in case of 1 hour: 3600 - in case of 24 hour: 86400
	coverage	Data coverage	(0 to 1)	
	comtot	Memory usage	bytes	Output only for Windows Commit size
	freememp	Memory usage	bytes	Output only for Linux Memory size utilization for user processes
	memuse	Memory usage	percent	Output only for Linux
	Vmgmtm	Memory usage	Mbytes	Output only for VMware Estimated working set size of resource pool and virtual machine units
	ppmemdmvm	Memory usage	Mbytes	Output only for Hyper-V Current memory capacity of virtual machine
	xenavm	Memory usage	Mbytes	Output only for RHEL5-Xen Memory capacity allocated to domain
	Nickname	VM name		Output for VMware/Hyper-V/ RHEL5-Xen
	kvmmemused	Memory usage	Mbytes	Output only for RHEL-KVM Memory capacity allocated to domain
Network utilization	sdattim	Collection start time (*1)		yyyy/MM/dd HH:mm:ss
	resrcid	Resource ID		Output only for Windows Network device name
	recid	Record ID		Output any of the following - WIN_NET_INTERFACE - VMW_NET - XEN_NET - KVM-NET
	consintl	Interval time		- in case of interval time is 10 minutes: 600 - in case of 1 hour: 3600 - in case of 24 hour: 86400
	coverage	Data coverage	(0 to 1)	
	ifbytin	Network usage (received)	bytes	Output only for Windows Amount of received data(byte)

Graph type	Column name	Explanation	Unit	Description
	ifbytot	Network usage (sent)	bytes	Output only for Windows Amount of sent data(byte)
	vmnpmvtr	Network usage (sent)	Mbits	Output only for VMware Amount of data transferred by virtual network device port unit
	vmnpmbrecv	Network usage (received)	Mbits	Output only for VMware Amount of data received by virtual network device port unit
	xenkbtx	Network usage (sent)	Kbytes	Output only for RHEL5-Xen Amount of data sent by virtual network interface
	xenkbrx	Network usage (received)	Kbytes	Output only for RHEL5-Xen Amount of data received by virtual network interface
	Nickname	VM name		Output only for VMware/Hyper-V/ RHEL5-Xen
	kvmnetrxby	Network usage (received)	bytes	Output only for RHEL-KVM Amount of data sent by virtual network interface
	kvmnettxby	Network usage (sent)	bytes	Output only for RHEL-KVM Amount of data received by virtual network interface

*1: When the information from the virtual L-server where the live migration was performed is output to CSV, the following phenomena may occur:

- Information for a certain point of time is output twice

- Information for a certain point of time is not output

If there is a large difference in the time and date in the VM host where the live migration was performed, the above phenomena will be more likely to occur.

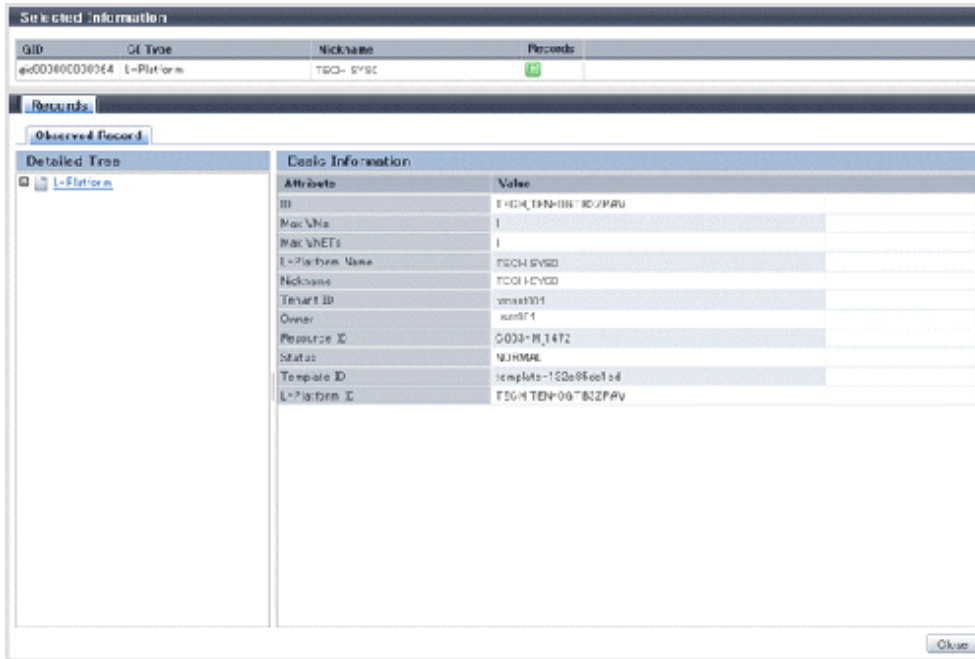## 4.2.2 Configuration Information Display

The tenant, L-Platforms and L-Servers displayed in the CI list of the system condition window are managed as configuration items (CIs).

When the GID link in the CI list of the system condition window is clicked, the configuration information of the target tenant, L-Platform or L-Server is displayed in a separate window.

A display example is shown below.

The table below explains the displayed items.

Item		Explanation
Selected Information	**GID**	Displays the identifier set by the system to identify the configuration item.
	CI Type	Displays the configuration item type. The CI types are as follows: - Tenant: If a tenant is selected - L-Platform: If an L-Platform is selected - L-Server: If an L-Server is selected
	Nickname	Displays the display name of the configuration item. The following display names are displayed in accordance with the CI type: - For the tenant CI type: The tenant name determined during tenant registration ("tenant name (tenant ID)") - For the L-Platform CI type: The L-Platform subscription name set during L-Platform subscription - For the L-Server CI type: The L-Server name set during L-Platform subscription or L-Platform reconfiguration ("server name (host name)")
	Record	Displays the type of records held by the configuration item. [0], indicating the actual information, is displayed.
Record	**Detailed Tree**	This is a tree of the elements comprising the configuration item. The following elements are displayed in accordance with the CI type: - For the tenant CI type: Tenants - For the L-Platform CI type: Instances - For the L-Server CI type: L-Server node information When an element is selected, the element attribute values are displayed in the basic information. Values are displayed as attribute values, and differ depending on the element: - If the element is a tenant: The value determined during tenant registration

Item			Explanation
			- If the element is an instance: The value set during L-Platform subscription - If the element is L-Server node information: The value set during L-Platform subscription or L-Platform reconfiguration
	Basic Information	**Attribute**	Displays the attribute name. When the label in the upper part is clicked, items can be sorted by attribute name.
		Value	Displays the attribute value. When the label in the upper part is clicked, items can be sorted by attribute value.
Close button			When this button is clicked, the window closes.

Chapter 5 Template

This chapter explains how to create and manage L-Platform templates.

5.1 L-Platform Template Components

This section explains the types of information comprising an L-Platform template.

The table below shows the information comprising an L-Platform template.

Table 5.1 Information comprising an L-Platform template

Information	Description
Template information	Defines the L-Platform template configuration
Segment information	Defines the network resource configuration
Image information	Defines the cloning image configuration
Software information	Defines the software configuration contained in the cloning image

The relationship between information comprising the L-Platform template is shown below.

Figure 5.1 Figure The relationship between information comprising the L-Platform template
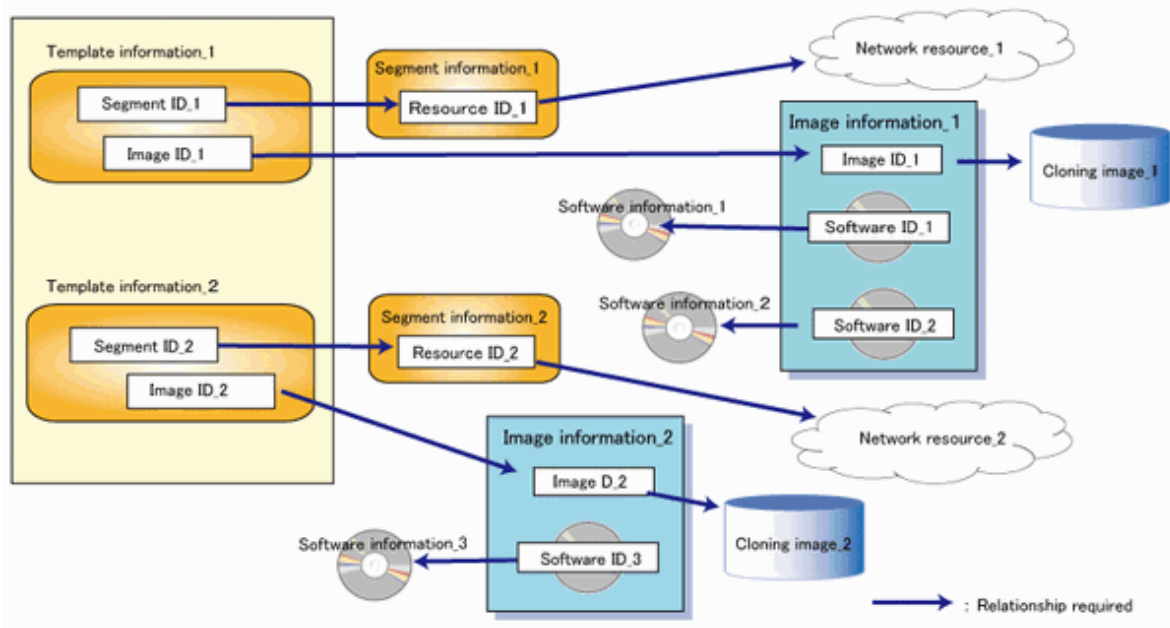
5.2 Explanation of Windows

This section explains the ROR Console **Template** tab window.

The following figure shows the ROR Console **Template** tab window.

Figure 5.2 ROR Console Template tab

5.2.1 Menu

The following figure shows the menu displayed under the ROR Console **Template** tab.
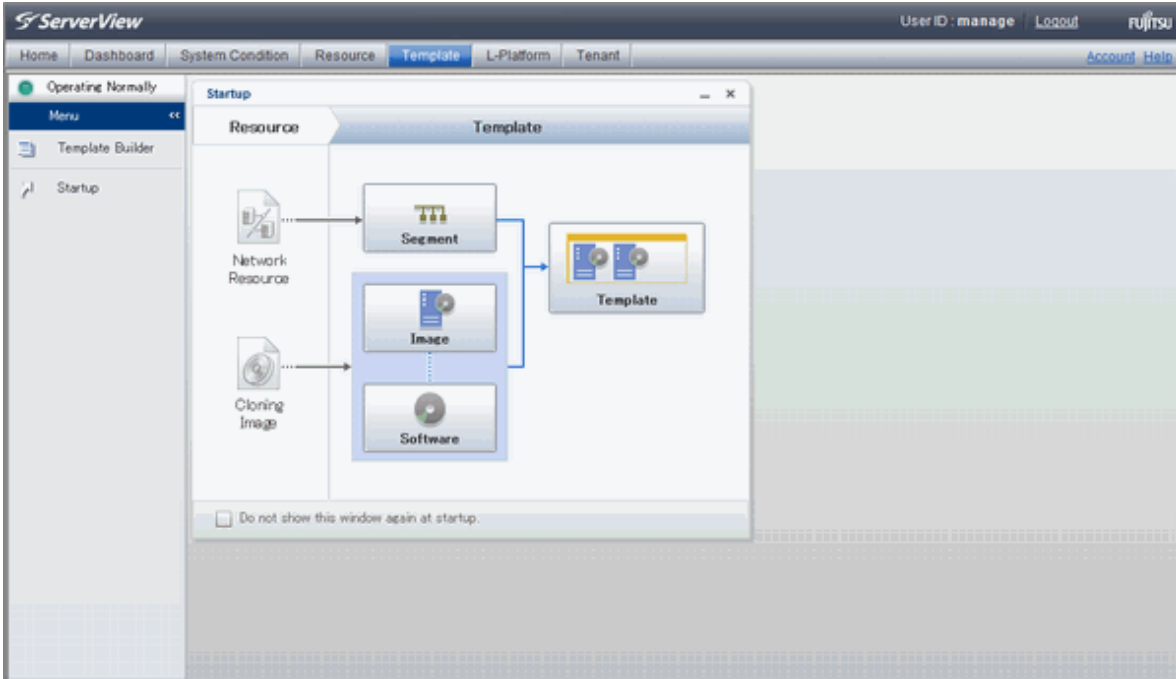
Figure 5.3 Menu
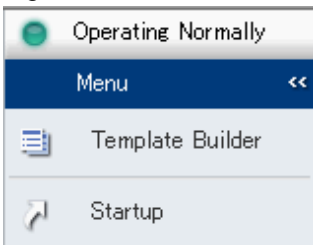
When **Template Builder** is selected, the L-Platform Template window will be displayed.

When **Startup** is selected, the **Startup** window is displayed

🛈 Note
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- During L-Platform template operations, if stoppage of the Admin Server or something similar inhibits connection, the lamp on the menu changes to grey and "Not Operating" is displayed. If this occurs, contact the system administrator.
....

5.2.2 Startup Window

The following figure shows the **Startup** window displayed under the ROR Console **Template** tab window.

Figure 5.4 Startup window
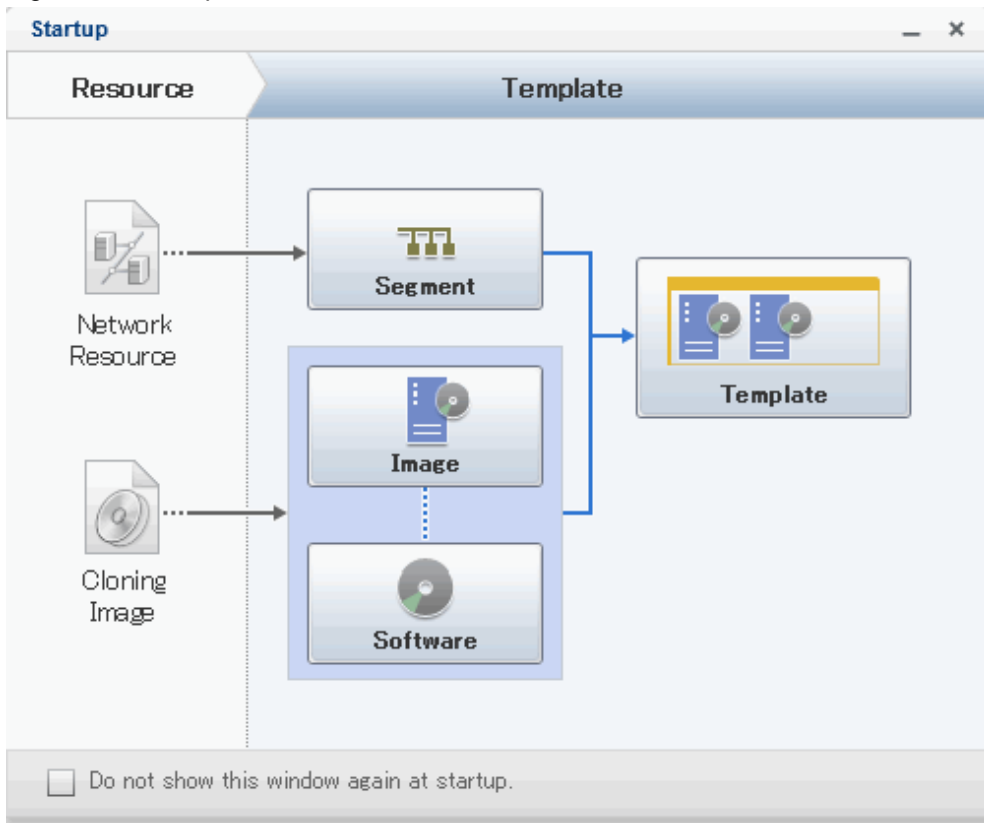
The procedures for creating the various types of information comprising an L-Platform template are shown as button images on the **Startup** window.

When the button image for each type of information is clicked, the corresponding tab of the **L-Platform Template** window is displayed.

5.2.3 L-Platform Template Window

The L-Platform template window is displayed according to one of the following methods:

- Selecting **Template builder** from the menu

- Clicking the button image of an information type on the **Startup** window

The **L-Platform Template** window is comprised of four tabs. The table below shows the correspondences between the tab names and the information comprising the L-Platform template.

Table 5.2 Correspondences between tab names and the information comprising the L-Platform template

Tab Name	Information
Template	Template information
Segment	Segment information
Image	Image information
Software	Software information

5.2.3.1 Template Tab

The following figure shows the **Template** tab of the **L-Platform Template** window.

Figure 5.5 Template tab of the L-Platform Template window
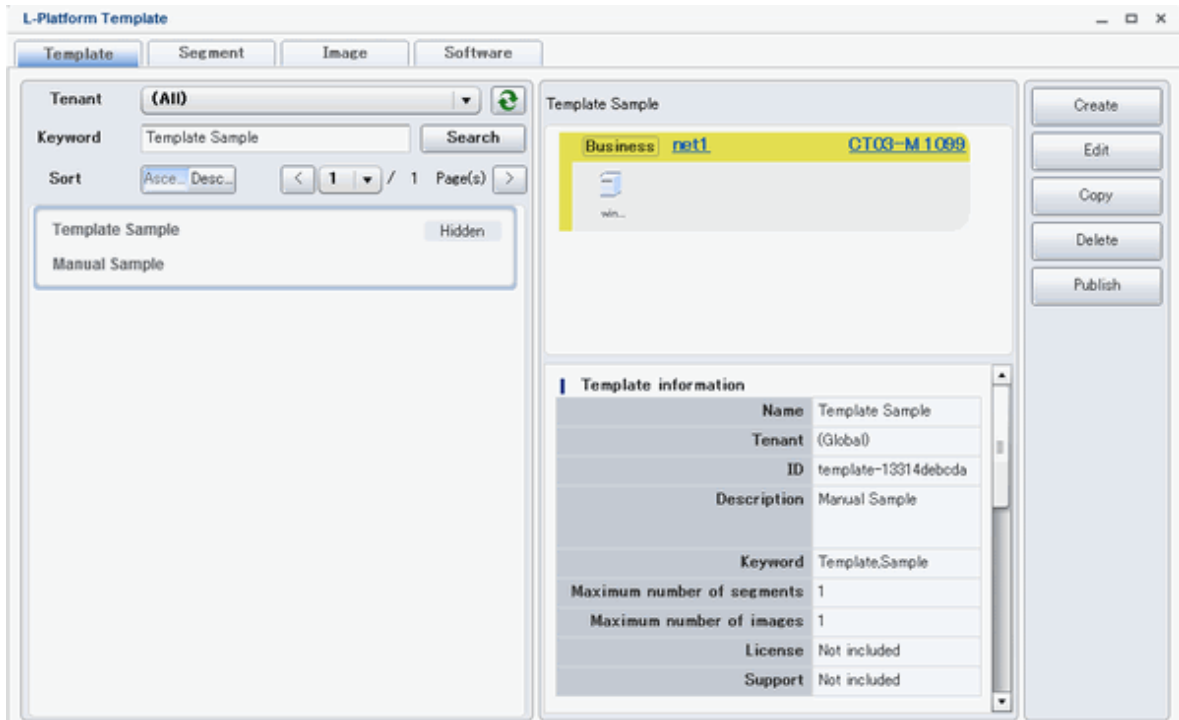
Window Explanation

- The left side of the page displays a list of L-Platform templates.

- When an L-Platform template is selected in the L-Platform template list, the right side of the page displays an image of the selected L-Platform template configuration (upper part) and template information details (lower part).

- Tenants and keywords can be used as L-Platform template list filters.

- Clicking the reload button ( ) resets sorting, pages, and selected states.

P Point
. . . .
Strings included in the keyword filter are those that were specified in "keyword" in basic information of the template information.
. . . .

Explanation of Buttons

- Edit

  Edits the contents of existing registered template information.

  Refer to "5.3.4 Editing L-Platform Template" for details.

- Copy

  Creates new template information based on existing registered template information.

  Refer to "5.3.3 Copying L-Platform Template" for details.

- Delete

  Deletes template information.

  Refer to "5.3.5 Deleting L-Platform Template" for details.

- Publish

Publishes an L-Platform template.

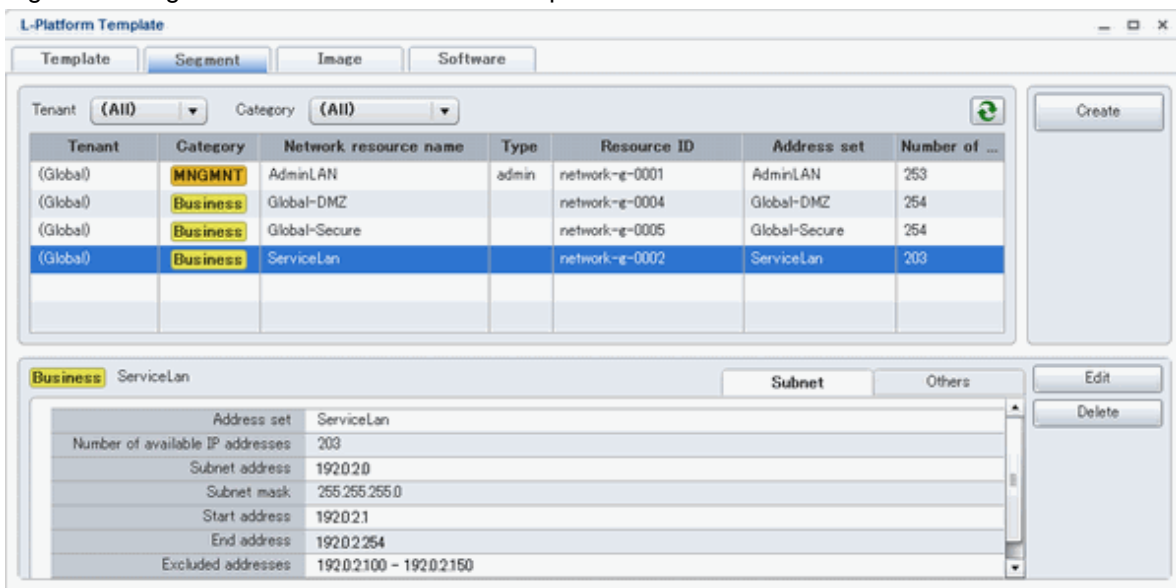Refer to "5.3.6 Publishing and Hiding L-Platform Template" for details.

- Hide

Hides an L-Platform template.

Refer to "5.3.6 Publishing and Hiding L-Platform Template" for details.

5.2.3.2 Segment Tab

The following figure shows the **Segment** tab of the **L-Platform Template** window.

Figure 5.6 Segment tab of the L-Platform Template window

Window Explanation

- The upper part of the page displays a list of segment information.

- When segment information is selected in the segment information list, the lower part of the page displays details of the selected segment information.

- The display sequence in the segment information list can be changed to ascending order or descending order. To change the sequence, click the header (Category, Network resource name, etc.).

- Tenants and categories (Business, Management) can be used as segment information list filters.

- Clicking the reload button ( ) resets sorting and selected states.

Explanation of Buttons

- Create

Creates new segment information.

Refer to "5.3.2 Creating New L-Platform Template" for details.

- Edit

Edits the contents of existing registered segment information.

Refer to "5.3.4 Editing L-Platform Template" for details.

- Delete

  Deletes segment information.
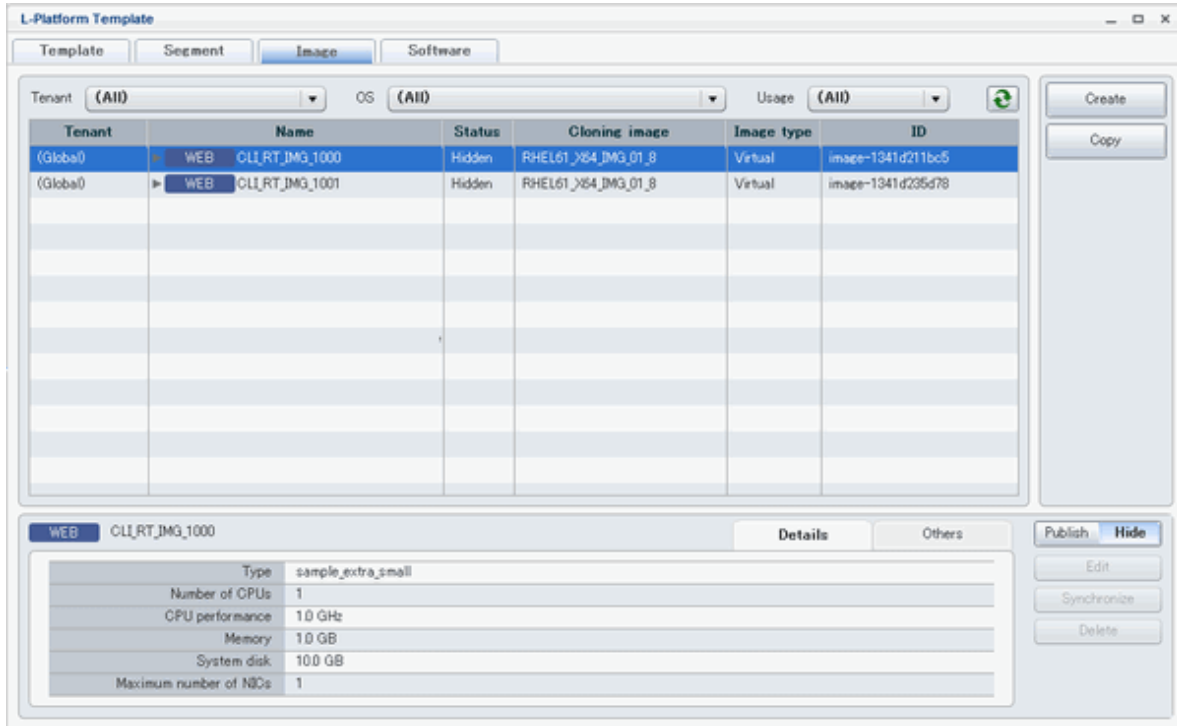
  Refer to "5.3.5 Deleting L-Platform Template" for details.

5.2.3.3 Image Tab

The following figure shows the **Image** tab of the **L-Platform Template** window.

Figure 5.7 Image tab of the L-Platform Template window

Window Explanation

- The upper part of the page displays a list of image information. Note that the software information and patch information included in the image information is displayed in a tree format.

- When image information is selected in the image information list, the lower part of the page displays details of the selected information. Note that if software information or patch information is selected in the image information list, details of that selected information are displayed.

- The display sequence in the image information list can be changed to ascending order or descending order. To change the sequence, click the header (Name, ID, etc).

- Tenants, the OS, and Usage can be used as image information list filters.

- Clicking the reload button ( ) resets sorting and selected states.

Explanation of Buttons

- Create

  Creates new image information.

  Refer to "5.3.2 Creating New L-Platform Template" for details.

- Copy

  Creates new image information based on existing registered image information.

Refer to "5.3.3 Copying L-Platform Template" for details.

- Publish

    Publishes image information.

    Refer to "5.3.7 Publishing Image Information" for details.

- Hide

    Hides image information.

    Refer to "5.3.7 Publishing Image Information" for details.

- Edit

    Edits the contents of existing registered image information.

    Refer to "5.3.4 Editing L-Platform Template" for details.

- Synchronize

    Updates the image information if the cloning image has been updated.

    This button is enabled only if image information synchronization is necessary.

    Refer to "5.3.8 Synchronizing Image Information" for details.

- Delete

    Deletes image information.

    Refer to "5.3.5 Deleting L-Platform Template" for details.

5.2.3.4 Software Tab
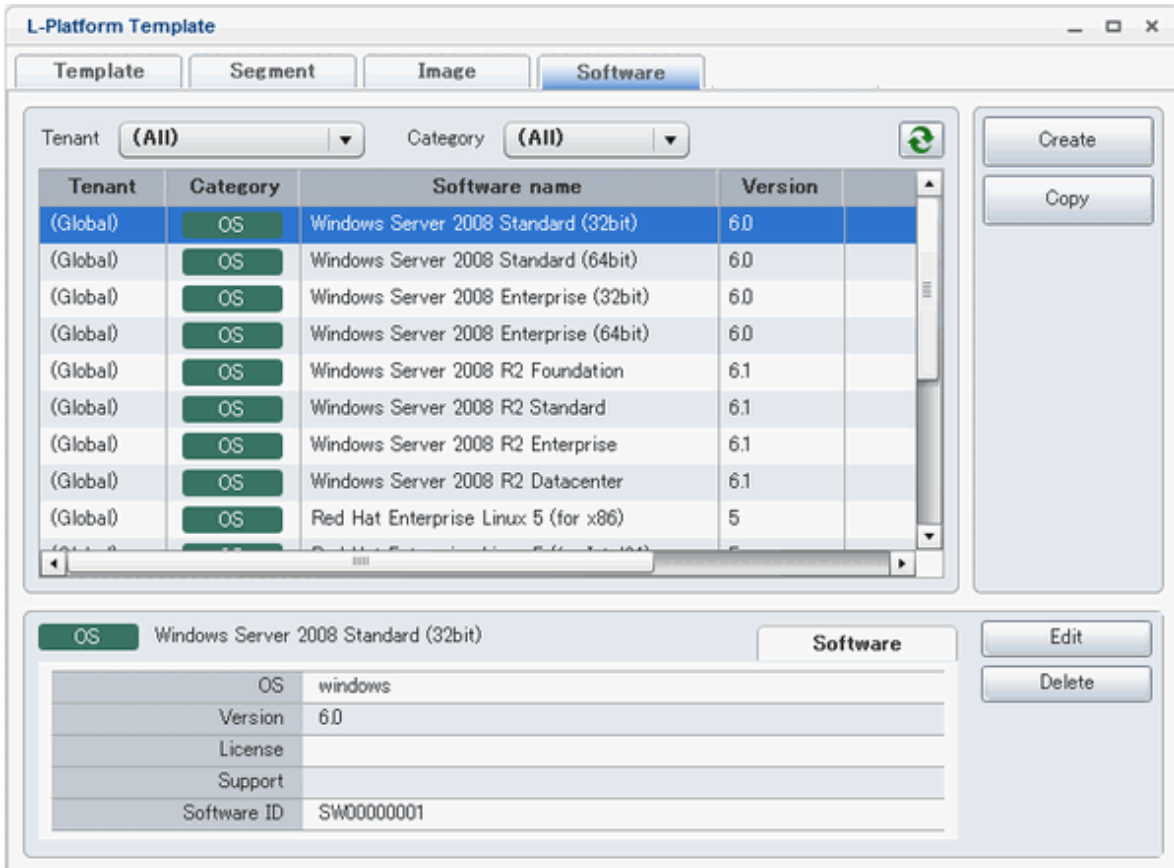
The following figure shows the **Software** tab of the **L-Platform Template** window.

Figure 5.8 Software tab of the L-Platform Template window

Window Explanation

- The upper part of the page displays a list of software information.

- When software information is selected in the software information list, the lower part of the page displays details of the selected software information.

- The display sequence in the software information list can be changed to ascending order or descending order. To change the sequence, click the header (category, software name, etc.).

- Tenants can be used as software information list filters.

- Clicking the reload button ( ) resets sorting and selected states.

Explanation of Buttons

- Create

    Creates new software information.

    Refer to "5.3.2 Creating New L-Platform Template" for details.

- Copy

    Creates new software information based on existing registered software information.

    Refer to "5.3.3 Copying L-Platform Template" for details.

- Edit

    Edits the contents of existing registered software information.

    Refer to "5.3.4 Editing L-Platform Template" for details.

- Delete

    Deletes the software information.

    Refer to "5.3.5 Deleting L-Platform Template" for details.

5.3 L-Platform Template Operations

This section explains L-Platform template operations.

5.3.1 L-Platform Template Operations and Roles

Infrastructure Administrators and Tenant Administrators can perform L-Platform template operations.

There are two types of L-Platform templates: tenant-specific templates that can be used only by a specific tenant, and global templates that can be used by all tenants.

The Tenant Administrator can perform operations for only tenant-specific templates owned by tenants managed by that Administrator.

Note that Tenant Administrators cannot create new template information. However, they can add tenant-specific templates to the tenants they manage by copying from global templates or tenant-specific templates.

5.3.2 Creating New L-Platform Template

For the various types of information comprising an L-Platform template, the following information can be newly created:

- Segment information

- Image information

- Software information

Note that a Tenant Administrator must prepare tenant-specific network resources before creating new segment information.

Follow the procedure below to newly create the above information:

1. On the **L-Platform Template** window, select the tab (Segment, Image, or Software) of the information to be newly created.

1. Click the **Create** button.

2. Set information in the new creation window.

   Refer to "5.4 Items to Set for Each Type of L-Platform Template Information" for details on the information to be set.

3. Click the **Create** button.

   A message indicating that the template has been created is displayed and the template is created.

5.3.3 Copying L-Platform Template

For the various types of information comprising an L-Platform template, the following information can be copied:

- Template information

- Image information

- Software information

Follow the procedure below to copy the above information:

1. On the **L-Platform Template** window, select the tab (Template, Image, or Software) of the information to be copied.

2. From the list, select the information to be referenced.

3. Click the **Copy** button.

4. The information set in the copy window is the same as the referenced information. If required, change this information.

   Refer to "5.4 Items to Set for Each Type of L-Platform Template Information" for details on the information to be set.

5. Click the **Create** button.

   A message indicating that the template has been created is displayed and the template is created.

5.3.4 Editing L-Platform Template

For the various types of information comprising an L-Platform template, the following information can be edited:

- Template information

- Segment information

- Image information

- Software information

Follow the procedure below to edit the above information:

1. On the **L-Platform Template** window, select the tab (Template, Segment, Image, or Software) of the information to be edited.

2. From the list, select the information to be edited.

3. Click the **Edit** button.

4. Change the information on the edit window.

   Refer to "5.4 Items to Set for Each Type of L-Platform Template Information" for details on the information to be set.

5. Click the **OK** button.

A message indicating that the template has been edited is displayed and the template is changed.

P Point
. . . .

- Image information cannot be edited if it is in use by published template information or if it is published.

- Software information cannot be edited if it is in use by published template information.

- When image information is edited, it is updated to the latest cloning image resource ID.
. . . .

5.3.5 Deleting L-Platform Template

For the various types of information comprising an L-Platform template, the following information can be deleted:

- Template information

- Segment information

- Image information

- Software information

Follow the procedure below to delete the above information:

1. On the **L-Platform Template** window, select the tab (Template, Segment, Image, or Software) of the information to be deleted.

2. From the list, select the information to be deleted.

3. Click the **Delete** button.

A deletion confirmation message is displayed.

4. Click the **Yes** button.

The selected information is deleted.

Note that information must be deleted in the following sequence if all types of information comprising an L-Platform template are being deleted:

1. Template information

2. Segment information

3. Image information

4. Software information

However, the order of Items 2 and 3 can be reversed.

P Point
. . . .

- Image information cannot be deleted if it is in use by any template information, or if it is published.

- Software information cannot be deleted if it is in use by any image information.
. . . .

5.3.6 Publishing and Hiding L-Platform Template

An L-Platform template can be published or hidden.

Publication enables an L-Platform to be created on the basis of the L-Platform template.

If hidden, an L-Platform cannot be created on the basis of the L-Platform template.

Follow the procedure below to publish or hide an L-Platform template:

1. On the **L-Platform Template** window, select the **Template** tab.

2. From the L-Platform template list, select the L-Platform template to be published or hidden.

3. Click the **Publish** button or the **Hide** button.

   The selected L-Platform template is published or hidden.

5.3.7 Publishing Image Information

Create an L-Platform on the basis of an L-Platform template.

An L-Platform can be created with the same configuration as the L-Platform template, or the configuration can be changed.

Normally, when changing a configuration, only the image information defined in the L-Platform template is displayed as a usable server list. However, by publishing the image information, the published image information can also be displayed in the server list as usable information regardless of the definitions in the L-Platform template.

This enables image information other than the image information defined in the L-Platform template to be added when creating an L-Platform.

Follow the procedure below to publish or hide image information:

1. On the **L-Platform Template** window, select the **Image** tab.

2. From the image information list, select the image information to be published or hidden.

3. Click the **Publish** button or the **Hide** button.

   The selected image information is published or hidden.

5.3.8 Synchronizing Image Information

Cloning image resource IDs are held in the image information.

If an cloning image is updated, the resource IDs are changed. Therefore, the resource IDs held in the image information must be updated. This is known as image information synchronization.

Follow the procedure below to synchronize image information:

1. On the **L-Platform Template** window, select the **Image** tab.

2. From the image information list, select the cloning image to be synchronized.

3. Click the **Synchronize** button.

4. If required, change the information on the **Synchronize Image Information** window.

   Refer to "5.4 Items to Set for Each Type of L-Platform Template Information" for details of the information to be set.

5. Click the **OK** button.

   A message indicating that the image information has been edited is displayed and the image information is changed.

5.4 Items to Set for Each Type of L-Platform Template Information

This section explains to items to be set in the various types of information comprising an L-Platform template.

Refer to the settings items explained here when performing the following L-Platform template operations:

- 5.3.2 Creating New L-Platform Template

- 5.3.3 Copying L-Platform Template

- 5.3.4 Editing L-Platform Template

Note that only those items that can be set are explained here. Items that cannot be changed are not explained.

5.4.1 Software Information

The window used to set software information is shown below.

Note that the windows displayed when new software information is being created are used as examples in this explanation.

Figure 5.9 Window for setting software information

Explanation of Items

- OS

    Select one of the following software operating systems:

    - Windows

    - Linux

    - Windows (64 bit)

    - Linux (64 bit)

- Software name

    Enter up to 85 characters (excluding $<$, $>$, &, ", and ') for the software name

    If this is filtered by category and operating system, the list of registered software information will be displayed. The software name can also be selected from the list and edited.

- Version

    Enter up to 10 bytes (excluding $<$, $>$, &, ", and ') for the software version

- License

    Enter up to 85 characters (excluding $<$, $>$, &, ", and ') for the software license information

If OS was specified for Category, specify the product key for the Windows operating system. This cannot be specified in Linux operating systems.

- When the virtualization software is VMware

  For Windows Server 2003, specify the product key for the Windows operating system.

  For an operating system that is not Windows Server 2003, specify " " (an empty string).

- When the virtualization software is Hyper-V

  Specify the product key for the Windows operating system.

- Support

  Enter up to 85 characters (excluding <, >, &, ", and ') for the software support information.

Operation Procedure

Follow the procedure below for operations at the window for setting software information:

1. Set each of the software information items.

2. Click the **Create** button.

   The **Software** tab list window is displayed.

Note
....
When the **Software** tab list window is displayed, tenant and keyword filtering, sorting, pages, and selected states are all reset.
....

5.4.2 Image Information

Set image information on the following five pages:

1. Select Image page (this page is only seen when creating new image information)

2. Set Basic Info page

3. Select Software page
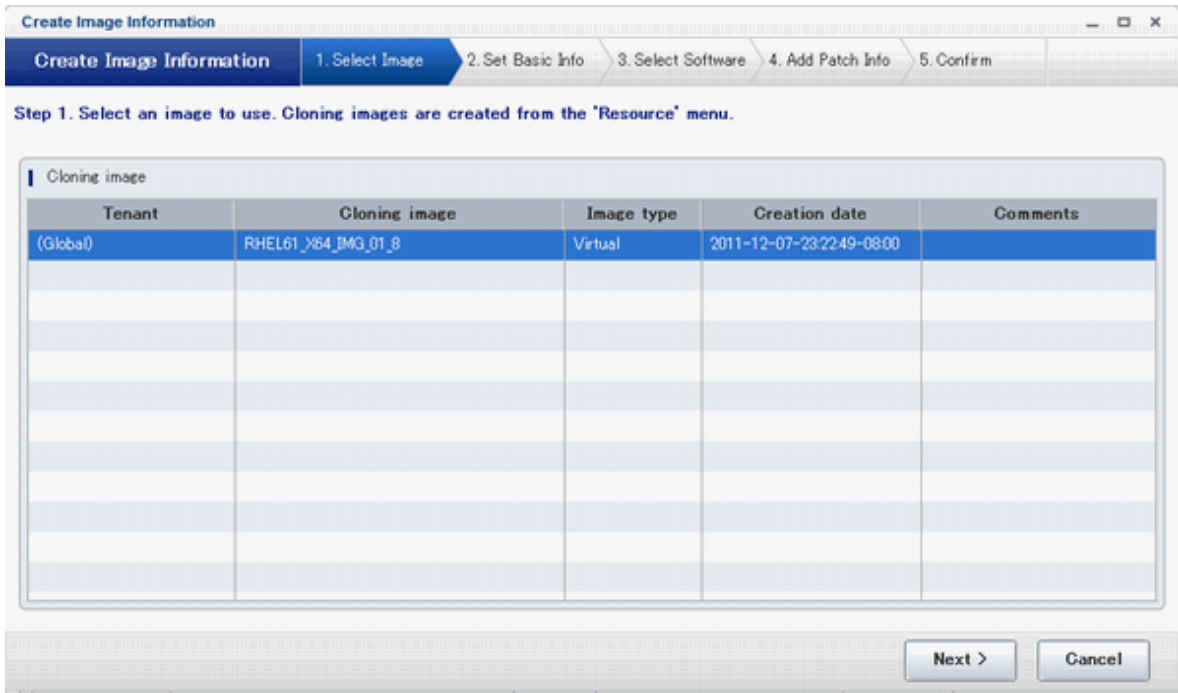
4. Add Patch Info page

5. Confirm page

Note that the windows displayed when new image information is being created are used as examples in this explanation.

5.4.2.1 Select Image Page

On the Select Image page, select the cloning image that will be used.

The **Select Image** page is shown below.

Figure 5.10 Image information Select Image page

Operation Procedure

Follow the procedure below for operations at the **Select Image** page:

1. Select an cloning image from the list.

2. Click the **Next** button.

   The **Set Basic Info** page is displayed.

5.4.2.2 Set Basic Info Page

On the Set Basic Info page, set the basic information for the image information.

The **Set Basic Info** page is shown below.

Figure 5.11 Image information Set Basic Info page

Explanation of Items

- Image information name

  Enter up to 85 characters (excluding <, >, &, ", and ') for the image information name

- Type

  Selects the registered L-Server template.

  L-Server templates in which a model name is specified are not displayed. An L-Server template that does not specify a model name must be prepared before image information can be created for a physical L-Server.

- Usage

  Selects the usage of the server included in the image from those shown below. Multiple options can be selected.

    - WEB: Web Server

    - AP: Application Server

    - DB: DB Server

- System disk

  Specifies the size of the system disk for a server included in the cloning image. Range: 0.1-99999.9 GB.

- Maximum number of CPUs

  Specifies the maximum number of CPUs that can be specified when creating a new L-Platform.
  Specify a value in the range from 1 to the upper limit value for the registered VM pool.

  Can be omitted. If omitted, it is assumed that the upper limit value for the registered VM pool is specified.

- Maximum CPU performance

  Specifies the maximum CPU performance in GHz, which can be specified when creating a new L-Platform.

  Specify a value in the range from 0.1 to the upper limit value for the registered VM pool.

  Can be omitted. If omitted, it is assumed that the upper limit value for the registered VM pool is specified.

- Maximum memory

  Specifies the maximum memory size in GB, which can be specified when creating a new L-Platform.

  Specify a value in the range from 0.1 to the upper limit value for the registered VM pool.

  Can be omitted. If omitted, it is assumed that the upper limit value for the registered VM pool is specified.

- Maximum number of data disks

  Specifies the maximum number of extension disks that can be added to the server. Range: 0-99.

- Maximum data disk size

  Specifies the maximum size of the extended disk size in GB, which can be specified when creating a new L-Platform.

  Specify a value in the range from 0.1 to the upper limit value for the registered storage pool.

  Can be omitted. If omitted, it is assumed that the upper limit value for the registered storage pool is specified.

- Maximum number of NICs

  Specifies the number of NICs. Range: 1-99.

- Initial password

  Enter up to 85 characters (excluding <, >, &, ", and ') for the password for the users below.

  [Windows]

  Specified password is set to OS.

  Can be omitted. if omitted, it is generated automatically.

    - When the virtualization software is VMware

      Specifies the password for the user name "Administrator".

    - When the virtualization software is Hyper-V

      Specifies the password for the local administrator account used in the L-Server that will be created.

  [Linux]

  Specifies the superuser password.

  The password must match the password already set in the cloning image.

- Initial password (confirm)

  Specifies the same value as Initial password.

- Resource tags

  Enter up to 85 characters (excluding <, >, &, ", and ') for the character string that filters the resources to be displayed as deployment destination VM pool/server pool options when creating a new L-Platform

  The only resources displayed as options are those for which the character string in the VM pool/server pool comment field contains the character string specified as the resource tags.

💹 Example

. . . .

Example: If the specification is as follows, only /VMPool1 and /VMPool2 are displayed as options:

/VMPool1 comment: web

/VMPool2 comment: web

/VMPool3 comment: ap

Resource tags: web

Operation Procedure

The operation procedure on the Basic information page is as follows:

1. Set the various basic information items for the image information.

2. Click the **Next** button.

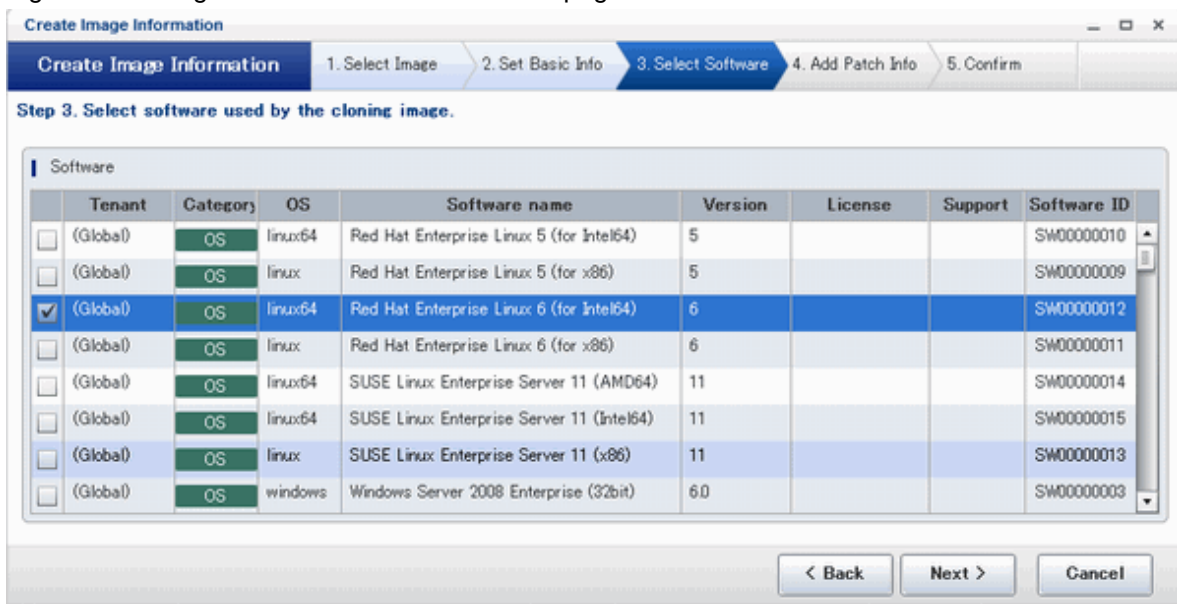   The **Select Software** page is displayed.

P Point

If an input item contains an error, and error message is displayed. If an error message is displayed, refer to the error message and correct the setting.

5.4.2.3 Select Software Page

On the Select Software page, set the software used in the cloning image in the image information.

The **Select Software** page is shown below.

Figure 5.12 Image information Select Software page

Operation Procedure

The operation procedure on the Select Software page is as follows:

1. Select the check box for the software that will be set.

2. Click the **Next** button.

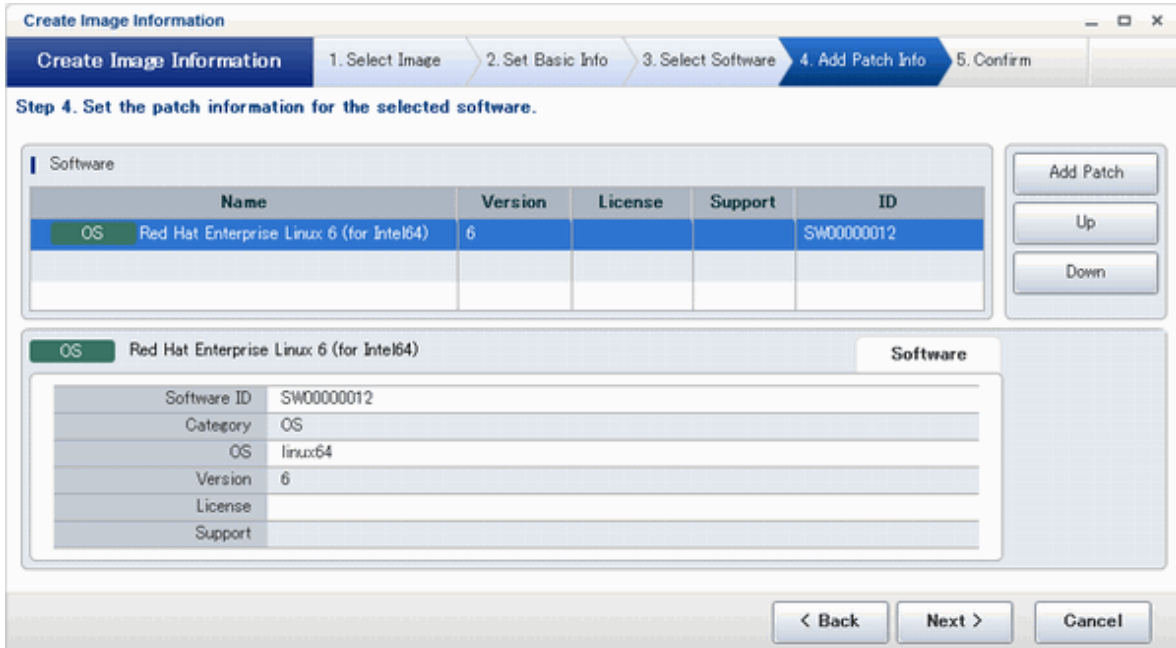   The **Add Patch Info** page is displayed.

Point

....

If no selection is made or if multiple selections are made, an error message is displayed. Ensure that one selection is made.

....

5.4.2.4 Add Patch Info Page

Add, change, or delete software patch information at the **Add Patch Info** page.

The **Add Patch Info** page is shown below.

Figure 5.13 Image information Add Patch Info page

Window Explanation

The upper part of the page displays a list of software information or patch information.

When software information or patch information is selected in the list, the lower part of the page displays details of the selected information.

Explanation of Buttons

- Add Patch

    Adds patch information.

    When the software or patch information is selected from the list at the top of the page, the **Add Patch** button will be displayed.

    Refer to "Add Patch Information" for details.

- Up, Down

    When the patch information is selected from the list at the top of the page and the **Up** or **Down** button is clicked, the patch information that was selected moves up or down.

- Delete

    Deletes patch information.

    When the patch information is selected from the list at the top of the page, the **Delete** button will be displayed.

    Refer to "Delete Patch Information" for details.

Add Patch Information

The procedure to add patch information is as follows:

1. From the list at the top of the page, select the software or patch information for which the patch is to be added.

2. Click the **Add Patch** Button.

   The patch information will be added below the selected software information or patch information.

3. The component name for the patch information and the input field for the description will be displayed at the bottom of the page. Enter the required items.

4. Click the **Next** button.

   The **Confirm** page is displayed.

5.
   Figure 5.14 Add Patch Info page (Add Patch information)

Explanation of Items

- Patch ID

  Enter up to 32 bytes (an ASCII character string excluding <, >, &, ", and ') for the patch ID

  The same patch ID cannot be set multiple times for one type of software.

  The default is 'PATCH + "consecutive numbering (from 1)"'.

- Component Name

  Enter up to 85 characters (excluding <, >, &, ", and ') for the name of the component to which the patch is applied

- Description

  Enter up to 85 characters (excluding <, >, &, ", and ') for the patch explanation.

Change Patch Information

To change the patch information that was set:

1. From the list in the upper part of the page, select the patch information to be changed.

2. Detailed information about the selected patch information will be displayed at the bottom of the page. Change the information as necessary.

3. Click the **Next** button.

   The **Confirm** page is displayed.

Point

. . . .

If the selected patch information was changed, the syntax check for the changed values will be performed automatically. If the syntax is correct, the patch information will be changed. If a syntax error occurred, an error message will be displayed and the pre-change values will be restored.

. . . .

Delete Patch Information

The procedure to delete patch information is as follows:

1. From the list in the upper part of the page, select the patch information to be deleted.

2. Click the **Delete** button.

   A deletion confirmation message is displayed.
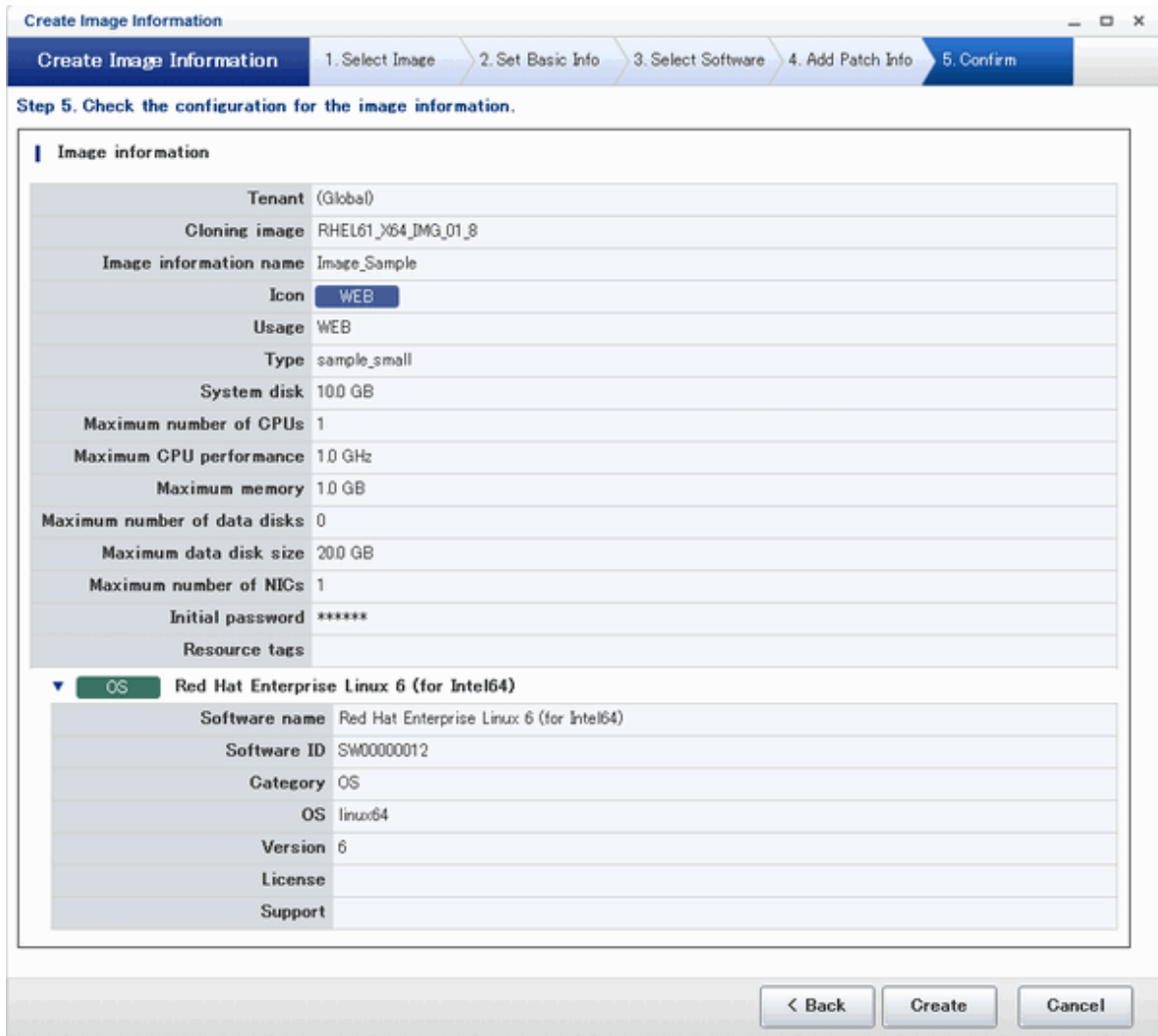
3. Click the **Yes** button.

   The patch information is deleted.

5.4.2.5 Confirm Page

Check the set image information at the **Confirm** page, and create, copy, or edit the image information.

The **Confirm** page is shown below.

Figure 5.15 Image information Confirm page

Operation Procedure

The operation procedure on the Confirm page is as follows:

1. Check whether the displayed content is valid.

   If it is invalid, go back using the **Back** button, and configure correct settings.

2. Click the **Create** button.

   A message indicating that the image information has been created is displayed, and the image information is registered.

   Then, the **Image** tab list window is displayed.

Note

When the **Image** tab list window is displayed, tenant, operating system, and usage filtering, and also sorting and selected states, are all reset.

5.4.3 Segment Information

The window used to set segment information is shown below.

Note that the window displayed when a new segment is being created is used as an example in this explanation.

Figure 5.16 Create New Segment window

Explanation of Items

- Category

   Select one of the following categories:

   - Business Segment

   - Manager Segment

- Segment type

   Enter any character string (an ASCII character string not including <, >, &, ", or ') of up to 32 bytes to identify the segment.

   To set a network resource for segment information that is specified in a rule set of a firewall,

   specify the same character string as SegmentType specified in the parameter file of the rule set.

Operation Procedure

The procedure to create segment information is as follows:

1. Set each of the segment information items.

2. Click the **Create** button.

   The **Segment** tab list window is displayed.

📝 **Note**
. . . .
When the **Segment** tab list window is displayed, tenant and category filtering, sorting, and selected states are all reset.
. . . .

5.4.4 Template Information

Set template information on the following three pages:

1. Set Basic Info page

2. Configure page

3. Confirm page

Note that the windows displayed when new template information is being created are used as examples in this explanation.

5.4.4.1 Set Basic Info Page

On the Set Basic Info page, set the basic information for the template information.

The **Set Basic Info** page is shown below.

Figure 5.17 Template information Set Basic Info page

Explanation of Items

- Template name

  Enter up to 85 characters (excluding <, >, &, ", and ') for the L-Platform template name

  The L-Platform template name specified here is used for the default system name for the L-Platform.
  For the system name, the characters that can be used and the length of the name vary depending on the method for setting resource names that has been specified by the system administrator.
  It is recommended that L-Platform template names be specified within the following range, which is effective for any method for setting resource names.

  - Names consisting of no more than 23 alphanumeric characters, underscores ("_") and hyphens ("-")

  When the L-Platform template name is entered, it will be set as a keyword automatically. However, if the L-Platform template name is changed once the cursor has been moved to the keyword field, these changes will not be reflected in the keyword.

- Description

   Enter up to 85 characters (excluding <, >, &, ", and ') to describe the L-Platform implemented by the L-Platform template, the contents of the L-Platform template, and so on.

- Keyword

   Enter up to 85 characters (excluding <, >, &, ", and ') for the L-Platform template search keyword

   If multiple keywords are set, separate each keyword using a space.

- Firewall

   When setting a firewall, click the **Set** button and select a rule set from the **Firewall** window shown below. This is only selectable when a new L-Platform template is being created.

   When deleting a set firewall, click the **Set** button and select "None" in the **Firewall** window shown below.

Figure 5.18 Template information Firewall window
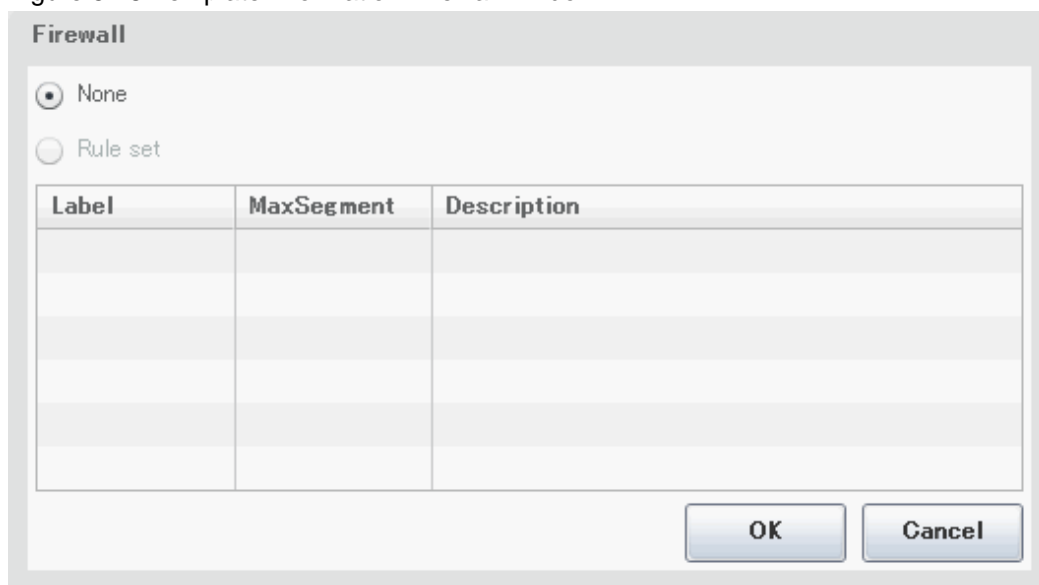
- Maximum number of segments

   Specify the maximum number of segments that can be used by the L-Platform. Specify a number between 1 and 99.

   If a firewall rule set is selected, the values specified in the rule set are used as the maximum value and the initial value.

- Maximum number of L-Servers

   Specify the maximum number of servers that can be used by the L-Platform. Specify a number between 1 and 30.

- License

   Select whether a license has been assigned.

- Support

   Select whether support has been assigned.

Operation Procedure

The operation procedure on the Set Basic Info page is as follows:

1. Set the various basic information items for the template information.

2. Click the **Next** button.

   The **Configure** page is displayed.

![P] Point

. . . .

If an input item contains an error, and error message is displayed. If an error message is displayed, refer to the error message and correct the setting.
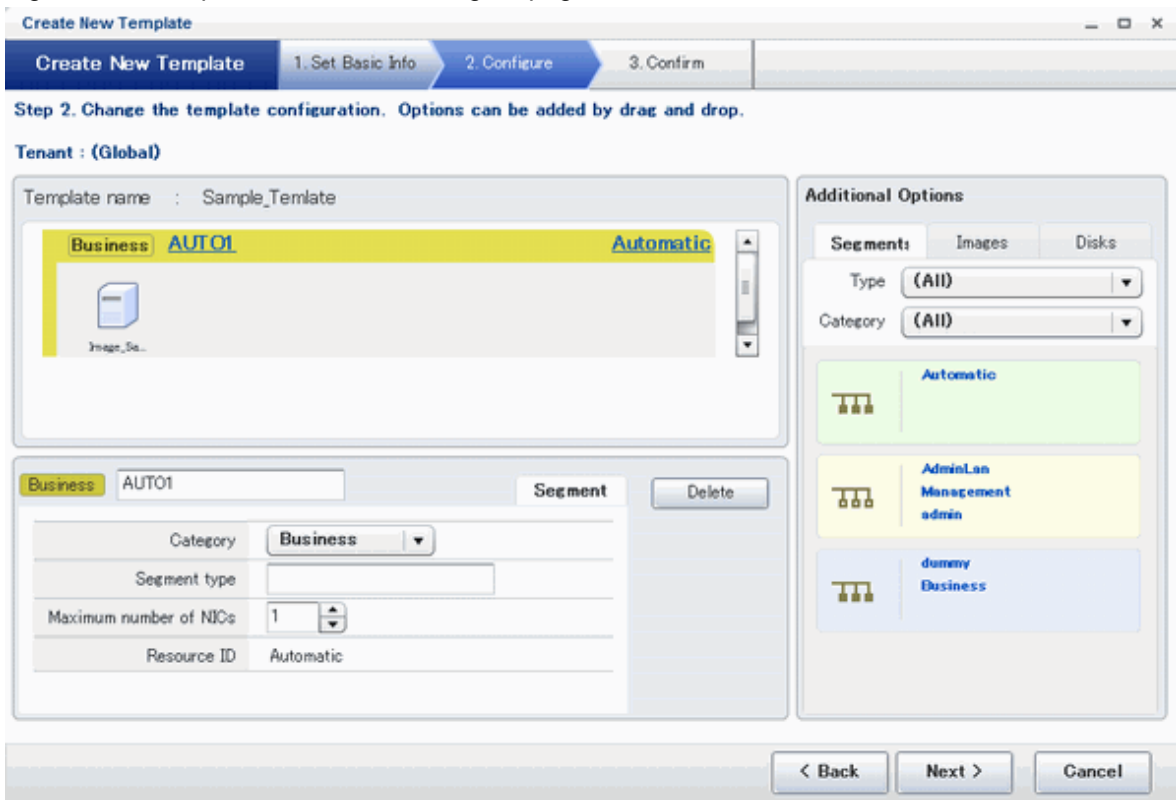
. . . .

5.4.4.2 Configure Page

On the Configure page, set the segment, image, and disk configurations.

The segments, images, and disks that can be added are displayed in a list in Additional Options.

The **Configure** page is shown below.

Figure 5.19 Template information Configure page

Window Explanation

- The upper part of the page displays the L-Platform template configuration. This part is called the configuration display area.

- The lower part of the page displays details of the resource (firewall, segment, image, or disk) selected in the configuration display area.

- The right side of the page displays a list of the resources (segments, images, and disks) that can be added to the L-Platform template. This part is called the additional options.

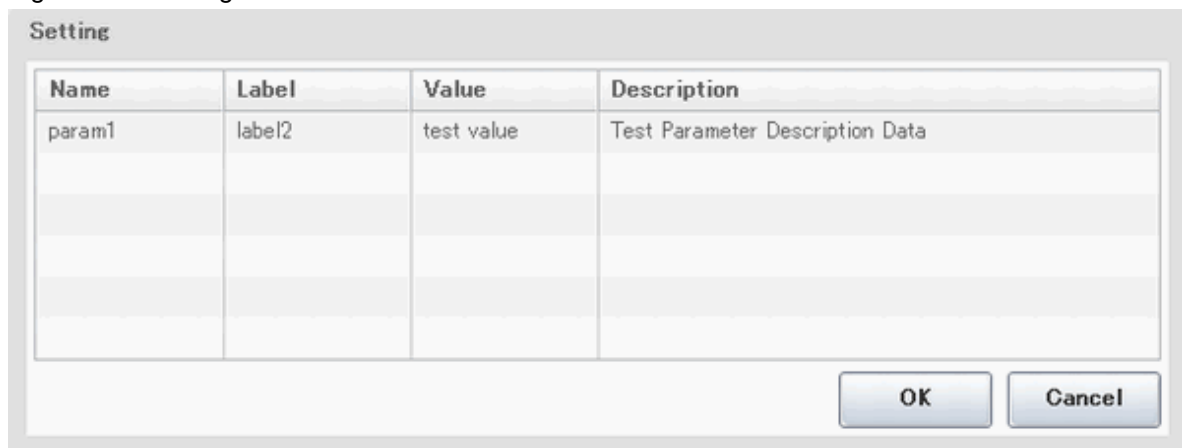**Explanation of Items (Firewall)**

- Firewall name

  Enter up to 32 bytes (excluding <, >, &, ", and ') for the firewall name

- Settings value

  When the **Set** button is clicked, the **Setting** window shown below is displayed.

Figure 5.20 Setting window

The **Setting** window displays a list of the various types of information defined in the rule set.

Only the settings values can be changed.

Explanation of Items (Segments)

- Segment name

  Enter up to 20 bytes (ASCII character string excluding <, >, &, ", and ') for the segment name

- Category

  Select one of the following categories:

    - Business

    - Management

  However, the category can be selected only for automatic selection segments.

- Segment type

  Enter any character string (an ASCII character string not including <, >, &, ", or ') of up to 32 bytes to identify the segment.

  However, a segment identifier can be specified only for automatic selection segments.

- Maximum number of NICs

  Enter the maximum number of servers that can connect to the segment. Specify a number between 1 and 30.

  However, for segments defined in the firewall, the upper limit is the value specified in the firewall rule set.

  If multiple NICs of the same server were connected to the same segment, each NIC will be mounted as one server.

- Resource ID

  Select a network resource. It is selectable only when creating or copying the L-Platform template.

  The network resources displayed in the list are the automatically selected networks and those matching the character string specified by the segment identification information.

If desired network resources are not listed, create or edit the segment information for each of these network resources and specify the segment identification information same as in the rule set.

Information

An automatic selection segment refers to segment information that has not been related to a network resource.

Network resources are automatically selected for automatic selection segments, and network resources are selected automatically when an L-Platform is created.

Explanation of Items (Images)

- Server name

    Enter up to 85 characters (excluding <, >, &, ", and ') for the server name

- VM pool

    Select the VM pool resource that is the server deployment destination.
    This can also be changed at the time of deployment.

- Storage pool

    Select the storage pool resource that is the server deployment destination.
    This can also be changed at the time of deployment.

- Image type

    Selects the registered L-Server template that will be selected by default.

Note

- If an existing disk is added, the L-Server template cannot be changed from an RHEL-KVM L-Server template if the VM-type is an RHEL-KVM L-Server template.

- If a new disk is added, the L-Server template cannot be changed to an RHEL-KVM L-Server template if the VM-type is not an RHEL-KVM L-Server template.

- Boot priority

    Sets the priority order when performing batch power supply operations in either the L-Platform or the tenant. Range:1-256.

    The smaller the value, the higher the priority order.

Explanation of Items (Disks)

- Storage pool

    Select the storage pool resource that is the extension disk deployment destination.

- Data disk size

    Specify the size of the disk in GB.

Operation Procedure

Follow the procedure below to perform **Configure** page operations:

1. In the additional options, select the tab (Segment, Image, or Disk) of the resource to be added

2. Drag and drop to the resource configuration area the resource to be added to add it to the template information.

    The table below shows the correspondences between resources to be added and information that can be dragged and dropped.

Table 5.3 Correspondences between resources to be added and information that can be dragged and dropped

Resource to be added	Drag and drop information
Segment	Template
Image	Segment
Disk	Image

📝 Note
....
- If the resource being added is an image, the only segments that can be dropped in an image created from a physical L-Server are control segments.

- If the resource being added is a disk, the only existing disks that can be dropped are the following:

    - An image created from a physical L-Server

    - An image whose L-Server template VM type is RHEL-KVM

- If the resource being added is a disk, it is not possible to drag-and-drop a new disk to an image whose L-Server template VM type is RHEL-KVM.
....

3. Select the added resource, and then edit the resource.

4. Click the **Next** button.

   The **Confirm** page is displayed.

ℹ️ Information
....
If an image was dragged from Additional Options and then dropped in a segment, then all the NICs will be set in that segment.

While the image is selected, the NIC ID for that image will be displayed.
....

🅿️ Point
....
If an input item contains an error, and error message is displayed. If an error message is displayed, refer to the error message and correct the setting.
....

5.4.4.3 Confirm Page

On the **Confirm** page, check the configuration of the set template information, and create, copy, or edit the L-Platform template.

The **Confirm** page is shown below.

Figure 5.21 Template information Confirm page

Operation Procedure

The operation procedure on the Confirm page is as follows:

1. Check whether the displayed content is valid.

   If it is invalid, go back using the **Back** button, and configure correct settings.

2. Click the **Create** button.

   A message indicating that the template information has been created is displayed, and the L-Platform template is registered.

   Then, the **Template** tab list window is displayed.

Note

When the **Template** tab list window is displayed, tenant and keyword filtering, sorting, pages, and selected states are all reset.

Chapter 6 L-Platform

This chapter explains how to use the L-Platform.

6.1 Display L-Platform

This section explains how to display the L-Platform and describes the top page.

How to display the L-Platform

To display the L-Platform:

- On the ROR Console after login, select the **L-Platform** tab.

L-Platform Top Page

An example of the L-Platform home page is shown below.
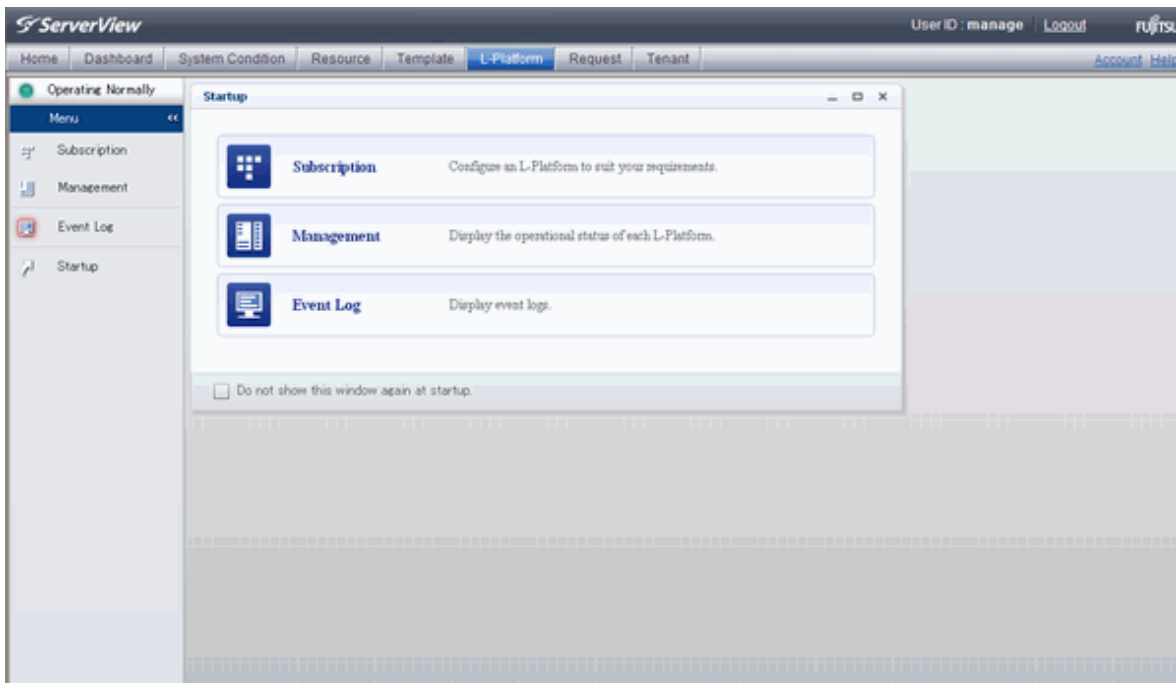
The following section explains the contents of the L-Platform operation menu:

- L-Platform Subscription
  When **Subscription** is selected, the page used to subscribe to a service will be displayed.
  Refer to "6.2 Subscribe to an L-Platform" for the L-Platform management method.

- L-Platform Management
  When Management is selected, a list of created L-Platforms is displayed.
  Refer to "6.3 L-Platform Management" for the L-Platform management method.

- Event logs
  When Event Log is selected, logs of information about errors that have occurred while using the L-Platform functions will be displayed.

  Refer to "6.4 Display Event Logs" for the event log display method.

- Startup
  When Startup is selected, major functions of L-Platform and their overview will be displayed.

Point

The **Startup** page is displayed as the home page of L-Platform. To prevent the **Startup** page from being displayed as the home page, select the **Do not show this window again at startup** check box.

- **Close** link
  When **Close** link is clicked, the confirmation window for closing the window will be displayed. Click **Yes** on the confirmation window to close the L-Platform window.

Note

- If it becomes impossible to connect by the management server stop and etc. when L-Platform is being operated, the lamp in the menu becomes gray and the message "Not Operating" is displayed. In this case, contact the system administrator. According to the displayed window and the performed operation, an error message like the following may be displayed.

    - Failed to get system configuration.

    - Failed to get the access right.

6.2 Subscribe to an L-Platform

This section explains how to subscribe to an L-Platform

6.2.1 Subscribe to a New L-Platform

On the **Subscription** page of L-Platform, the user can subscribe to an L-Platform on the basis of the specification that has been registered.

Two methods are available to subscribe to a new L-Platform. The method to be used is determined by the method of subscription that the Infra administrator department has specified.

- L-Platform Template reconfiguration not possible
  Changes to registered L-Platform Templates are not permitted.

- L-Platform Template reconfiguration possible
  Changes to registered L-Platform Templates are permitted.

The procedure for each method is shown below.

L-Platform Template Reconfiguration not Possible

Follow the steps below to subscribe to a new L-Platform:

1. Select **Subscription** on the operation menu of **New L-Platform** page.
   The **Subscription** page will be displayed.

2. Confirm the procedures on the **Subscription** page, and click the **Subscribe a new L-Platform** button.

3. Confirm the contents of the L-Platform template on the **Select Template** page, and select L-Platform template to be used.
All the L-Platform templates that are registered in the L-Platform and enabled are displayed on the **Select Template** page.

For each L-Platform template, the corresponding estimated fees will also be displayed.
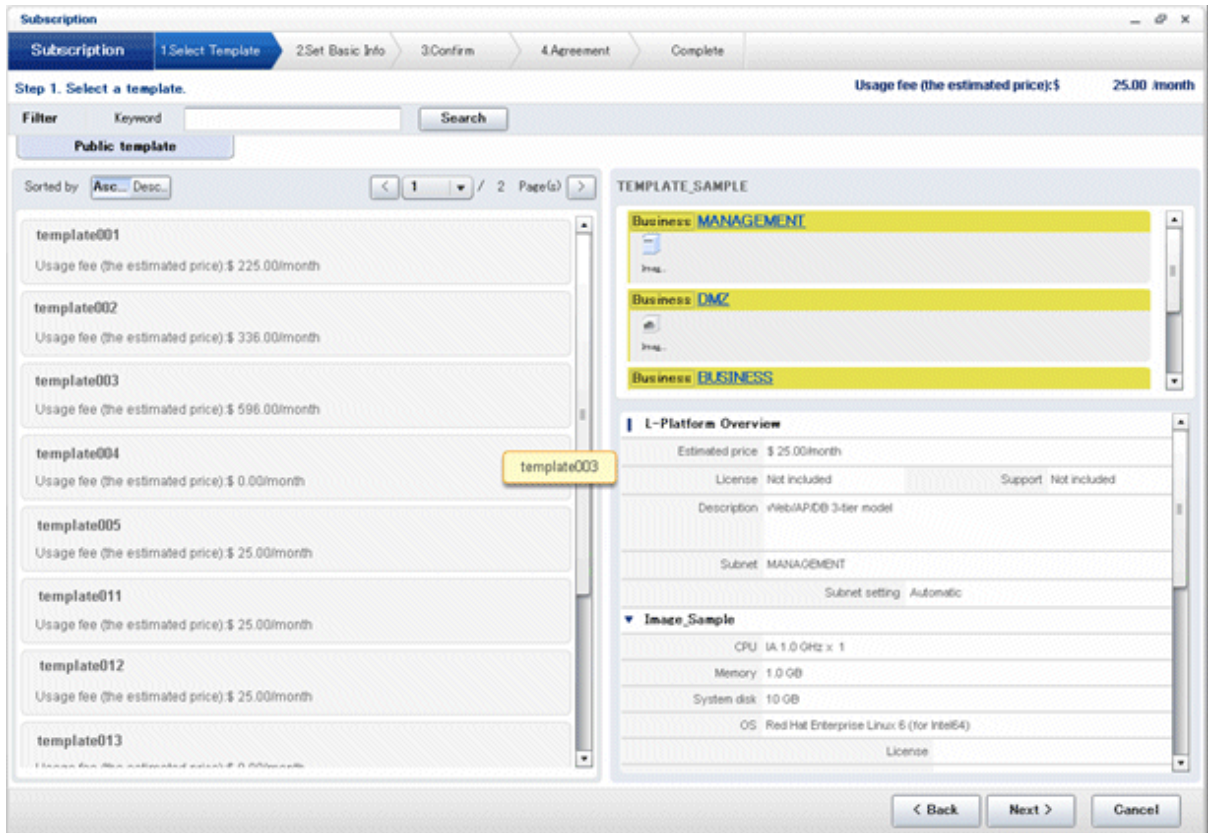
L-Platform templates are displayed by the L-Platform template name in ascending order. The sequence in the specification display can be switched by clicking **Sorted by** followed by the **Ascending order** or **Descending order** button.

To search an L-Platform template using the keyword search function, enter **Keyword** and then click the **Search** button. Specify a character string in **Keyword** that is the keyword for the L-Platform template the user wants to use. When a keyword is specified, a search takes place based on the keywords that the Infra administrator set in the specifications. The keyword search function cannot be used if the Infra Administrator did not set keywords.
For example, to search a specification where Red Hat Linux 5.1 is installed as the operating system, specify "Linux 5.1".

Point

Estimated fees for the L-Platform template will only be displayed when the charges display is set to enabled.

4. Select the L-Platform template to be used and click the **Next** button.
    The **Set Basic Info** page will be displayed.

The **L-Platform Name** displays the L-Platform template name.
To change to an arbitrary name, the new name must be no more than 85 characters long, be unique within the organization and not include the following characters:

```
<  >  &  '  " and control characters
```

However, the strings and the number of characters that can be specified may vary depending on the L-Platform settings.
It is recommended that the name be specified using no more than 23 of the following characters:

```
Alphanumeric characters, underscores ("_") and hyphens ("-")
```

5. Enter a name to **L-Platform Name**, and click the **Next** button.
   The **Confirm** page will be displayed.

Point

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CSV output

When the **Save as CSV** button is clicked, the **Select the destination to save** window is displayed where the L-Platform Template configuration can be saved as a CSV file.
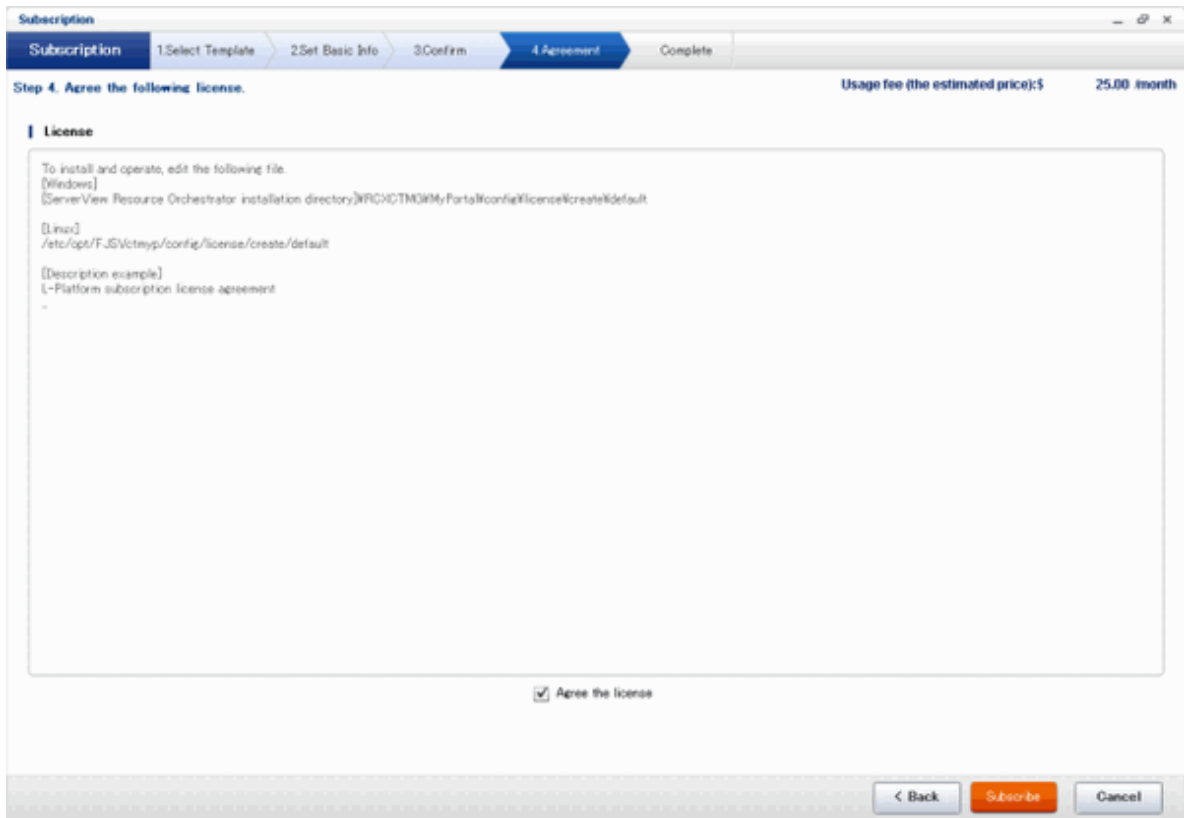The CSV file name is in the following format:

```
SystemConfiguration (+ <L-Platform name >+)_ <date> + .csv
```

Save configuration

By clicking the **Save Configuration** button, the L-Platform template is saved, and the display returns to the **Subscription** page. The saved L-Platform template can be subscribed by clicking the **Create from saved L-Platforms** button on the **Subscription** page.

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6. Check the displayed contents of the L-Platform template, and click the **Next** button.
   When the **Next** button is clicked, the **Agreement** page will be displayed.

7. Check the license agreement displayed. Select the **Agree the license** check box, then, click the **Subscribe** button.
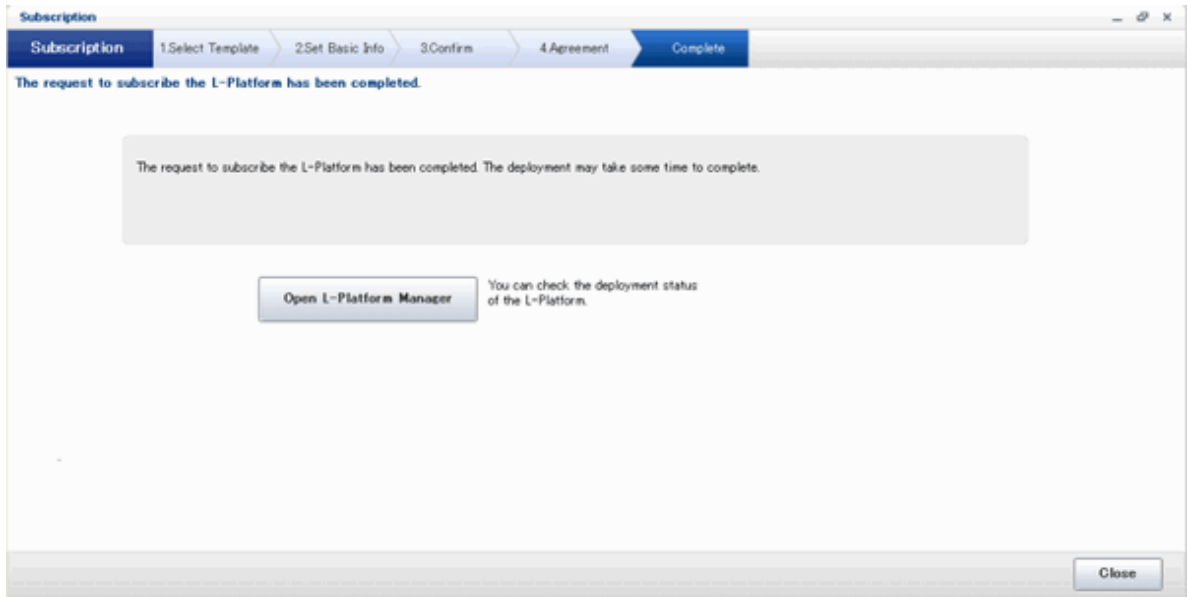
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When the application process is enabled, clicking of the **Subscribe** button on the **Agreement** page displays the **Forward screen** window. Refer to "6.5 Select Forward Destination of Application Process" for details.

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The **Complete** page will be displayed when the subscription to the L-Platform is accepted.

- When the application process is disabled
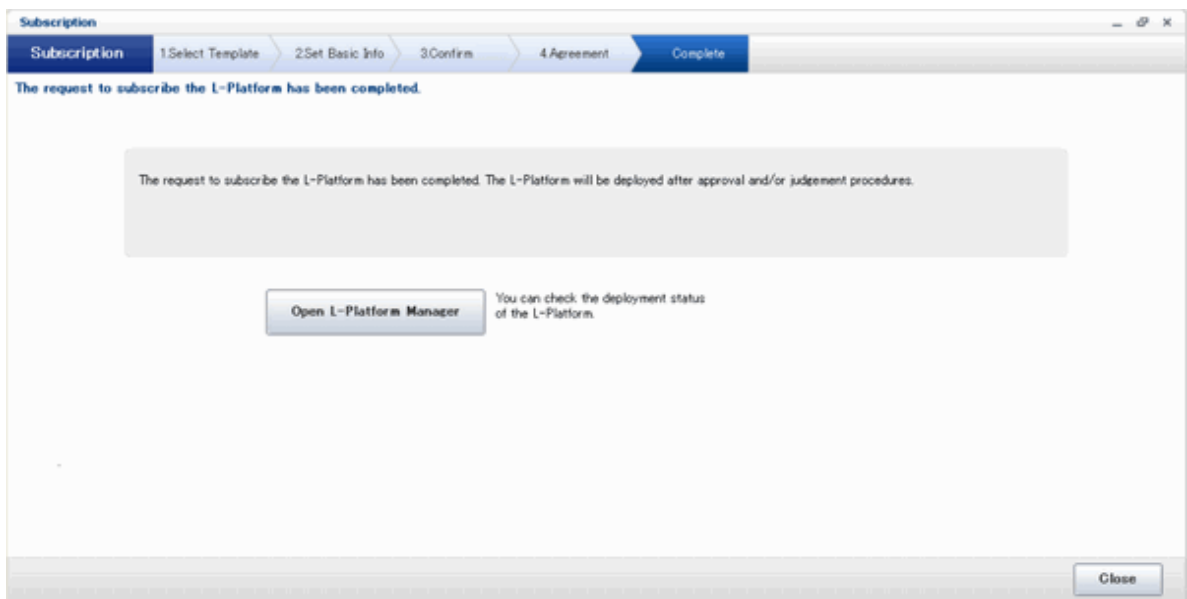
    The following message will be displayed:
    "A request to subscribe the L-Platform has been completed. The deployment may take some time to complete."

- When the application process is enabled

    The following message will be displayed:
    "The request to subscribe the L-Platform has been completed. The L-Platform will be deployed after approval and/or judgement procedures."

8. Click the **Close** button. The display returns to the **Subscription** page.

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When a subscribed L-Platform is deployed, a subscription completion notification email is sent to the subscriber. This email contains the information necessary to access the L-Platform.

If deployment of the subscribed L-Platform fails, a subscription failure notification email is sent to the subscriber and the Infrastructure Administrator. In this case, check with the Infrastructure Administrator, and then subscribe again.

L-Platform Template Reconfiguration Possible

Follow the steps below to subscribe to a new L-Platform:

1. Select **Subscription** on the operation menu of the **Subscription** page.
   The **Subscription** page will be displayed.

2. Confirm the procedures on the **Subscription** page, and click the **Subscribe a new L-Platform** button.

3. Confirm the contents of the L-Platform templates on the **Select Template** page, and select the L-Platform template to be used.
   All the L-Platform templates that are registered in the L-Platform and enabled are displayed on the **Select Template** page.

   For each L-Platform template, the corresponding estimated fees will also be displayed.
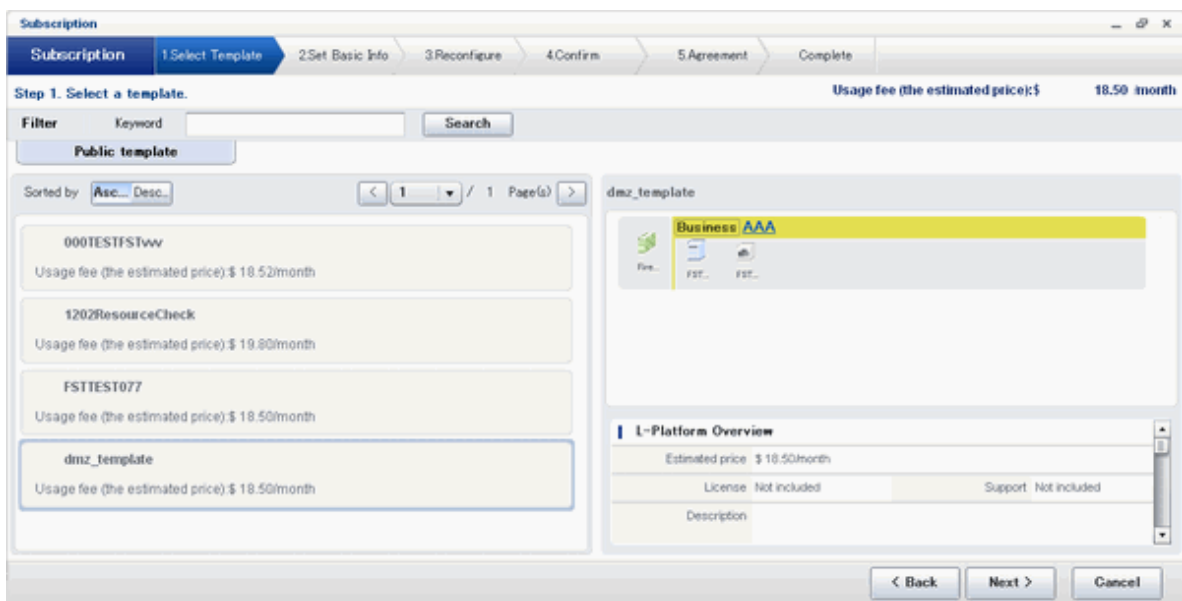
L-Platform templates are displayed by the L-Platform template name in ascending order. The sequence in the specification display can be switched by clicking **Sorted by** followed by the **Ascending order** or **Descending order** button.

To search a specification using the keyword search function, enter **Keyword** and then click the **Search** button.
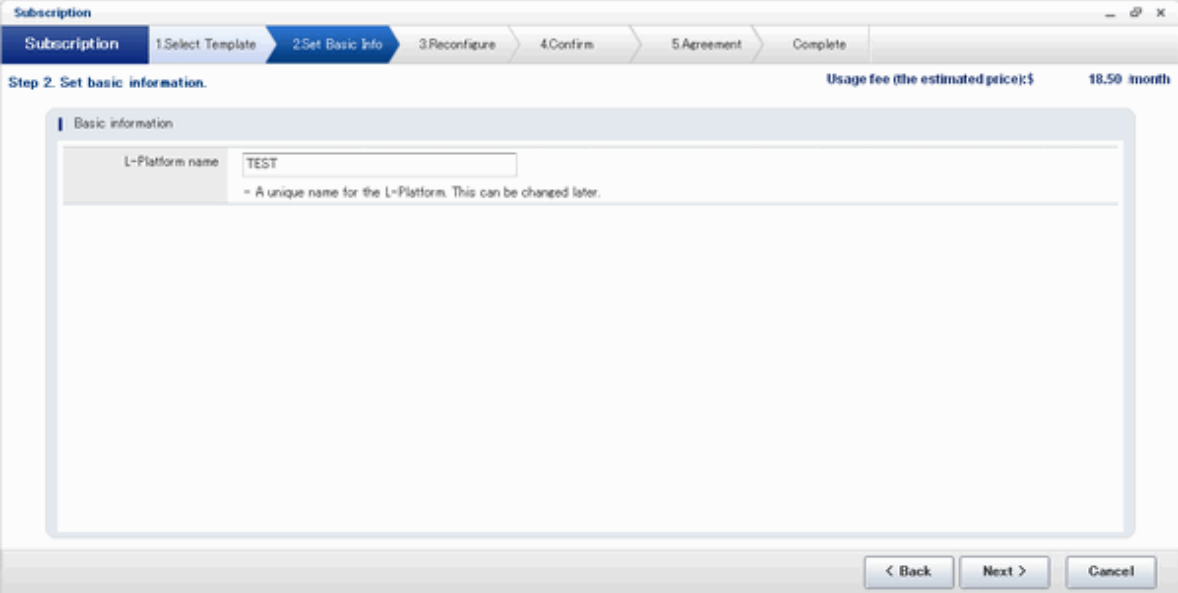
Specify a character string in **Keyword** that is the keyword for the L-Platform template the user wants to use. When a keyword is specified, a search takes place based on the keywords that the infra administrator set in the specifications. The keyword search function cannot be used if the infra administrator did not set keywords.

For example, to search an L-Platform template where Red Hat Linux 5.1 is installed as the operating system, specify "Linux 5.1".

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Estimated fees for the L-Platform template will only be displayed when the charges display is set to enabled.

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4. Select the L-Platform template to be used and click the **Next** button.
   The **Set Basic Info** page will be displayed.

The **L-Platform Name** is displayed by the L-Platform template name.

To change to an arbitrary name, the new name must be no more than 85 characters long, be unique within the organization and not include the following characters:

```
   <, >, &, ', " and control characters
```

However, the strings and the number of characters that can be specified may vary depending on the L-Platform settings.
It is recommended that the name be specified using no more than 23 of the following characters.

```
   Alphanumeric characters, underscores ("_") and hyphens ("-")
```

5. Enter a name to **L-Platform Name**, and click the **Next** button.
   The **Reconfigure** page will be displayed.
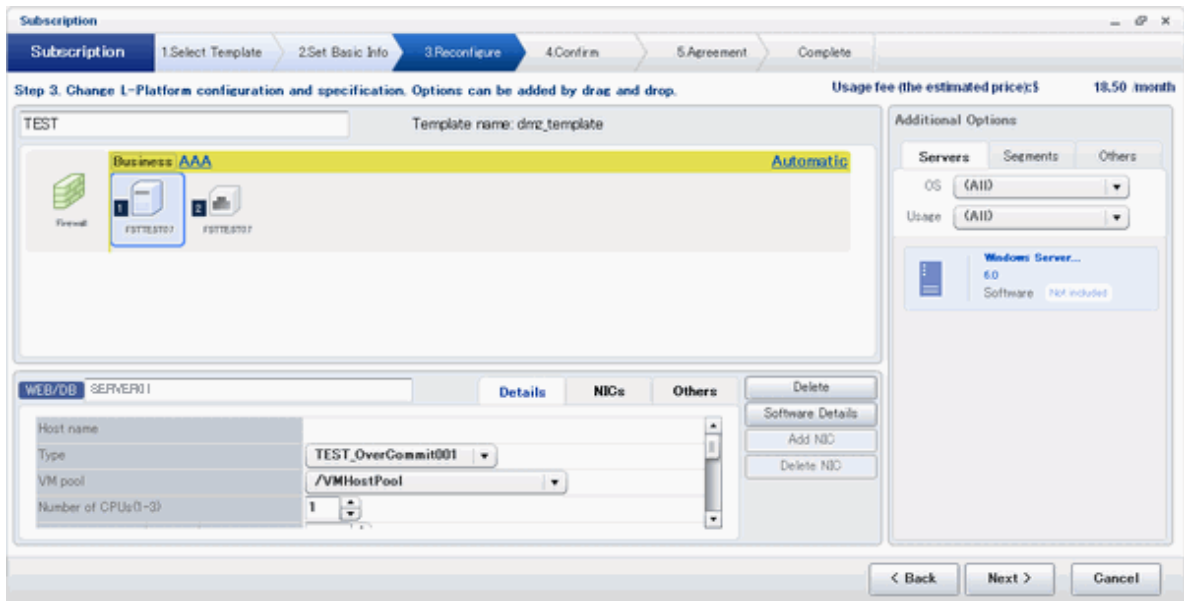
6. This will display the configuration of the L-Platform template selected on the **Reconfigure** page. Change the configuration as required.
   For the items that can be changed on the **Reconfigure** page, refer to "6.3.13 Reconfiguration Page".

7. When modification of the L-Platform template has completed, click the **Next** button.
   The **Confirm** page will be displayed.
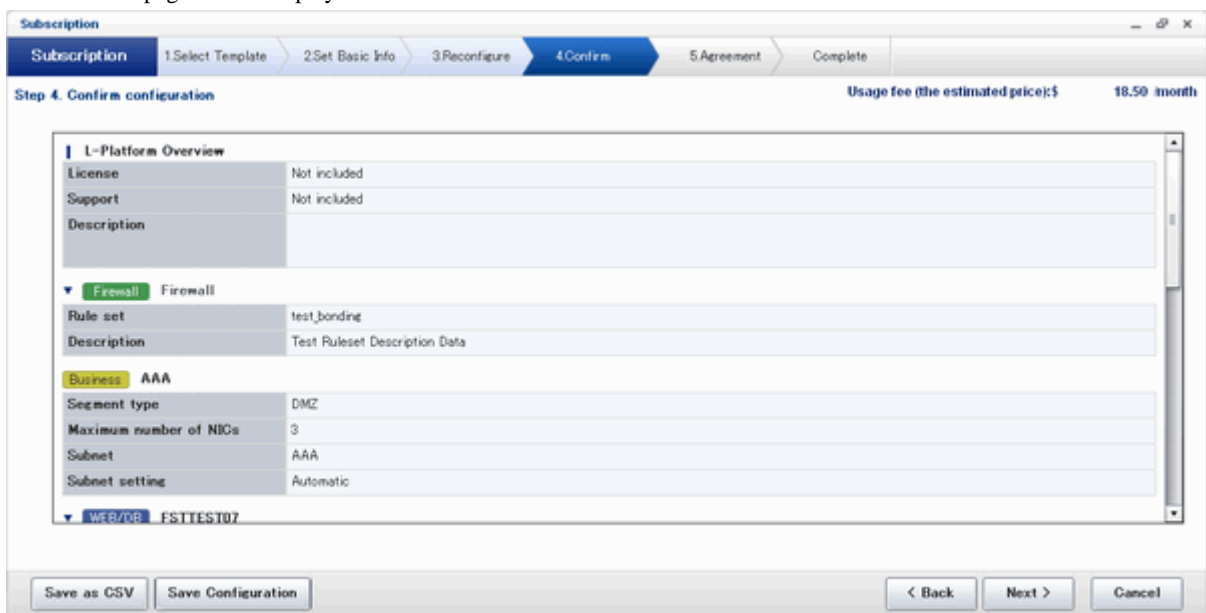
Item	Display format
Item changed	The values of changed items are displayed in red. The value before the change is displayed as "changed from *the old value*".
Item added	"* added" is displayed after added elements. The values of added items are displayed in red. The background of added items is also displayed in red.
Item deleted	"* deleted" is displayed after deleted items. The background of deleted items is displayed in grey.

CSV output

When the **Save as CSV** button is clicked, the **Select the destination to save** window is displayed where the L-Platform Template configuration can be saved as a CSV file.
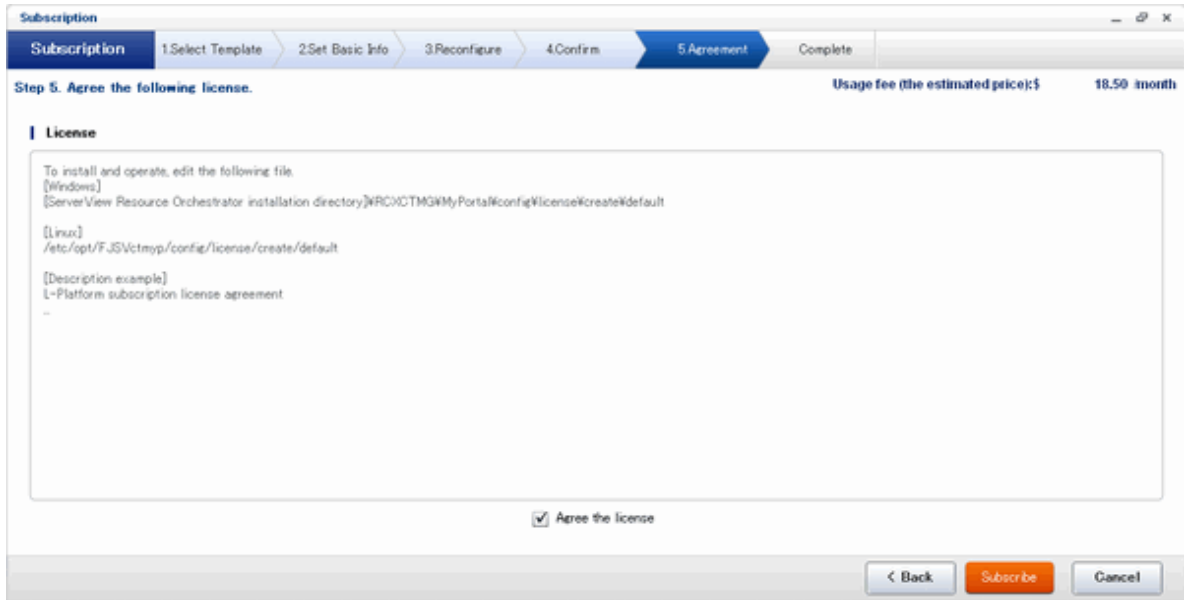The CSV file name is in the following format:

```
SystemConfiguration (+ <L-Platform name> +)_ <date> + .csv
```

Save configuration

By clicking the **Save Configuration** button, the L-Platform template is saved, and the display returns to the **Subscription** page. The saved L-Platform template can be subscribed by clicking the **Create from saved L-Platforms button** on the **Subscription** page.

8. Check the displayed contents of the specification, and click the **Next** button.
   When the **Next** button is clicked, the **Agreement** page will be displayed.

9. Review and agree with the license agreement displayed. Select the **Agree the license** check box, then, click the **Subscribe** button.
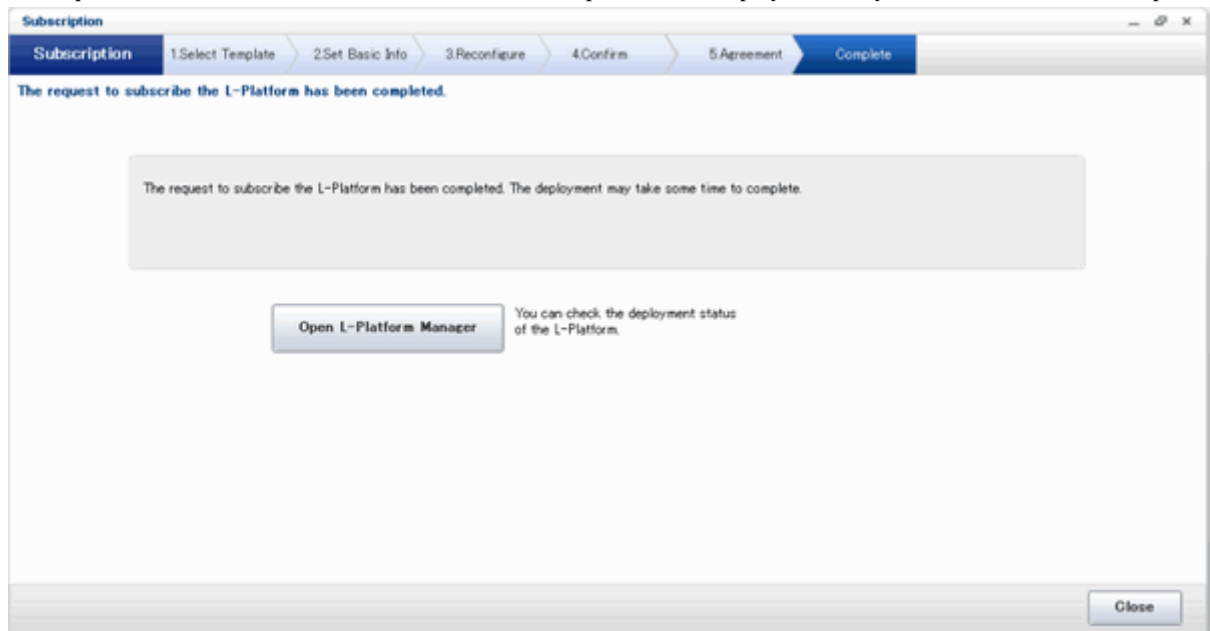
![P] **Point**

When the application process is enabled, clicking of the **Subscribe** button on the **Agreement** page displays the **Forward screen** window. Refer to "6.5 Select Forward Destination of Application Process" for details.

The **Complete** page will be displayed when the subscription to the L-Platform is accepted.

- When the application process is disabled
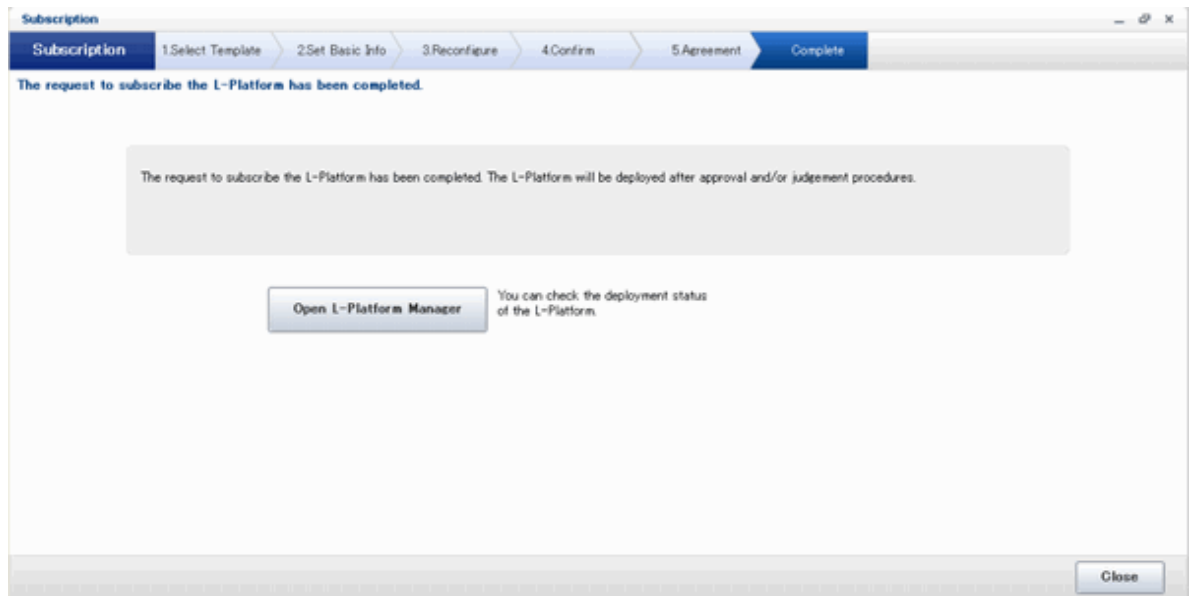
  The following message will be displayed:
  "A request to subscribe the L-Platform has been completed. The deployment may take some time to complete."

- When the application process is enabled

  The following message will be displayed:
  "The request to subscribe the L-Platform has been completed. The L-Platform will be deployed after approval and/or judgement procedures."

10. Click the **Close** button. The display returns to the **Subscription** page.

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When a subscribed L-Platform is deployed, a subscription completion notification email is sent to the subscriber. This email contains the information necessary to access the L-Platform.

If deployment of the subscribed L-Platform fails, a subscription failure notification email is sent to the subscriber and the Infrastructure Administrator.

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6.2.2 L-Platform Subscription after Saving Configuration

An L-Platform subscription can be submitted on the basis of an L-Platform Template for which the configuration is currently being saved.

Perform the following steps to submit an L-Platform subscription from this type of L-Platform Template:

1. Select **Subscription** on the operation menu of the **Subscription** page.
   This will display the procedures required to subscribe to an L-Platform.

2. After confirming the procedure, select **Subscribe from saved data**.
   The **Select Template** page will be displayed.
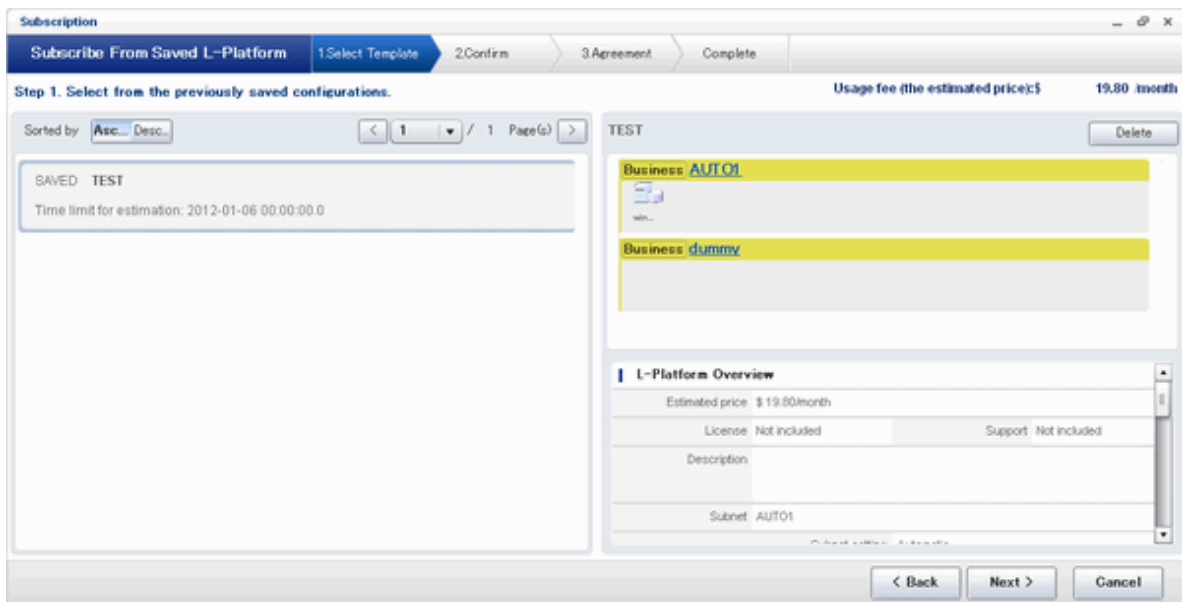
The time limit for estimating is displayed in each L-Platform templates.

When an L-Platform Template is selected from the L-Platform Template list, detailed information about the estimated fees and L-Platform Template at the time when the L-Platform Template was saved is displayed.

When the application process is enabled, the following status will be displayed before the L-Platform template names in the list of L-Platform templates:

- SAVED: Specification being saved
  The **Next** button will become available after selecting this item.

- UNAPPROVAL: Not approved
  The **Next** button will not become available even after selecting this item.

- REJECTION: Subscription rejected
  The **Next** button will not become available even after selecting this item.

![Note icon] **Note**

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In the application process, the L-Platform templates waiting to approve or to assess become the UNAPPROVAL state.

If you want to delete the L-Platform templates which state is UNAPPROVAL, cancel the corresponding application from application list of L-Platform. After canceling, it is deleted automatically.

When you delete the L-Platform templates which state is UNAPPROVAL on L-Platform template, errors occurs because there is no L-Platform template in processing the application process.

The L-Platform template which is rejected or dismissed at application process becomes REJECTTION state.

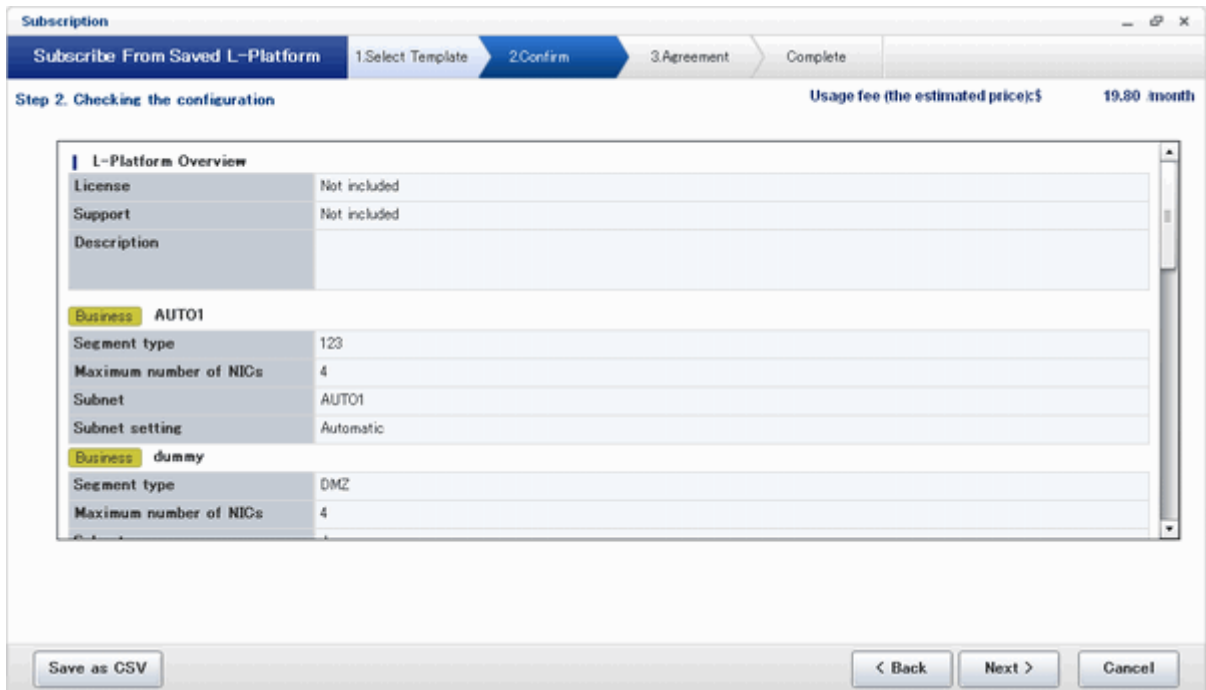Delete it from L-Platform after the confirmation if necessary.

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![Point icon] **Point**

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Estimated fees and quotation expiry dates for the L-Platform template will only be displayed when the charges display is set to enabled.
Note also that the estimated fees will display the price at the time the L-Platform template was saved. In particular, please be aware that this display will not change even if the price of the L-Platform is modified.
Furthermore, the displayed quotation expiry date is based on the validity period of estimated fees for the L-Platform template, and indicates the 30th day after the L-Platform template was saved.

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3. Select the L-Platform template to be used and click the **Next** button
   The **Confirm** page will be displayed.

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CSV output

When the **Save as CSV** button is clicked, the **Select the destination to save** window is displayed where the L-Platform template can be saved as a CSV file.
The CSV file name is in the following format:

```
SystemConfiguration (+ <L-Platform name> +)_ <date> + .csv
```

4. Check the displayed contents of the L-Platform template, and click the **Next** button.
   When the **Next** button is clicked, the **Agreement** page will be displayed.
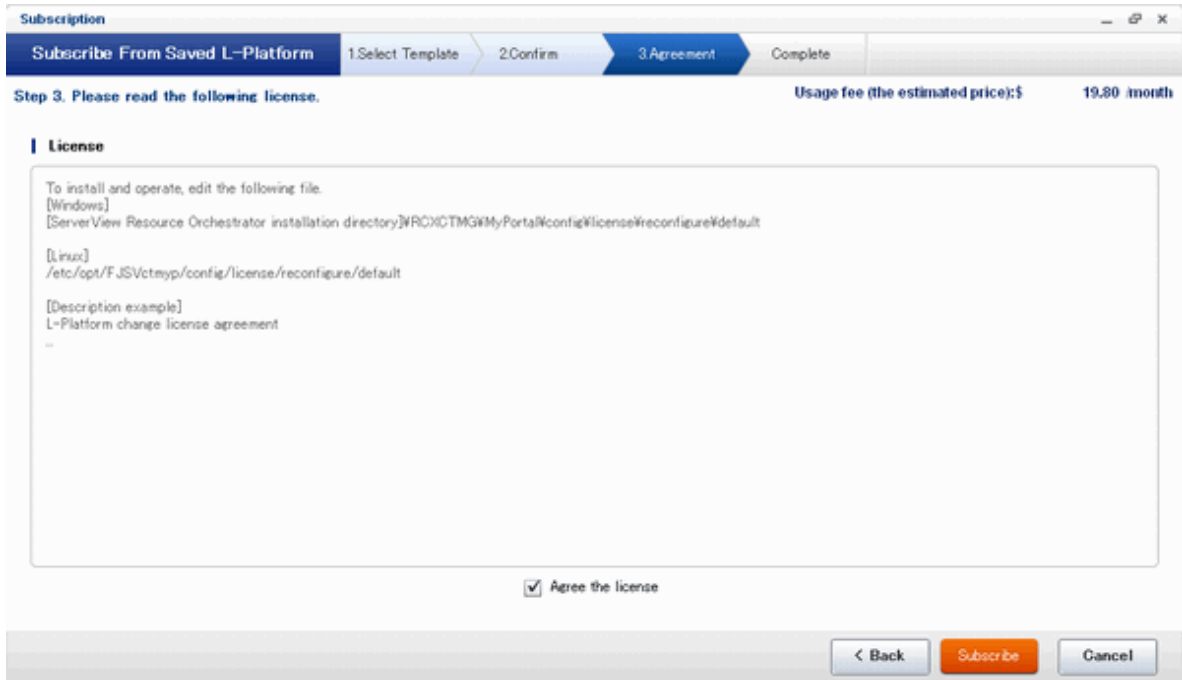
5. Review and agree with the license agreement displayed. Select the **Agree the license** check box, then, click the **Subscribe** button.

- When the application process is enabled, clicking of the **Subscribe** button on the **Agreement** page displays the **Forward screen** window. Refer to "6.5 Select Forward Destination of Application Process" for details.

- The saved specification will be removed if the **Subscribe** button on the **Agreement** page is clicked. To keep the specification, click the **Cancel** button.

The **Complete** page will be displayed when the subscription to the L-Platform is accepted.

- When the application process is disabled
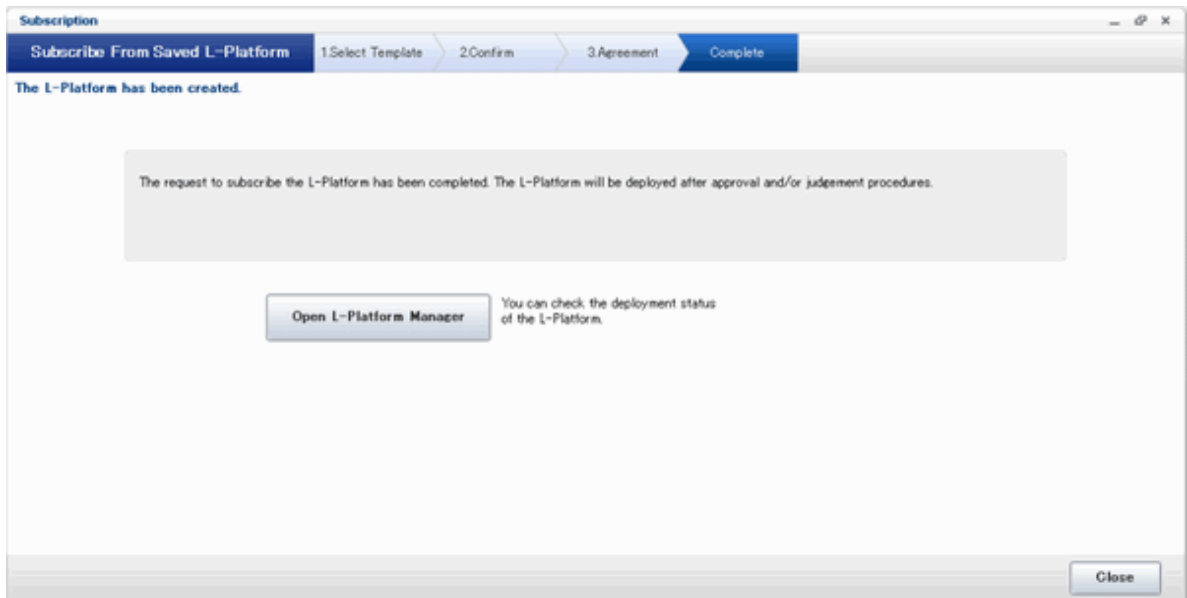
  The following message will be displayed.
  "A request to subscribe the L-Platform has been completed. The deployment may take some time to complete."
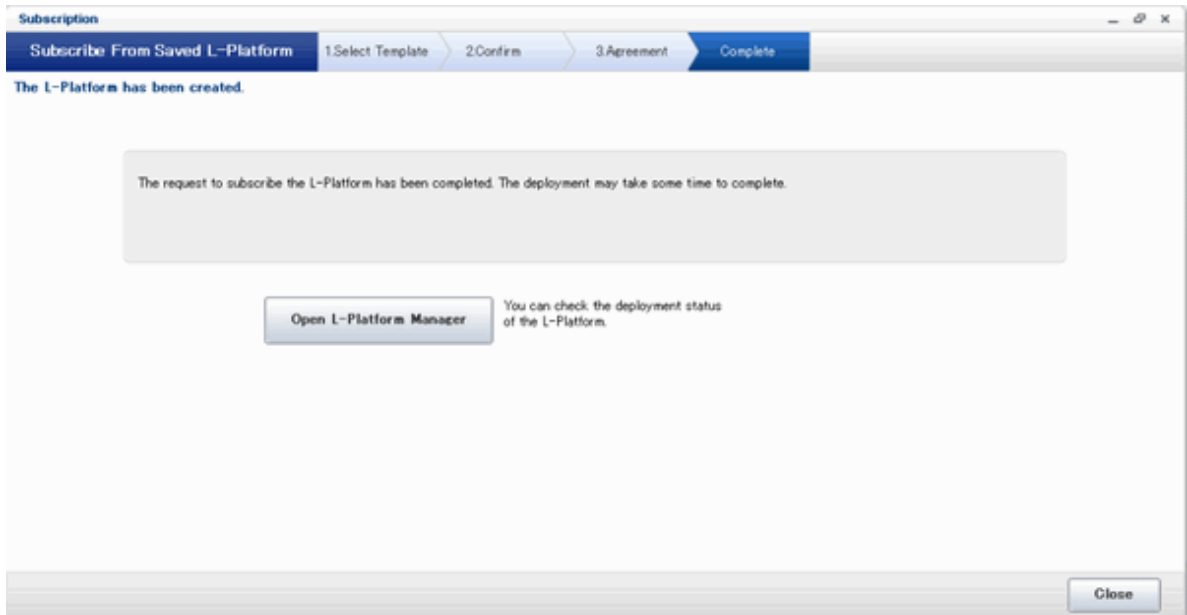
- When the application process is enabled

  The following message will be displayed.
  "The request to subscribe the L-Platform has been completed. The L-Platform will be deployed after approval and/or judgement procedures."

6. Click the **Close** button. The display returns to the **Subscription** page.

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When a subscribed L-Platform is deployed, a subscription completion notification email is sent to the subscriber. This email contains the information necessary to access the L-Platform.

If deployment of the subscribed L-Platform fails, a subscription failure notification email is sent to the subscriber and the Infrastructure Administrator. In this case, check with the Infrastructure Administrator, and then subscribe again.

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6.3 L-Platform Management

This section explains how to use the **Management** page to manage L-Platforms that are in use.

The L-Platforms targeted by L-Platform management vary in accordance with the user, as follows:

- Infrastructure Administrator

  All L-Platforms.

- Tenant Administrator
  All L-Platforms being used by owned tenants.

- Tenant users
  Only L-Platforms in use by the user.

The **Management** page can be used to display a list of the L-Platforms currently being used.
The following L-Platform operations can also be performed:

- L-Platform detailed information display

- Disk detailed information display

- Server start and stop

- L-Platform reconfiguration

- Taking snapshots of and restoring virtual servers

- Physical server backup and restore

- L-Platform cancellation

6.3.1 L-Platform Management Display Page

This section explains how to display the L-Platform management page and explains the display format.

L-Platform Management Page Display Method

From the operation menu on the **L-Platform** page, select **Management**.

L-Platform Management Page Display Format

The L-Platform management page has the following three types of display format.

| Display format	Description
L-Platform Management	Displays the L-Platform configuration images in a list
L-Platform Management (list)	Displays the L-Platform list
Server List	The list displays virtual servers. It can display all servers or inactive servers.

The buttons in the upper-left section of the page can be used to switch between the "L-Platform Management" and "Server List" display formats.
The display can be switched between the "configuration" format and the "list" format using the button located on the top right hand side of the page ( ).

Examples of each display format are shown below:

- L-Platform Management

    Click the **Management** button on the top left hand side of the page and then click the button ([**···**]) on the top right hand side of the page to display an L-Platform list in a configuration image.
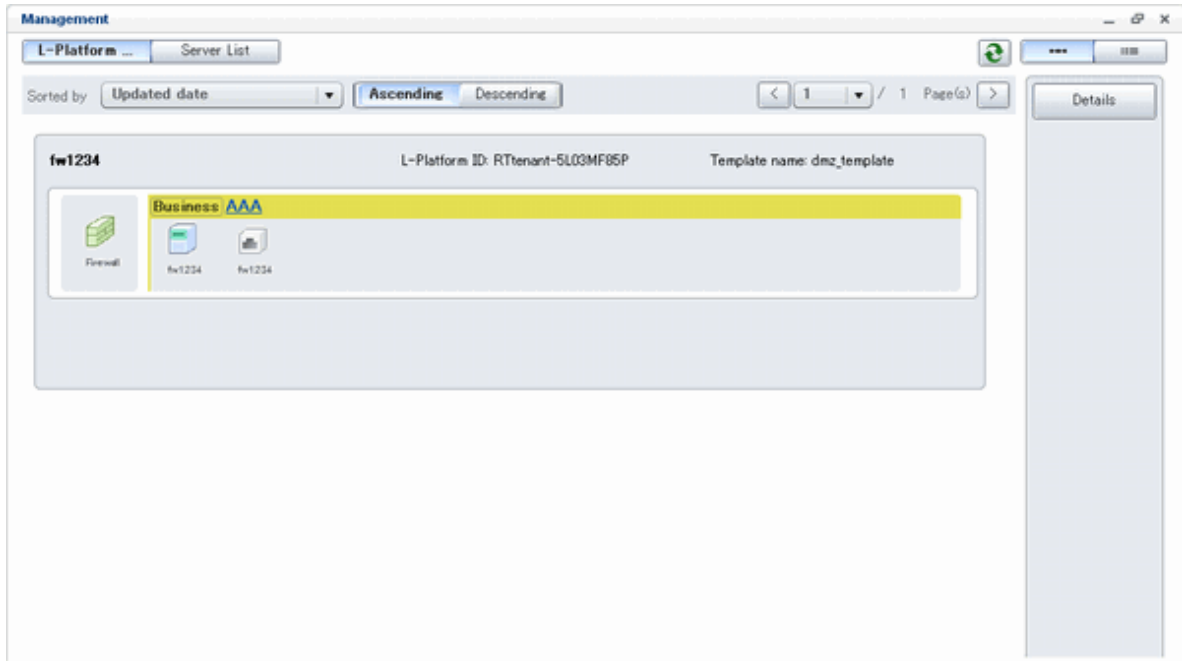
    The following information can be checked on the **Management** page:

    The following information can be checked using the **Management** page:

    - L-Platform name: The L-Platform name set during L-Platform subscription

    - L-Platform ID: The ID that identifies the L-Platform

    - L-Platform Template name: The name of the L-Platform Template

    - L-Platform configuration: The L-Platform configuration image

    The sequence of the L-Platforms displayed can be switched by clicking **Sorted by** followed by the **Ascending order** or **Descending order** button for the following items:
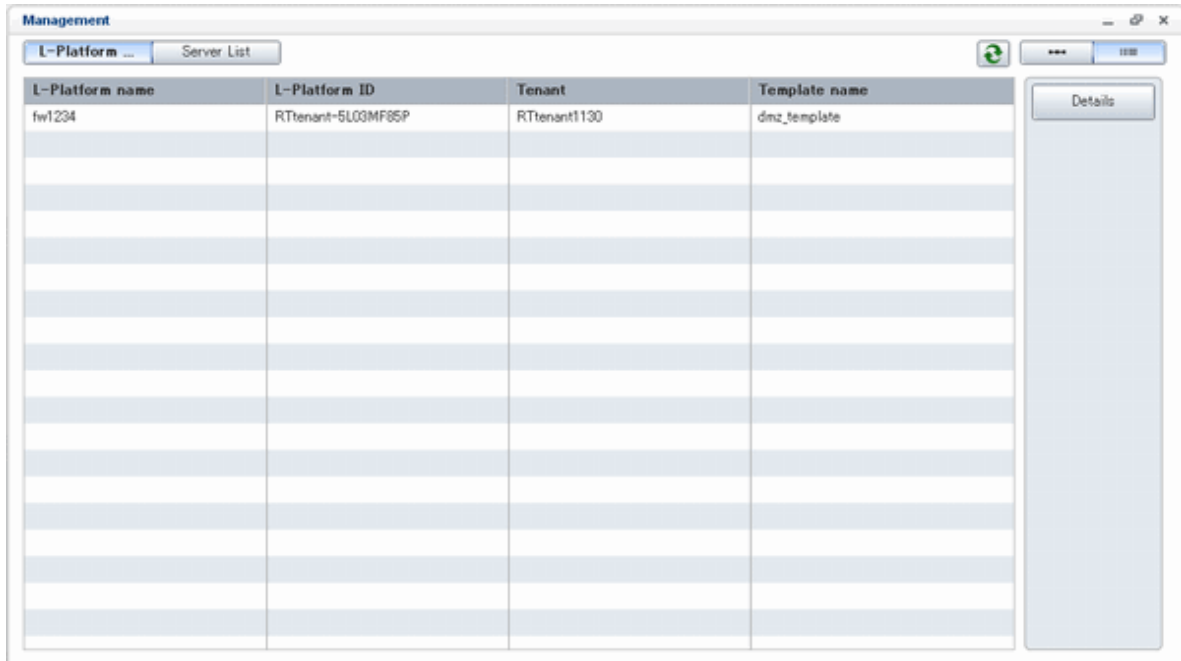
    - Update date

    - L-Platform name

    - L-Platform ID

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Using the **Details** button, details of the L-Platform can be displayed on the **Management** page. Refer to "6.3.2 L-Platform Detailed Information Display" for information on displaying the L-Platform details.
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- L-Platform Management (list)

    Click the **Management** button on the top left hand side of the page and then click the button ([≡]) on the top right hand side of the page to display a list of information on the L-Platforms.

The following information can be checked on the **L-Platform Management (list)** page.

  - L-Platform name: The L-Platform name set during L-Platform subscription

  - L-Platform ID: An ID to identify the L-Platform

  - Organization information: Identification number for the organization

  - L-Platform template name: Name of the L-Platform template

The sequence of the L-Platforms displayed can be switched between ascending order and descending order by clicking the column headers (L-Platform name, L-Platform ID, etc).

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Using the **Details** button, details on the L-Platform can be displayed on the **L-Platform Management (list)** page. Refer to "6.3.2 L-Platform Detailed Information Display" for information on displaying the L-Platform details.

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- Server List

    Click the **Server List** button on the top left hand side of the page to display a list of information on servers included in an L-Platform. The following shows an example of all servers being displayed. To display inactive servers, click the **Stopped** tab.
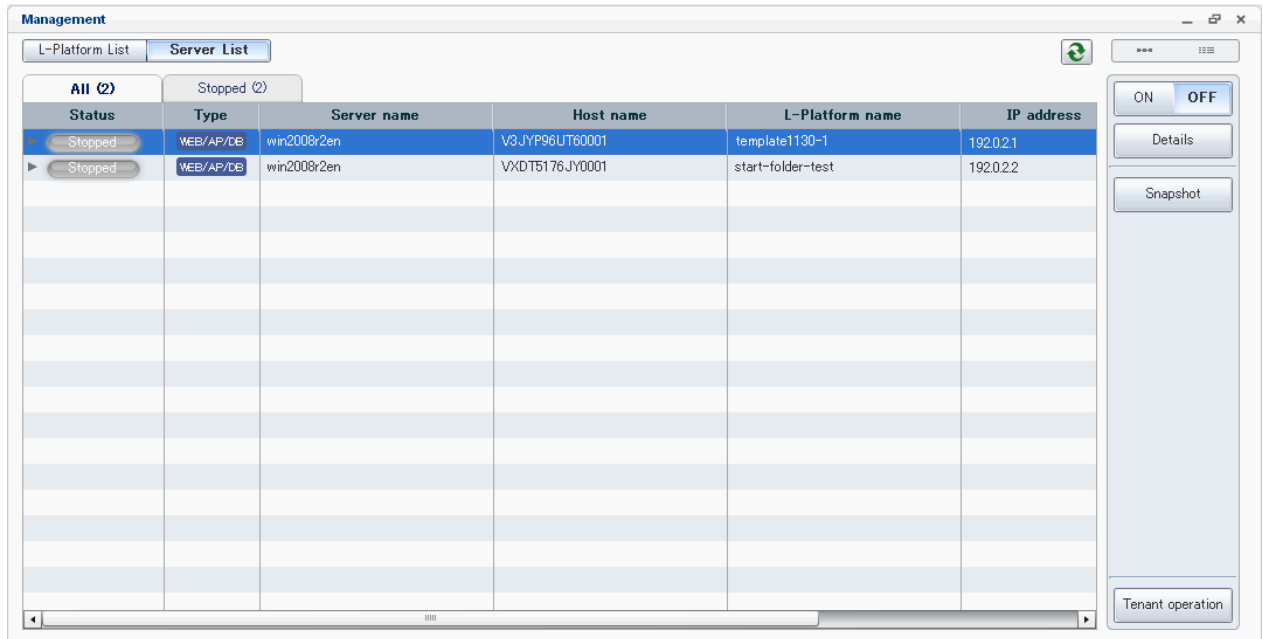
The following information can be checked on the **Server List** page.

  - Status: Server status (Running, Stopped)

  - Type: Server type

  - Server name: Server name

  - Host name: The server host name. However, this is not displayed for a physical server

  - L-Platform name: The L-Platform name set during L-Platform subscription

  - IP address: IP address of the server

  - Backup/Snapshot: Status of taking and restoring the backup and snapshots

  - Generation: Number of snapshots or backup stored

  - Number of snapshots: Number of snapshots or number of executed backups

The sequence of the servers displayed can be switched between ascending order and descending order by clicking the column headers (status, type, etc).

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The following buttons can be used to operate on the **Server List** page.

  - **ON** button: Start the server
    Refer to "6.3.4 Start and Stop the Server" for information on starting the server.

  - **OFF** button: Stop the server
    Refer to "6.3.4 Start and Stop the Server" for information on stopping the server.

  - **Details** button: Display details on an L-Platform or a disk.
    Refer to "6.3.2 L-Platform Detailed Information Display" for information on displaying L-Platform details. Refer to "6.3.3 Display Details on a Disk" for information on displaying details on a disk.

  - **Snapshot** button: Take and restore snapshots Refer to "6.3.6 Take and Restore Snapshot" for information on taking and restoring snapshots.

- **Backup** button: Backup and restore.
  This button is displayed for physical servers.
  Refer to "6.3.7 Physical Server Backup and Restore" for information on backup and restore.

- **Tenant operation** button: operations for Tenant.
  Refer to "6.3.10 Tenant Operation" for information on tenant operation.

![Note icon] **Note**

The **Running** icon for a server indicates that the power has been turned on.
Even if the **Running** icon is displayed, login to the L-Platform may fail if logged in immediately after deployment or starting the virtual server. In this case, allow a few minutes before trying to log in again.

6.3.2 L-Platform Detailed Information Display

Follow the steps below to display the details of L-Platform:

1. Display the **L-Platform Management, L-Platform Management (list)**, or **Server List** page.
   Refer to "6.3.1 L-Platform Management Display Page" for information on how to display the page.

2. Click the **Details** button after selecting the L-Platform or the server required.
   The **L-Platform Details** page will be displayed.

   There are two types of display format for the **L-Platform Details** page below. The display format can be switched using the button (![switch button]) located on the top right hand side of the page.

   - L-Platform configuration image

     By clicking the button (![button]) located on the top right hand side of the page, the L-Platform configuration is displayed as an image.
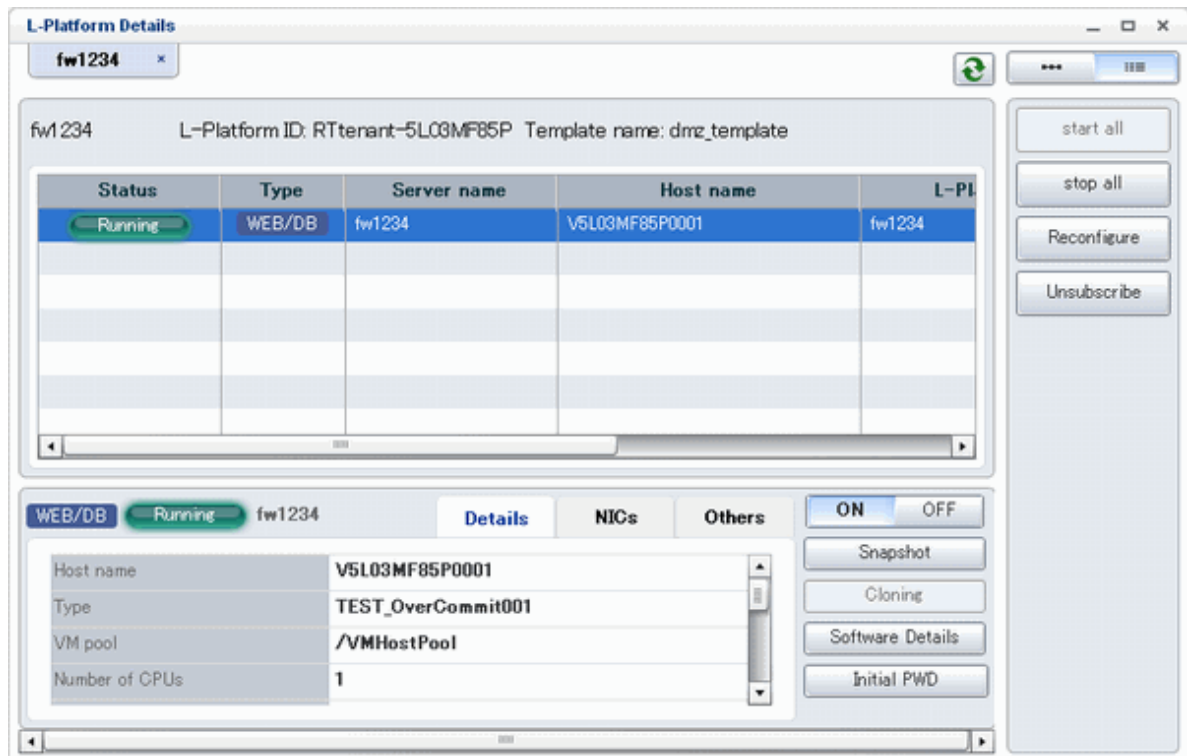
- Server List

By clicking the button ( ) located on the top right hand side of the page, a list of all virtual servers included in the L-Platform is displayed. The server List also displays the extended disks included in the virtual servers.

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The following buttons can be used on the **L-Platform Details** page:

- **start all** button: Turns the power on for all servers in the L-Platform as a group.

- **stop all** button: Turns the power off for all servers in the L-Platform as a group.

- **Reconfigure** button: Changes the L-Platform Template
  Refer to "6.3.11 L-Platform Reconfiguration" for information on changing L-Platform Templates.

- **Unsubscribe** button: Cancels the L-Platform
  Refer to "6.3.12 Cancel an L-Platform" for information on cancelling L-Platforms.

- **ON** button: Start the server
  Refer to "6.3.4 Start and Stop the Server" for information on starting the server.

- **OFF** button: Stop the server
  Refer to "6.3.4 Start and Stop the Server" for information on stopping the virtual server.

- **Snapshot** button: Take and restore snapshots
  This button is displayed for virtual servers.
  Refer to "6.3.6 Take and Restore Snapshot " for information on taking and restoring snapshots.

- **Backup** button: Backup and restore
  This button is displayed for physical servers.
  Refer to "6.3.7 Physical Server Backup and Restore" for information on backup and restore.

- Setting button:Setup firewall
  This button is displayed for firewall.
  Refer to "6.3.9 Setup Firewall" for information on setup firewall.

- **Cloning** button: Collects a cloning image from an already deployed server
  Refer to "6.3.8 Image Collection" for information on image collection.

- **Software Details** button: Display software information

- **Initial PWD** button: Confirm the initial password
  Depending on the L-Platform settings, the "Initial password" is " ". Sometimes it is displayed as ".
  The initial password is set after L-Platform deployment.

- **Add Patch Information** button: Register the patch information
  Refer to "6.3.5 Manage Patch Information" for information on registering patch information.

- **Delete Patch Information** button: Delete the patch information
  Refer to "6.3.5 Manage Patch Information" for information on deleting the patch information.

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If 'start all' or 'stop all' button is clicked while another user is reconfiguring the L-Platform, the start or stop operation fails with the error code VSYS10051.

If this error occurs when no user is reconfiguring the L-Platform, perform the following operation before starting or stopping all servers.

1. Click the Reconfigure button on the L-Platform Details page.

2. After the following message is displayed, click the 'Obtain the lock on a mandatory basis' button, and then cancel the reconfiguration.

```
The L-Platform is locked by another user.
After obtaining the lock on a mandatory basis, the operation can be continued.
```

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6.3.3 Display Details on a Disk

Follow the steps below to display the details of a disk located on the virtual server:

1. Display the **L-Platform Details** page.
   Refer to "6.3.2 L-Platform Detailed Information Display" for information on how to display the page.

2. After selecting the virtual server to which the disk is added, select **Disk** from the list box.
   The details of the disk will be displayed on the **L-Platform Details** page.

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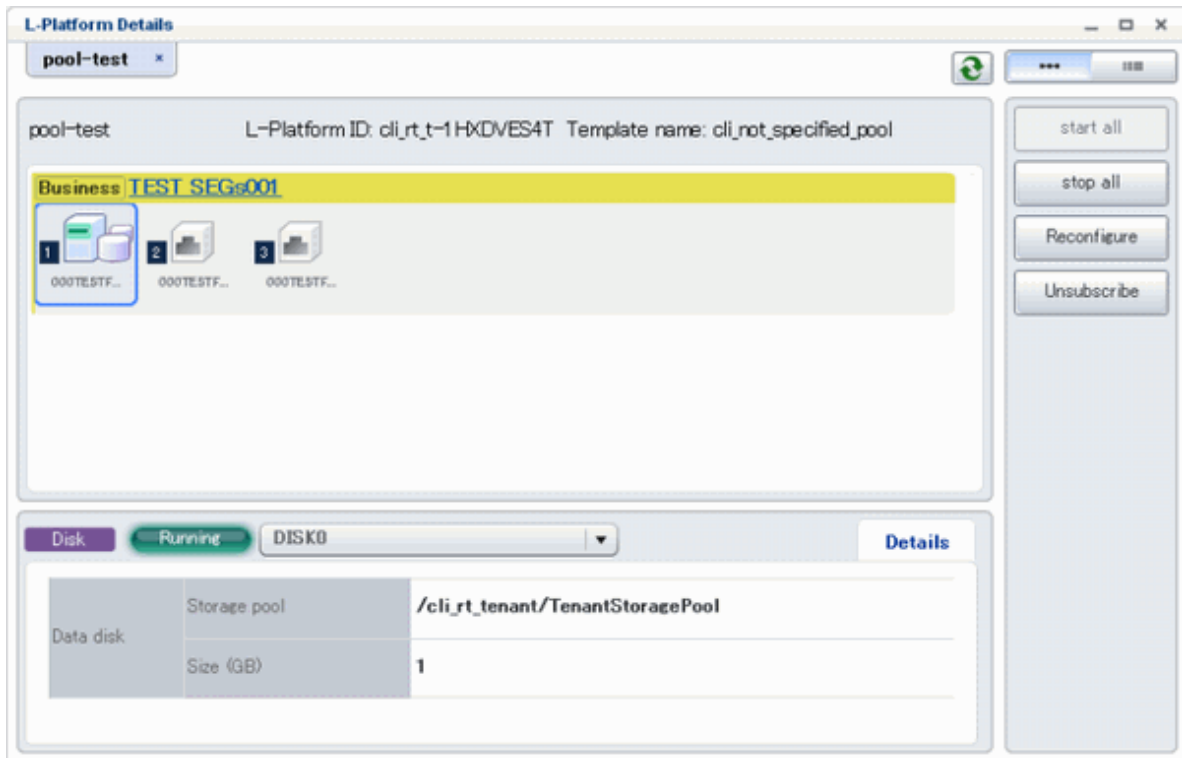
The following buttons can be used on the **L-Platform Details** page displaying the details of the disk.

- **Reconfigure** button: Modify an L-Platform template
  Refer to "6.3.11 L-Platform Reconfiguration" for information on modifying an L-Platform template.

- **Unsubscribe** button: Cancel an L-Platform
  Refer to "6.3.12 Cancel an L-Platform" for information on canceling an L-Platform.

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6.3.4 Start and Stop the Server

Follow the steps below to start or stop a server:

1. Display the **Server List** page.
   Refer to "6.3.1 L-Platform Management Display Page" for information on how to display the page.
   Alternatively, display the **L-Platform Details** page.
   Refer to "6.3.2 L-Platform Detailed Information Display" for information on how to display the page.

2. After selecting a required server, click the **ON** button to start it or the **OFF** button to stop it.

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Even if the server is stopped using the **OFF** button, sometimes the server may not stop, due to a problem with the server. In this case, the **ON** button and **OFF** button act as Forced stop buttons. When a **Forced stop** button is clicked, the server will stop forcibly.

The **Forced stop** button is designed to shut down the power to the server.
Therefore, the recommendations for virtual servers is to use remote desktop connection to connect to the virtual server, and then to shut down the operating system.

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6.3.5 Manage Patch Information

Patch information can be managed after it is applied to or deleted from a server that has been deployed.

Register Patch Information

Follow the steps below to register patch information:

1. Display the **L-Platform Details** page.
   Refer to "6.3.2 L-Platform Detailed Information Display" for information on how to display the page.

2. After selecting the required server, select the **Others** tab.
   The following page will be displayed if the patch information has not been registered.
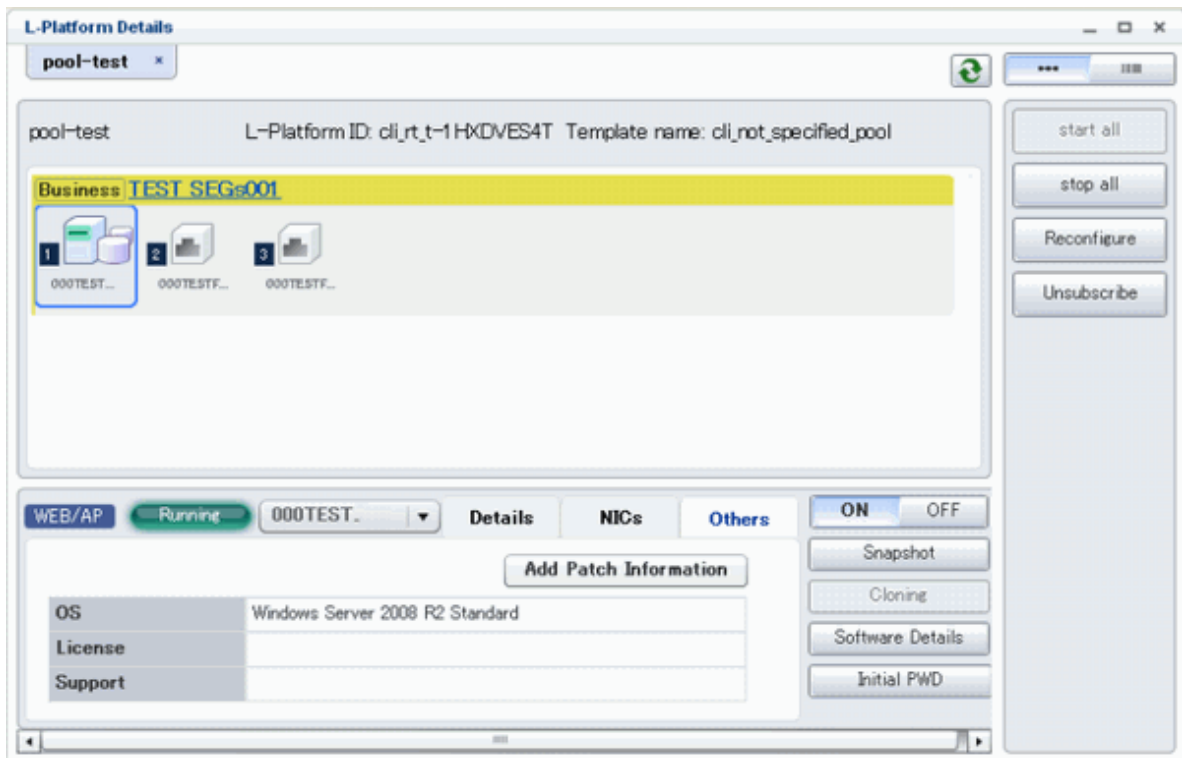
3. Click the **Add Patch Information** button.
   The **Add Patch Information** page will be displayed.

Item	Description
Patch ID	Specify the patch ID that has been applied. The patch ID must be no more than 32 bytes of alpha-numeric one-byte characters.
Component name	Specify the name of the component where the patch is to be applied. The name must be no more than 85 characters long and not include the following characters: `<, >, &, ', " and control characters`
Description	Specify the description related to the patch information that has been applied. The description must be no more than 85 characters long and not include the following characters: `<, >, &, ', " and control characters`

4. Enter the required fields and click the **OK** button.

Delete Patch Information

Follow the steps below to delete patch information that has been registered:

1. After selecting the required server on the **L-Platform Details** page, select the **Others** tab.
   The following page will be displayed if the patch information has been registered.
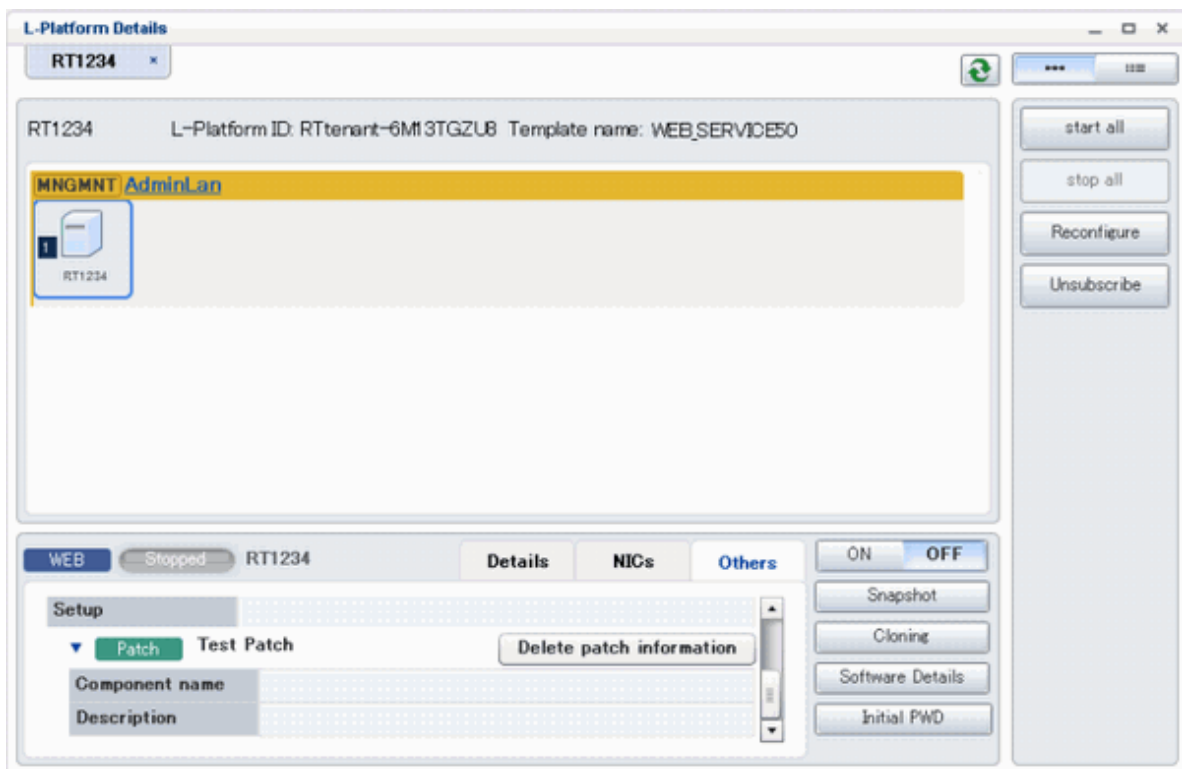
2. Click the **Delete patch information** button of the patch information to be deleted.
   A message confirming the deletion will be displayed. Click the **OK** button.

6.3.6 Take and Restore Snapshot

Using the **Snapshot** page, snapshots can be taken and restored for the virtual server.

To take the snapshots and restore them, the target virtual server must be inactive.
Snapshot is managed by the generation. Snapshots of older generations will be deleted if snapshots that are older than three generations are to be taken.
Contact the system administrator if it is necessary to take snapshots over 4 or more generations.

Note

- The function for taking and restoring snapshots is supported if the virtualization software is either VMware or Hyper-V. If the virtualization software is RHEL5-Xen or RHEL-KVM, there is no function for taking and restoring snapshots.

- The server will enter an error state if an error occurs while taking or restoring snapshots.
  When this occurs, a character string "Error" and **x** button will be displayed on the **Snapshot** column of the relevant row on the **Server List** page. To clear the error state, click the **X** button.

- The backup products that support the virtual server backup operations located on the virtualization software must be used to back up the virtual server to a disk or tape device that is not the disk device the virtual server is running on.

- When the configuration is modified after taking the snapshots and those snapshots are restored, the server may be restored to the state before the configuration was modified. It is recommended that new snapshots be taken after the configuration is modified.

- Even if a created snapshot is not deleted, contact the System Administrator if it is not displayed in the Snapshort window.

Take Snapshots

Follow the steps below to take snapshots:

1. Display the **Server List** page.
   Refer to "6.3.1 L-Platform Management Display Page" for information on how to display the page.
   Alternatively, display the **L-Platform Details** page.
   Refer to "6.3.2 L-Platform Detailed Information Display" for information on how to display the page.

2. After selecting a required server, click the **Snapshot** button.
   The **Snapshot** page will be displayed.

3. Click the Start to **Take Snapshot** button.

4. A pop-up window will be displayed. Enter a comment of less than 128 characters.
   This will display the comment entered on the snapshot list.

5. Click the **Take Snapshot** button to start taking the snapshot.

Restore Snapshots

Follow the steps below to restore the taken snapshots:

1. Select the required snapshot from the snapshot list on the **Snapshot** page.

2. When the **Restore** button is clicked, the restore processing of the snapshot will start.

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To delete the snapshots taken, select the snapshot to be deleted from the snapshot list, and click the **Delete** button.
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Note
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Only the operation of taking of the snapshot and restoring is displayed in the history on the **Snapshot** page.
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6.3.7 Physical Server Backup and Restore

The Backup page can be used to back up and restore a physical server.

The target physical server must be stopped before performing backup and restore.
Backup is managed by the generation. Backups of older generations will be deleted if snapshots that are older than three generations are to be taken.
Contact the system administrator if it is necessary to take backups over 4 or more generations.

Note
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- If an error occurs during backup or restore processing, an error state occurs for the server.
  At this time, the character string "Error" and an **X** button are displayed in the Backup column of the relevant row of the **Server List** page. The error status can be cancelled by clicking this **X** button.

- If a server is reconfigured after backup, when the server is restored it may revert to the configuration prior to the reconfiguration. It is recommended to make a new backup after reconfiguration.
. . . .
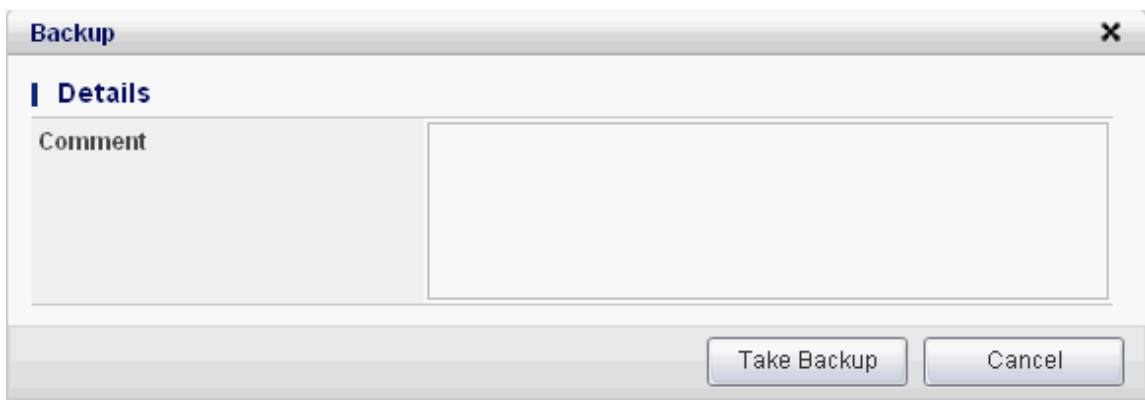
Backup

Follow the steps below to backup:

1. Display the **Server List** page.
   Refer to "6.3.1 L-Platform Management Display Page" for information on how to display the page.
   Alternatively, display the **L-Platform Details** page.
   Refer to "6.3.2 L-Platform Detailed Information Display" for information on how to display the page.

2. After selecting a required server, click the **Backup** button,
   The **Backup** page will be displayed.
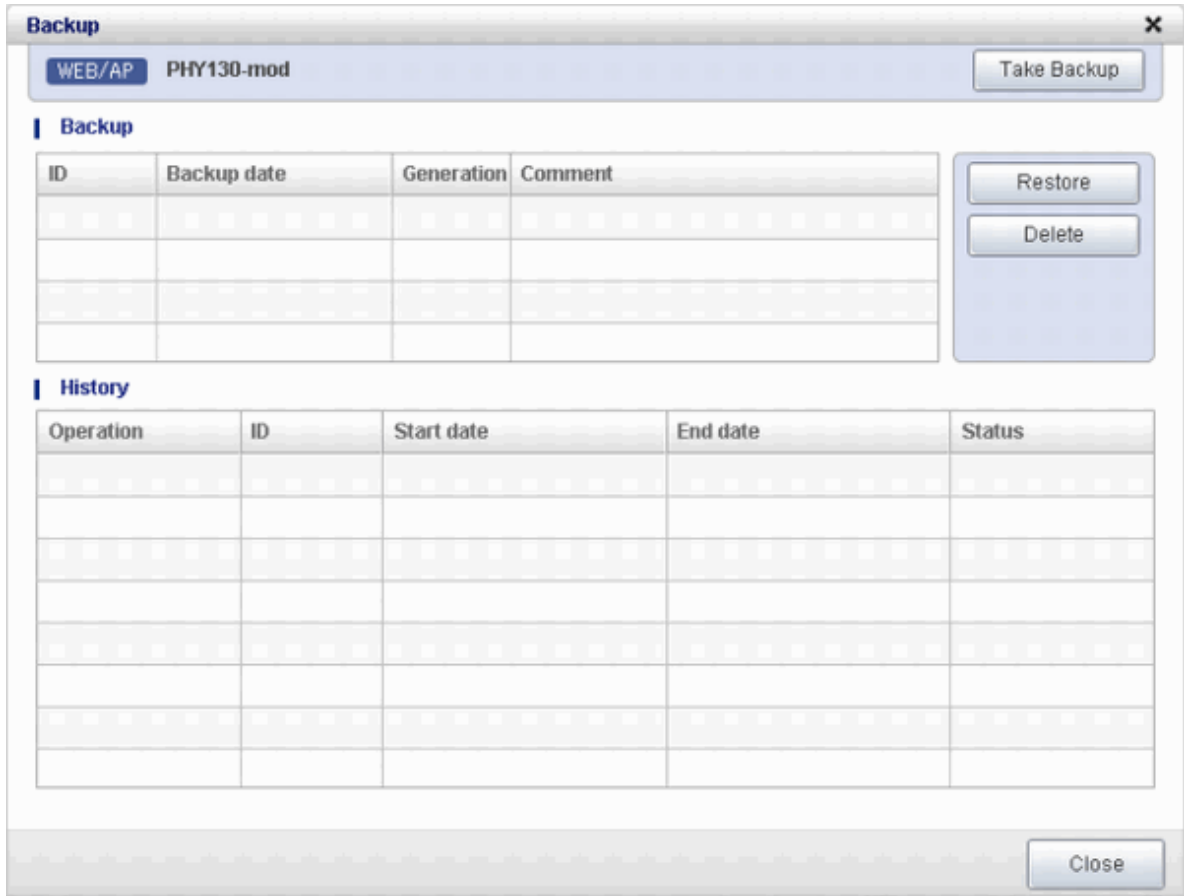
3. Click the **Take Backup** button.

4. A pop-up window will be displayed. Enter a comment of less than 128 characters.
   This will display the comment entered on the backup list.

5. Click the **Take Backup** button to start backup.

Restore

Perform the following operations to restore a backed up server:

1. In the backup list in the Backup page, select the target backup.

2. Click the **Restore** button to start the restore.

6.3.8 Image Collection

Collect a cloning image from an already deployed server.

The target server must be stopped if it is a virtual server and must be started if it is a physical server before collecting a cloning image.

Perform the following steps to collect an image:

1. Display the **L-Platform Details** page
   Refer to "6.3.2 L-Platform Detailed Information Display" for the display method.

2. Select the target server, and then click the **Cloning** button.
   The Cloning page is displayed.

3. Click the **Cloning** button.

4. A pop-up window is displayed.

   - Name: Enter up to 32 single-byte characters.

   - Comment: The comment can be omitted. Enter up to 256 characters.

   - Destination image pool: From the drop-down menu, specify the output destination image pool.

5. When the **Cloning** button is clicked, image collection starts.

![Note icon] **Note**

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When the target is a physical server, if the Cloning page is closed after starting to collect an image, the Cloning page will not be able to be opened until the image collection finishes.

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6.3.9 Setup Firewall

Change the firewall settings.

The firewall rule set parameter values can be changed in the firewall settings.

Perform the following steps to change the firewall settings:

1. Display the **L-Platform Details** page

   Refer to "6.3.2 L-Platform Detailed Information Display" for the display method.

2. Select the firewall, and then click the **Setting** button.

3. A pop-up window is displayed.

   - Label: Displays the parameter label

   - Description: Displays an explanation of the parameter

- Value: Enter the value to be set for the parameter

4. When the **Update** button is clicked, a confirmation message is displayed.
   Click the **OK** button to save and apply the firewall settings.

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Firewall settings cannot be set by L-Platform subscription or L-Platform reconfiguration.

After an L-Platform is deployed, check the IP addresses of the servers included in the L-Platform and the port numbers used by the installed middleware. Then, set the allowed IP addresses and port numbers in the relevant rule set parameters in the firewall settings.

6.3.10 Tenant Operation

Follow the steps below to do tenant operation.

1. Display the Server List page.

   Refer to "6.3.1 L-Platform Management Display Page" for information on how to display the page.

2. Click the **Tenant operation** button.

   Tenant operation page will be displayed.

3. Click **Start servers** button to start all servers in the tenant. Click **Stop servers** button to stop all servers in the tenant.

Tenant operation	✕

Select tenant

◯ All

◉ Specify Tenant(s)

Name	Display name
tenant001	tenant001

[Start servers] [Stop servers] [Cancel]

📖 Note
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Start or Stop servers failed in following conditions.

- There are deploying or reconfiguring L-Platforms in the tenant.

- There are servers in following conditions.
  starting
  stopping
  taking backup
  taking snapshot
  restoring
  cloning
. . . .

6.3.11 L-Platform Reconfiguration

The system configuration that configures the L-Platform in use can be modified on the **Reconfigure** page.

📖 Note
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- The **Reconfigure** page can be used only if the Infrastructure Administrator is permitted to change the L-Platform Template.

- Before changing the L-Platform, stop the server. If the virtual server is running when you try to change it, an error will occur. However, the following operations are executable even if the virtual server is running.

  - Change the system name

  - Change the server name

  - Change the disk name

  - Add a server

- Add a disk

- Change CPU performance (*) (virtual servers only)

  *: This operation can only be executed with RHEL5-Xen.

- Setting the startup priority level

- Regardless of whether or not an L-Platform reconfiguration completion notification email is received, check with the Infrastructure Administrator if an L-Platform Template is not changed. In this case, the change processing may have failed at the virtual server.

Follow the steps below to modify the system configuration that configures the L-Platform in use:

1. Display the **L-Platform Details** page.
   Refer to "6.3.2 L-Platform Detailed Information Display" for information on how to display the page.

2. Click the **Reconfigure** button and display the **Reconfigure** page.

3. Modify the system configuration as required on the **Reconfigure** page.

   Estimated charges corresponding to the system reconfiguration will be displayed in the top-right of the window.
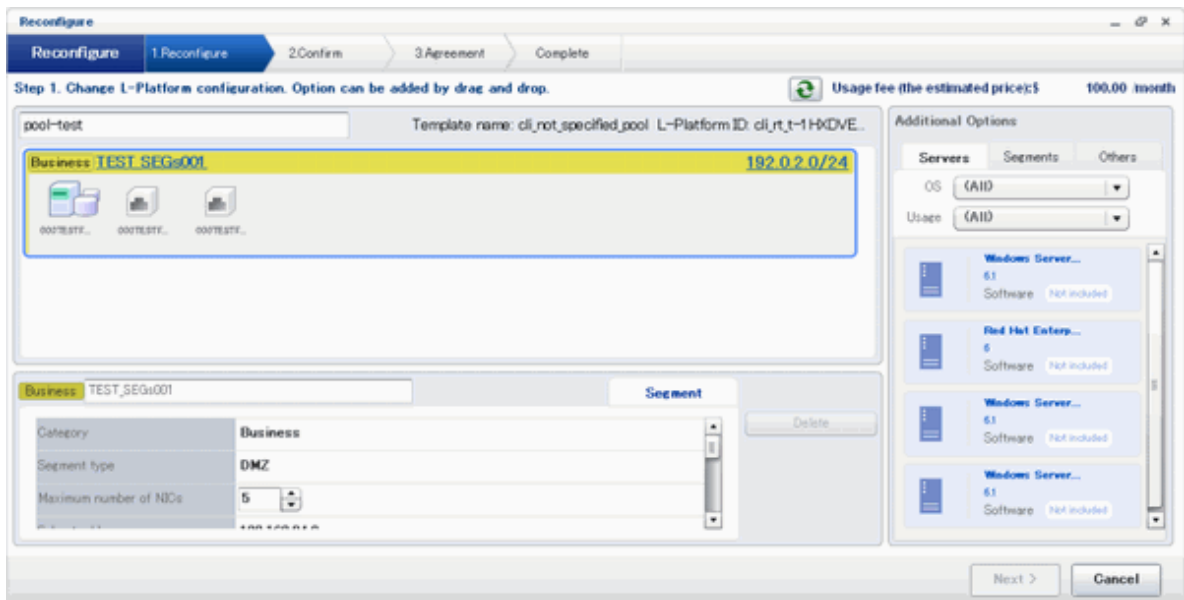
The following items cannot be modified when a system that has been deployed.

  - VM pool

  - System disk

  - Subnet

  - NIC extension and reduction (virtual servers only)

Refer to "6.3.13 Reconfiguration Page " for information on the other items.

Note

For both system disks and extended disks that have been deployed, neither the size nor the pool can be modified. Extended disks that have been deployed can be deleted.

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Estimated fees for the L-Platform template will only be displayed when the charges display is set to enabled.

The displayed estimated charges will be calculated according to current prices, and not according to prices at the time of deployment.

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4. When the L-Platform is modified, click the **Next** button.
   The **Confirm** page will be displayed.
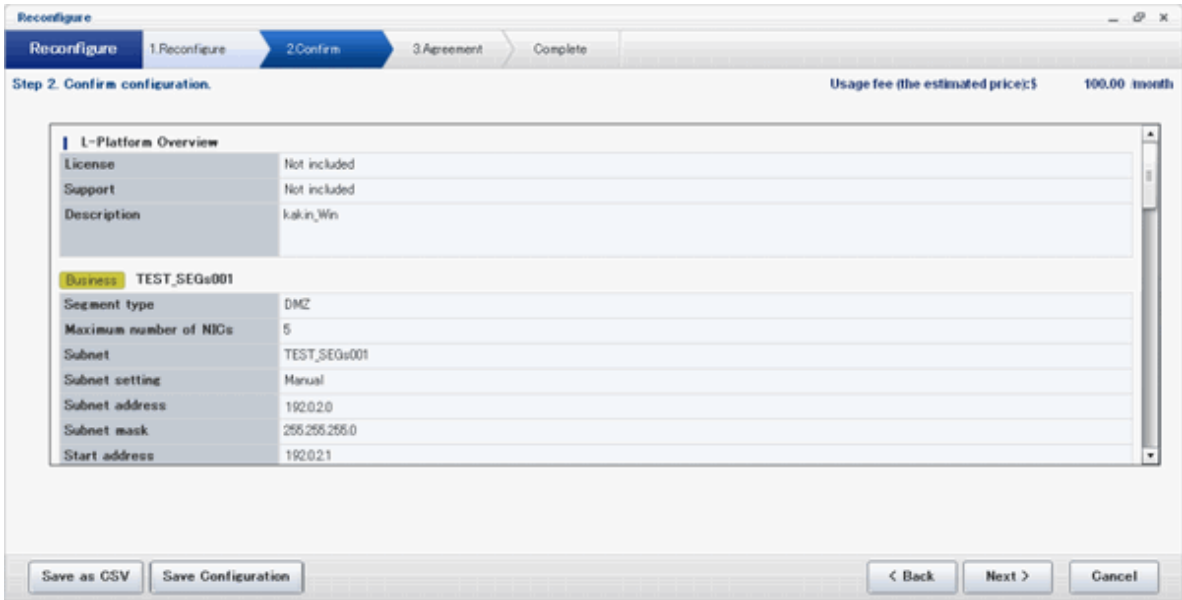
The difference between the old L-Platform template and the new L-Platform template is displayed as follows:

Item	Display format
Item changed	The values of the changed items are displayed in red. The old value is displayed as "Changed from *the old value*".
Item added	"*Added" is displayed after items that have been added. The values of the added items are displayed in red. The background of the added item is displayed in red.
Item deleted	"*Deleted" is displayed after items that have been deleted. The background of the deleted item is displayed in gray.

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CSV output

When the **Save as CSV** button is clicked, the **Select the destination to save** window is displayed where the L-Platform template can be saved as a CSV file.

The CSV file name is in the following format:

```
SystemConfiguration (+ <L-Platform name> +)_ <date> + .csv
```

Save specification

Click the **Save Configuration** button to save the L-Platform template, and the display returns to the **Management** page.

When the L-Platform template is saved, an icon ( ) will be displayed after the L-Platform template name.

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5. Check the displayed contents of the L-Platform template, and click the **Next** button.
   The **Agreement** page will be displayed.
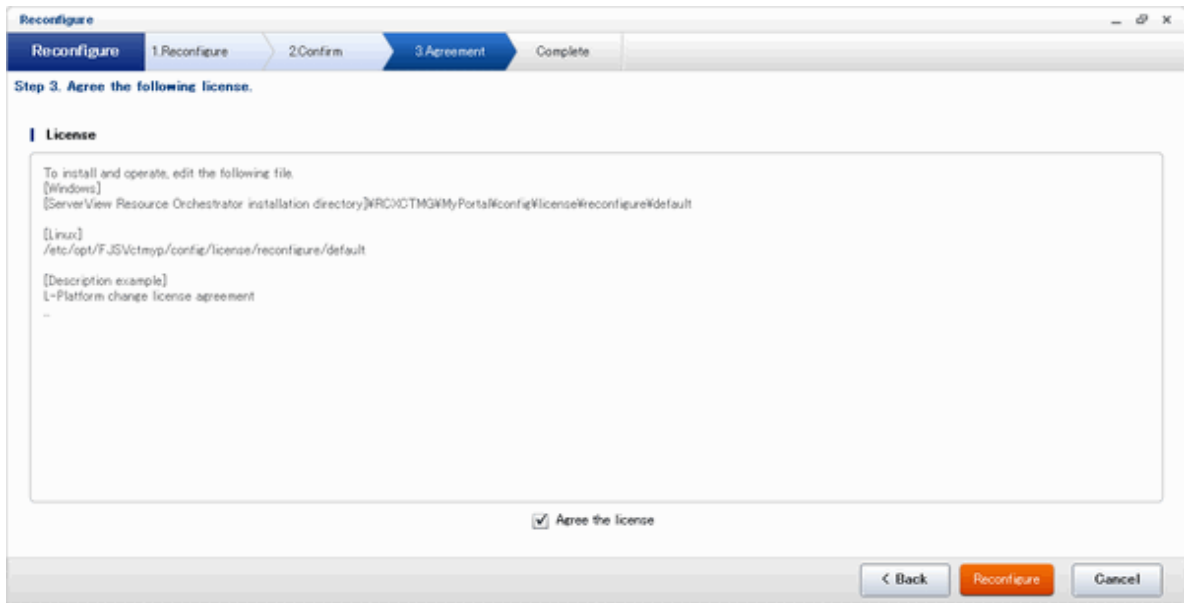
6. Check the license agreement displayed. Select the **Agree the license** check box, and then, click the **Reconfigure** button.

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When the application process is enabled, clicking of the **Reconfigure** button on the **Agreement** page displays the **Forward screen** window. Refer to "6.5 Select Forward Destination of Application Process" for details.
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The **Complete** page will be displayed when an application for modification of an L-Platform template is accepted.

- When the application process is disabled

   The following message will be displayed:
   "The request to reconfigure the L-Platform has been completed. The reconfiguration take some time to complete."
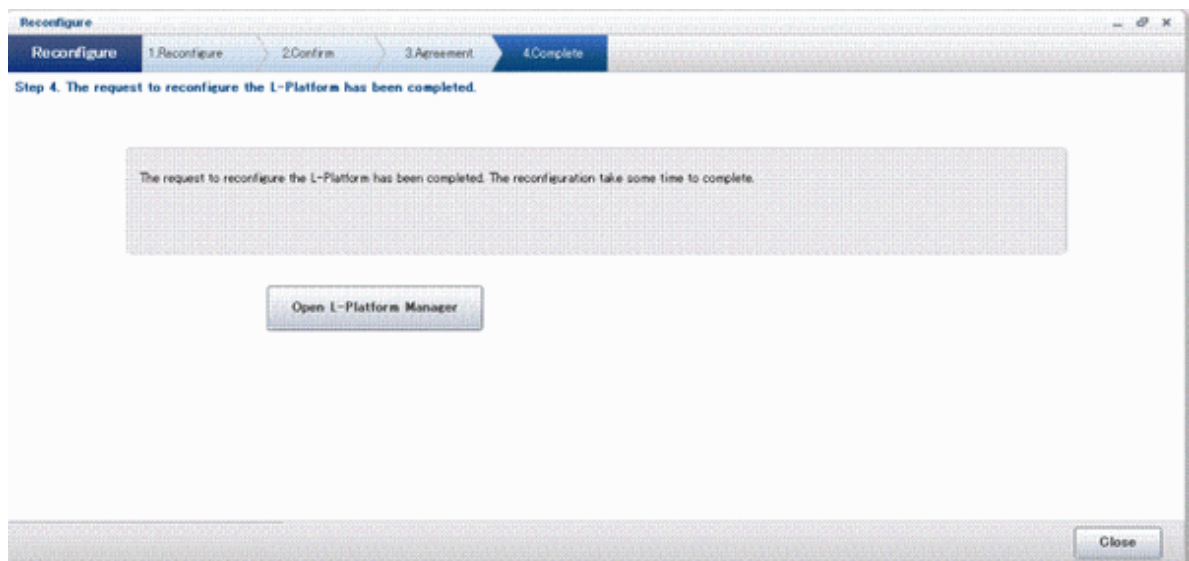
- When the application process is enabled

   The following message will be displayed:
   "The request to reconfigure the L-Platform has been completed. The L-Platform will be reconfigured after approval and/or judgement procedures."
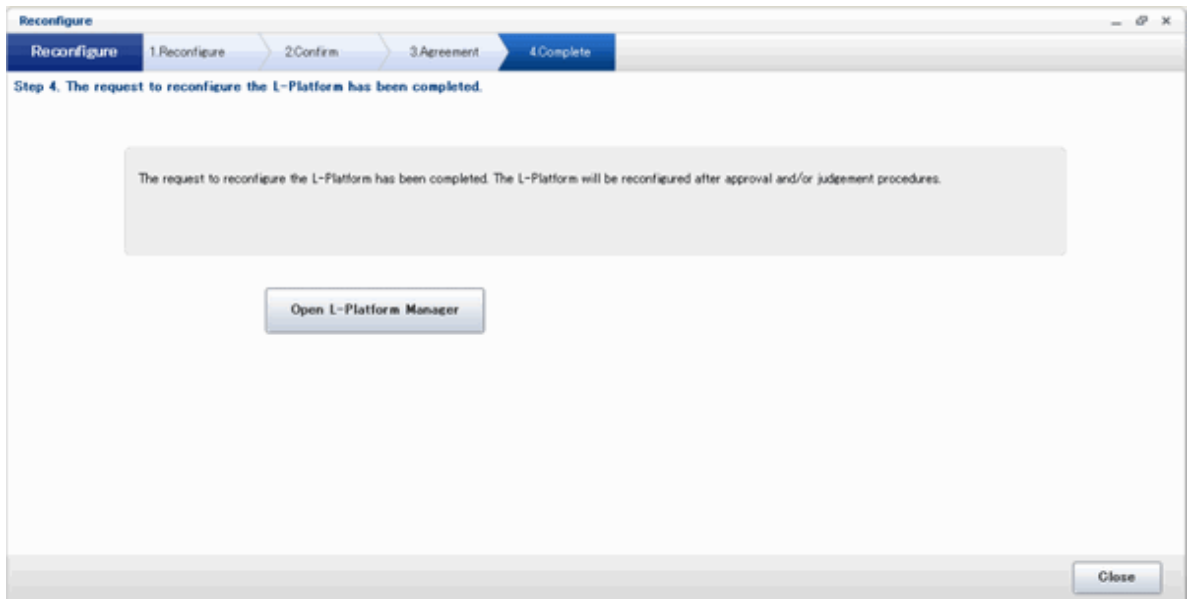
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When an L-Platform Template is changed, an L-Platform reconfiguration completion notification email is sent to the subscriber.

If an L-Platform Template change fails, an L-Platform reconfiguration failure notification email is sent to the subscriber and the Infrastructure Administrator. In this case, check with the Infrastructure Administrator about the action required.
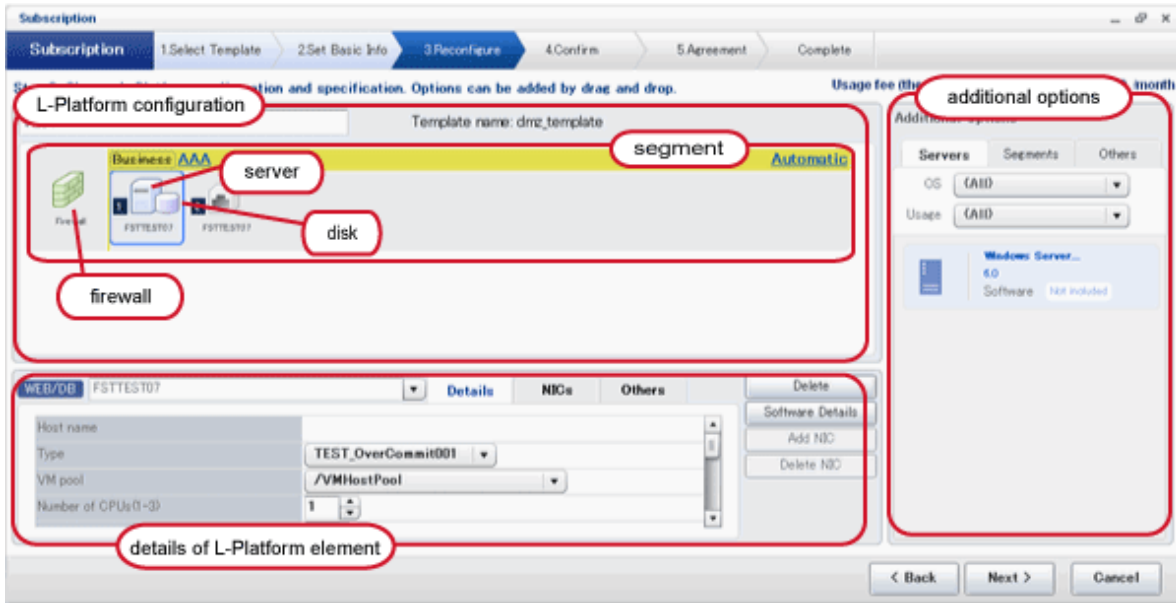. . . . .

6.3.12 Cancel an L-Platform

Follow the steps below to cancel an L-Platform:

1. Display the **L-Platform Details** page.
   Refer to "6.3.2 L-Platform Detailed Information Display" for information on how to display the page.

2. Stop all the servers of the system that configures the L-Platform to be canceled.
   Refer to "6.3.4 Start and Stop the Server" on information on how to stop a server.

3. Click the **Unsubscribe** button.
   The **Confirm** page will be displayed.
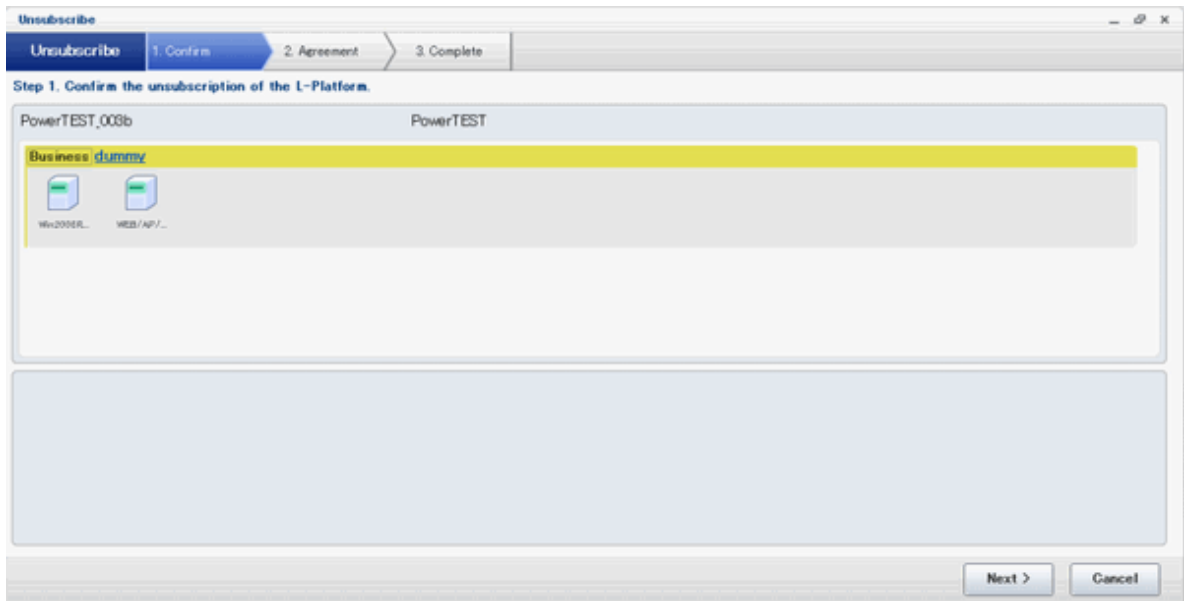
4. Confirm that the correct L-Platform is being canceled, and click the **Next** button.
   The **Agreement** page will be displayed.
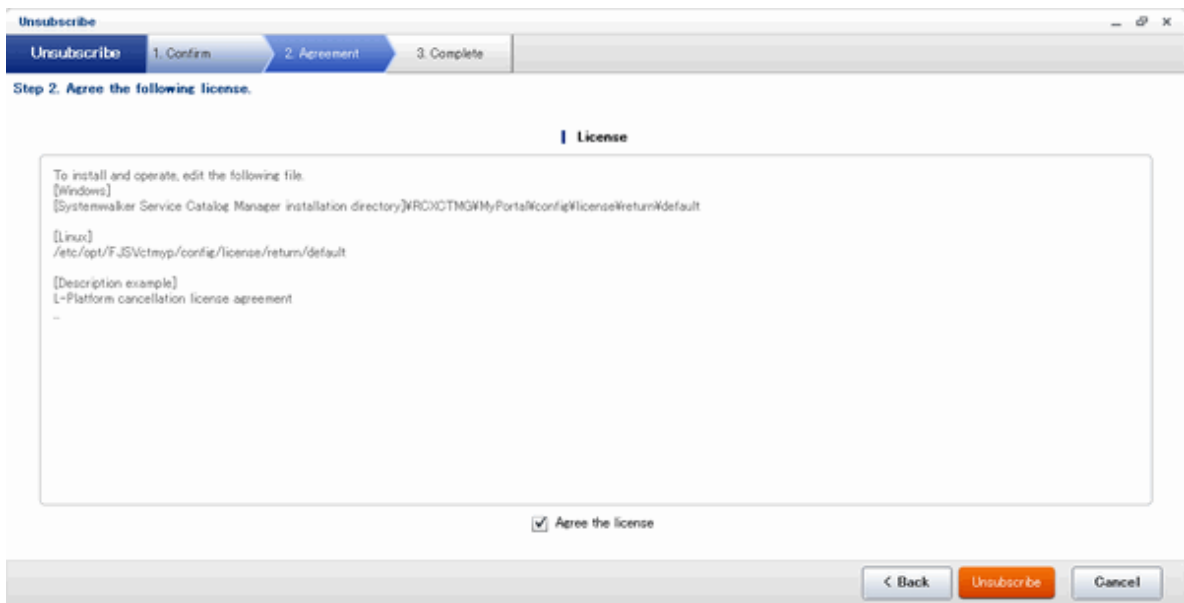
5. Select the **Agree the license** check box to cancel the subscription, and click the **Unsubscribe** button.

![P] **Point**
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When the application process is enabled, clicking of the **Unsubscribe** button on the **Unsubscribe** page displays the **Forward screen** window. Refer to "6.5 Select Forward Destination of Application Process " for details.
. . . .

The **Complete** page will be displayed when the L-Platform is canceled.

- When the application process is disabled

    The following message will be displayed.
    "The L-Platform has been unsubscribed."
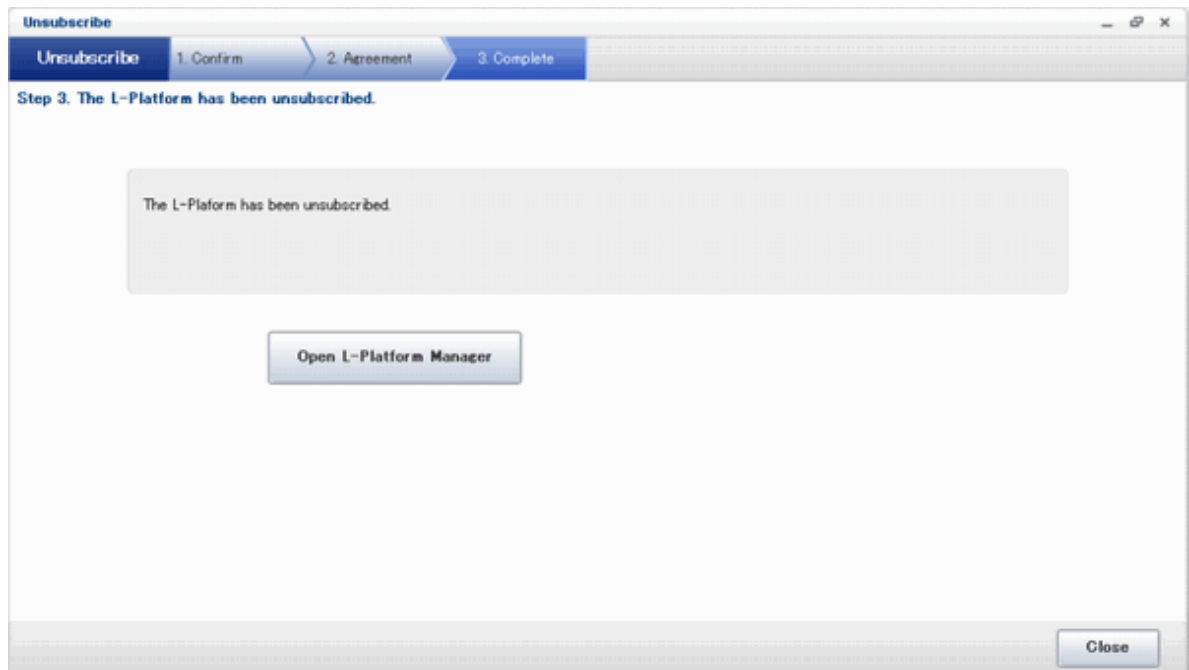
- When the application process is enabled

    The following message will be displayed.
    "The L-Platform to unsubscribe the L-Platform has been completed. The L-Platform will undeployed after approval and/or judgement procedures."

![Note icon] **Note**

When the following events occur, cancellation application may become impossible.

Notify the Infrastructure Administrator of the content displayed on the window.

- The pop-up blocker has been enabled and the 'Forward screen' window is not displayed.

- An error message is displayed on the 'Forward screen' window.
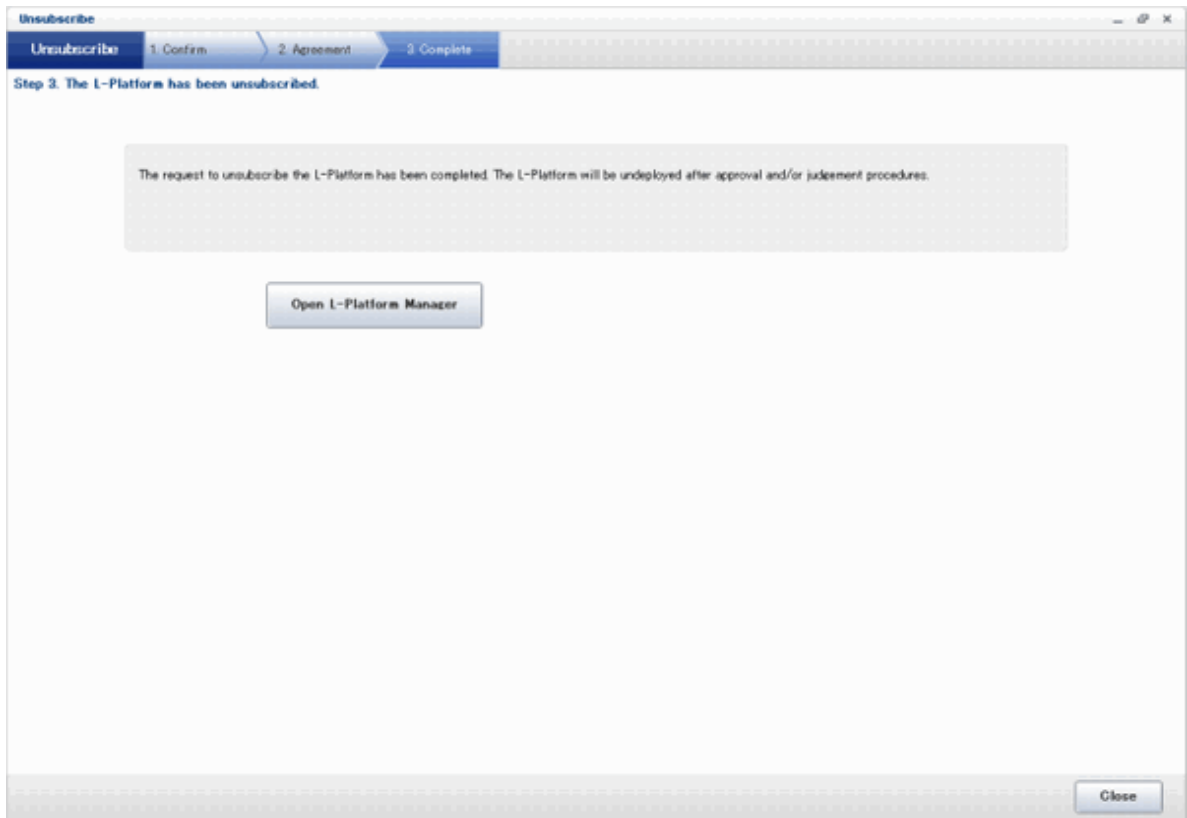
Point

When an L-Platform is cancelled, a cancellation completion notification email is sent to the subscriber.

If an L-Platform cancellation fails, a cancellation failure notification email is sent to the subscriber and the Infrastructure Administrator. In this case, check with the Infrastructure Administrator about the action required.

6.3.13 Reconfiguration Page

The following configuration can be defined on the **Reconfigure** page.

- Segment: Represents a network segment located on the L-Platform

- Virtual server: Represents a server on the L-Platform

- Physical server: Represents a physical server.

- Disk: Represents an extended disk that is not a system disk but can be added to the virtual server or physical server.

An example of the **Reconfigure** page display is shown below.

The configuration of the **Reconfigure** page is shown below:

Part	Description
L-Platform configuration	Located on the top of the page, this area expresses the L-Platform in terms of the elements of firewall, segment, virtual server, physical server and disk. When an element is selected, the element is displayed in the Details of configuration element.
Add options	Located on the right hand side of the page, this area lists the elements of, the virtual server, physical server and disk that can be added to the L-Platform The listed elements can be dragged and dropped into the L-Platform using a mouse and added to the virtual system configuration as elements.
Details of L-Platform element	Located at the bottom of the page, this area allows the details of a selected L-Platform element to be edited By clicking the **Delete** button, the elements such as a virtual server or physical server or a disk can be deleted from the L-Platform. Software information can be checked in a new window by clicking the **Software details** button. Click the **Add NIC** button to add NICs. The **Add NIC** button is enabled only if NICs can be added. Click the **Delete NIC** button to delete selected NICs.

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Estimated fees for the L-Platform template will only be displayed when the charges display is set to enabled. The displayed estimated fees will be calculated according to current prices each time the specs are changed.

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Edit the L-Platform

The L-Platform can be edited on the **Reconfigure** page.

The L-Platform name entered on the **Basic info** page can be modified.

Only the segments described in the L-Platform template specification are available. They cannot be added or deleted.

To add a virtual server or physical server, a virtual server or physical server listed in **Servers** tab of **Additional options** can be dragged and dropped into the segments.

To add a disk, a disk listed in **Others** tab of **Additional options** can be dragged and dropped into the virtual server or physical server.

The types of disks that can be added are new disks and existing disks. New disks can be added to virtual servers and physical servers. Existing disks are displayed if an Infrastructure Administrator has registered them to a storage pool that can reference already created disk resources, and can be added to physical servers.

Firewall

When the firewall is selected, its rule set can be checked. The firewall cannot be deleted.

The **Reconfigure** page example below shows the page when the firewall is clicked. The window below is the Subscribe L-Platform **Reconfigure** page.
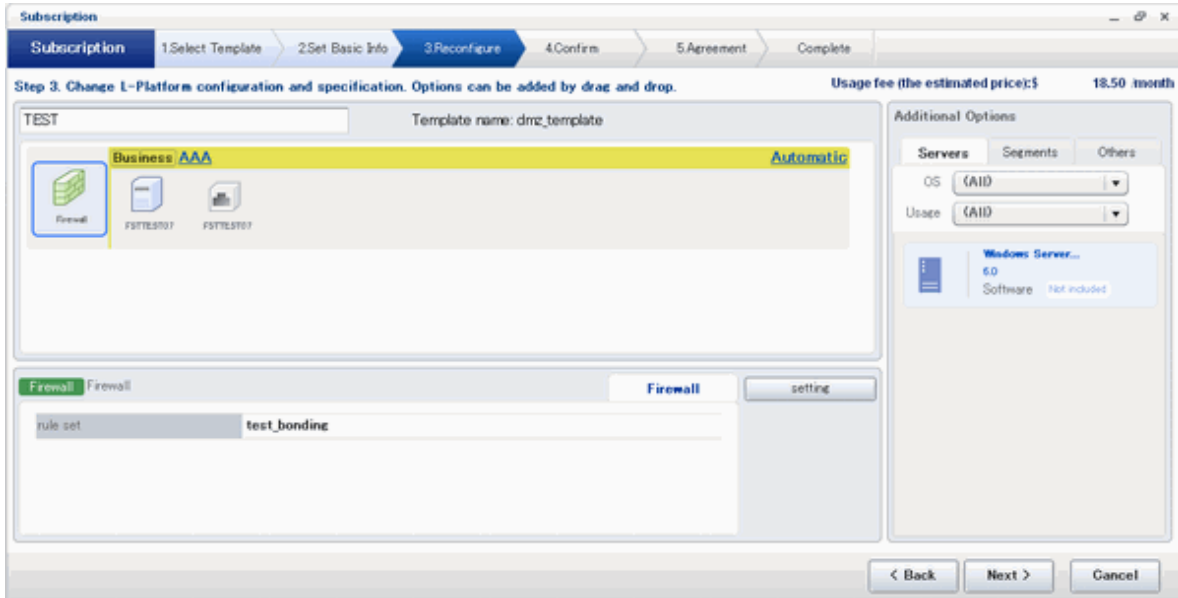
Firewall tab

Part	Description
rule set	Displays the name of the 'rule set' set for the firewall. The rule set name cannot be changed.

Click **Setting** button to check the parameter values in the rule set. The values set as the default are the values specified in the L-Platform template.

The window below is the rule set confirmation window.

> 📌 **Note**
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> - The firewall for a server added by a new L-Platform subscription or L-Platform reconfiguration is set after the L-Platform is deployed. Refer to "6.3.9 Setup Firewall" for details.
>
> ⋯⋯

Edit a Segment

A segment can be edited by selecting the segment to be edited.
It is possible to select whether a subnet allocated to the segment can be set automatically or manually in the segment editing. Note, however, that subnets cannot be modified in the L-Platform configuration after the system has been deployed.
If the network to be connected to is specified in the L-Platform template, the specified network remains selected.

The following window displays an example of the **Reconfigure** page when a segment name is clicked. The following window shows the **Reconfigure** page used to subscribe to an L-Platform.
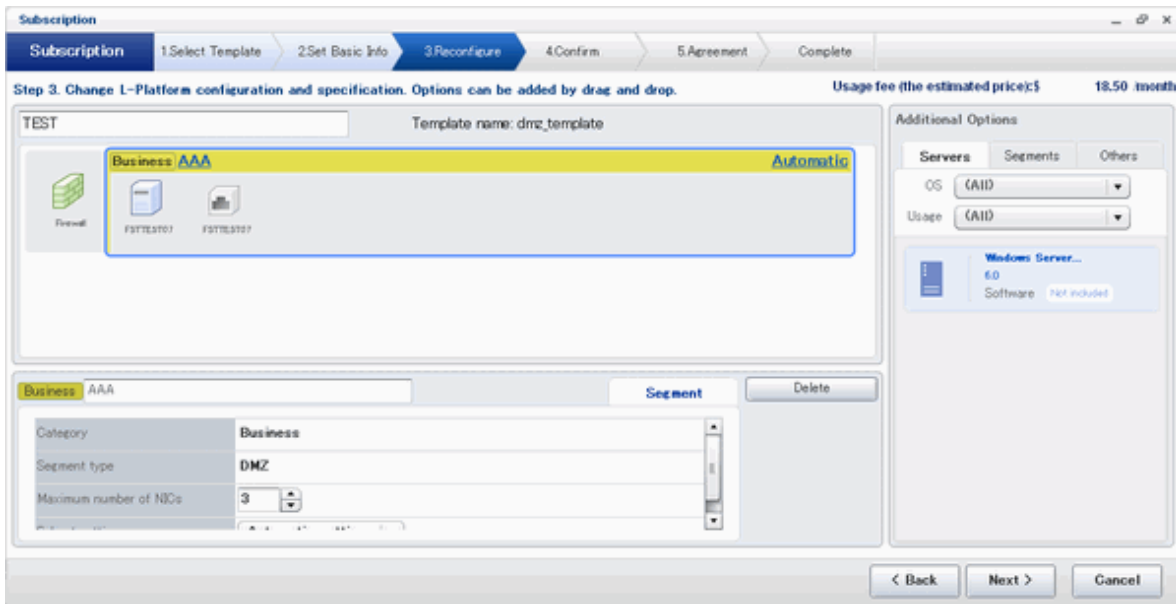
Details of configuration element Segment tab

Part	Description
Category	Specify the category if segments are selected automatically when additions are made by network extension. The default is "Business segment". - Business segment: A segment where business servers are deployed - Management segment: A segment where servers that monitor business or similar are deployed
Segment type	Specify the segment identification information used if segments are selected automatically when additions are made by network extension.
Maximum number of NICs	Specify the maximum number of servers that can be deployed in a segment.
Subnet setting	Specify the IP address of the virtual server to be deployed. The default value is "Automatic setting". - Automatic setting: Set automatically from the subnet - Manual setting: The user specifies a subnet address or selects it from a network resource list

📑 **Note**

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- If the maximum number of segments in the L-Platform template is one, the IP addresses of virtual servers being deployed can be specified in the subnet settings.

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Additional options Segment tab

Part	Description
Segment	- Extend or reduce a network.

📑 **Note**

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Network extension and reduction

- A network can be extended to the maximum number of segments for an L-Platform Template.

- Since at least one segment is required, it is not possible to delete all segments.

- When a segment is deleted, the connected NIC is also deleted. Since at least one NIC is also required, it is not possible to delete all NICs.

- Reduction is not possible while a server is operating.

Edit a Virtual Server

By clicking a virtual server, the virtual server can be edited by selecting the tabs displayed.

Details tab

The virtual server type can be selected using the **Details** tab.

An example of the **Details** tab display is shown below.

Part	Description

Host name	Sets the virtual server name specified in the L-Platform template.
	
	 "usage + (no. of servers + 1)" is set automatically for the virtual server that has been added as an option.
	 To rename, the name must be no more than 85 characters long and not include the following characters:
	
	 `<, >, &, ', " and control characters`
	
	 However, the strings and the number of characters that can be specified may vary depending on the system settings. It is recommended that the name be specified using no more than 15 of the following characters. The value specified for this item cannot consist of only numbers. Hyphens cannot be used for the first character.
	
	 `Alphanumeric characters, underscores ("_") and hyphens ("-")`
	
	 A pre-existing name cannot be specified.

Type	From the drop-down menu, select the type (specifications) of the registered server. The CPU, memory size, and System Disk will be set according to the type of the server selected. However, a message may appear indicating that the server type cannot be changed with some types of virtualization software.

Part		Description
VM pool		From the drop-down menu, select the resource name of the VM pool that is the server deployment destination. Contact the infra administrator in the event that an error message is displayed indicating that no existing pool can be selected as the server deployment destination.
CPU	Number of CPUs	Set the number of CPUs of the virtual server. Specify the lesser of the two values: Enter either the maximum value entered for image information or enter the maximum value of the VM pool, number of cores of VM hosts with the most numbers of cores. A value outside the range cannot be set.
	Performance	Specify CPU performance of the virtual server in GHz. Specify the lesser of the two values: Enter either the maximum value entered for image information or enter the maximum value of the VM pool, value of operational frequency of VM hosts with the most value of operational frequency. A value outside the range cannot be set.
	Reserved	Specify the reserved CPU performance for the virtual server, in GHz. The minimum value for the reserved clock speed that is guaranteed to be allocated to the virtual server can be specified. It is not possible to specify a value that is greater than the operating clock speed. Any value outside the allowable range cannot be specified. This is not displayed and cannot be specified if the virtualization software is RHEL-KVM.
	[VMware] Shares [Hyper-V] Weight	Specify the relative allotment ratio for determining the allotment of memory size when multiple virtual machines are competing for memory resources. Specify an integer up to 1,000,000. If the reconfiguration simplification function is disabled and the easy selection method is set, set values are as follows: - Low (500) - Standard (1,000) - High (2,000) This is not displayed and cannot be specified if the virtualization software is RHEL-KVM.
Memory	Size	Specify the memory size of the virtual server in GB. Specify the lesser of the two values: Enter either the maximum value entered for image information or enter the maximum value of the VM pool, free memory size of VM hosts with the most free memory size. A value outside the range cannot be set.
	[VMware] Reserved [Hyper-V] RAM	Specify the reserved memory size for the virtual server, in GB. The minimum value for the reserved memory size that is guaranteed to be allocated to the virtual server can be specified. It is not possible to specify a value that is greater than the memory size. Any value outside the allowable range cannot be specified. This is not displayed and cannot be specified if the virtualization software is RHEL-KVM.
	[VMware] Shares [Hyper-V] Weight	Specify the relative allotment ratio for determining the allotment of memory size when multiple virtual machines are competing for memory resources. Specify an integer up to 1,000,000. If the reconfiguration simplification function is disabled and the easy selection method is set, set values are as follows: - Low (500)

Part		Description
		- Standard (1,000)
		- High (2,000)
		This is not displayed and cannot be specified if the virtualization software is RHEL-KVM.
System Disk	Storage pool	From the drop-down menu, select the storage pool to be used.
	Size	The disk capacity of the virtual server is displayed in GB.
		The capacity of the system disk cannot be modified.
Boot priority		Sets the priority order when performing batched power supply operations in either the L-Platform or the tenant. The smaller the value, the higher the priority order.
		Set to 0 when power supply operations are not carried out in a single batch. Note however that this value cannot be set to 0 at the time of new deployment.

Point

The icons displayed in front of the virtual server names correspond to the usage of the virtual servers described in the specification.

- WEB: Web server

- AP: Application server

- DB: Database server

When a virtual server has multiple usages, an icon showing each usage separated by "/" will be displayed.
Example: WEB/AP, AP/WEB/DB etc.

Note

- The server type cannot be changed with some types of virtualization software.

- When the value 0 or no valid value is specified for CPU frequency, CPU reserve clock rate, memory size, or memory reserve size, it is treated as if the value 0.1 were specified. This modification is included in the changed items.

NICs tab

An IP address to be allocated to NIC can be set using the **NICs** tab.
An IP address can be set only when "manual setting" was specified when the segment was edited for a subnet. Note, however, that a subnet cannot be modified when modifying the configuration of a system that has been deployed, and so the IP address cannot be modified either.

The following example displays the **NICs** tab. The following window shows the **Reconfigure** page used to subscribe to an L-Platform.
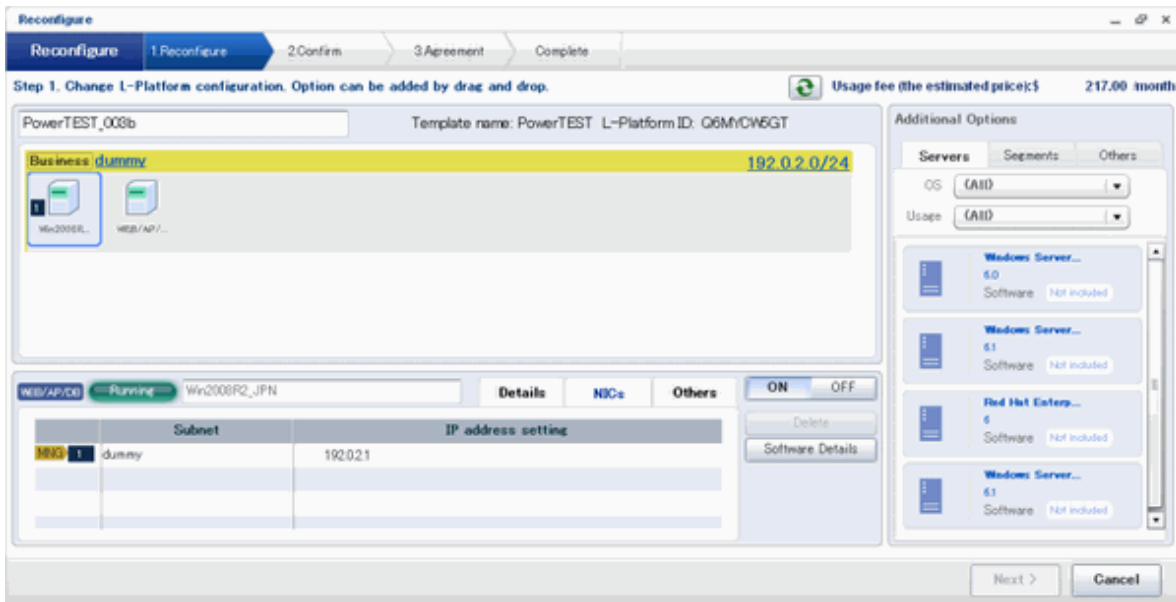
There are two ways of specifying an IP address as follows:

- Automatic
  Sets an IP address automatically from a subnet.

- Manual
  Enters an IP address directly.
  When there is a conflict between the specified IP address and network resources, an error message will be displayed.

An **MNG** icon is displayed for the control NIC.

The following window displays an example of an L-Platform where multiple NICs exist. The following window shows the **Reconfigure** page used to subscribe to an L-Platform.
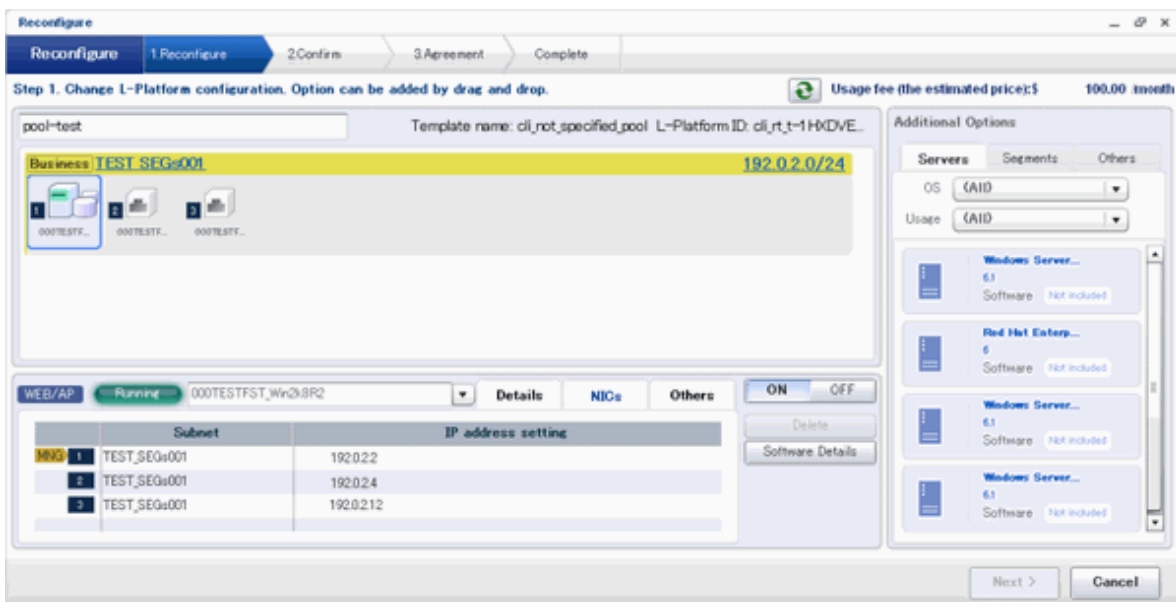
Each NIC is represented by one server. When a server is selected, the same server in each segment is selected.
When a server is selected an icon is displayed showing a number at its lower left hand corner. The number represents an NIC number.
Dark-colored servers are the NICs for administration, and light-colored servers are NICs for business.

When a server is dragged from the Add options and dropped on a segment, as many servers as the number of NICs specified for the segment in the image information are displayed.

NIC Extension and Reduction

This section explains NIC extension and reduction.
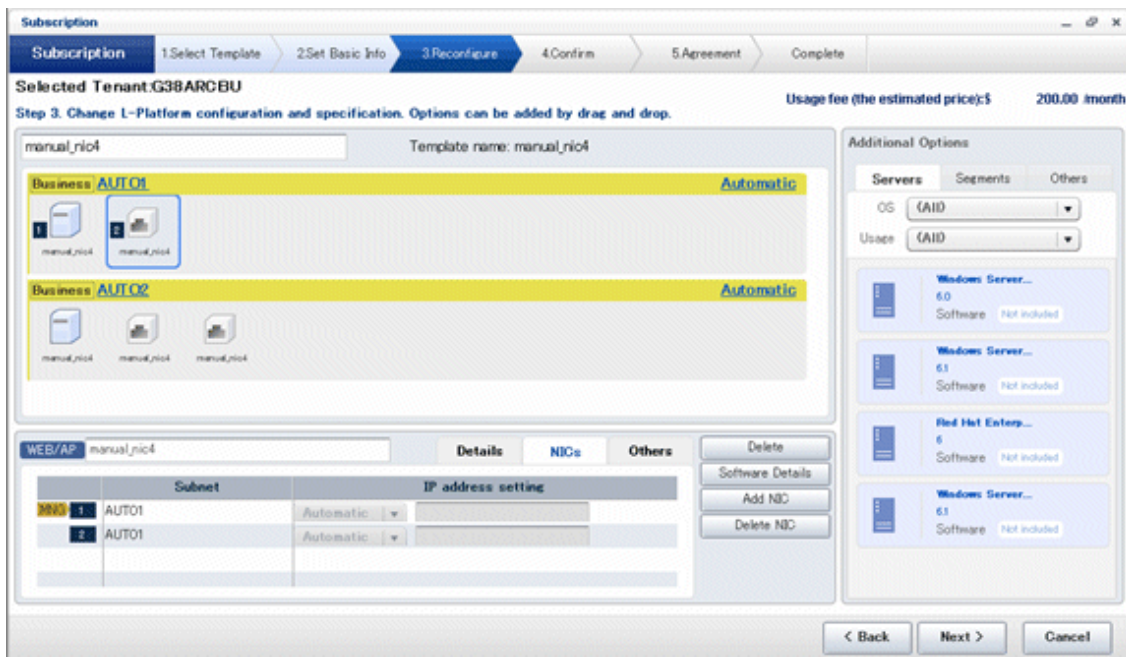
Click the **Add NIC** button to add a business NIC to the same segment as the control NIC.

Click the **Delete NIC** button deletes an NIC.

📌 Note

- This is possible only during L-Platform subscription. NIC extension and reduction are not possible after deployment.

- NICs cannot be added if they would exceed the maximum number of connections for the segment.

- Control NICs cannot be deleted.

- Since at least one NIC is required, it is not possible to delete all NICs.

- When extending or reducing NICs for a physical server, configure the number of NICs after settings are made to match the number of NICs of the physical server being used.

Others tab

The **Others** tab can be used to check the operating system installed at a virtual server, the middleware and other software, and information on the patches applied to the software.

A display example of the **Others** tab is shown below.
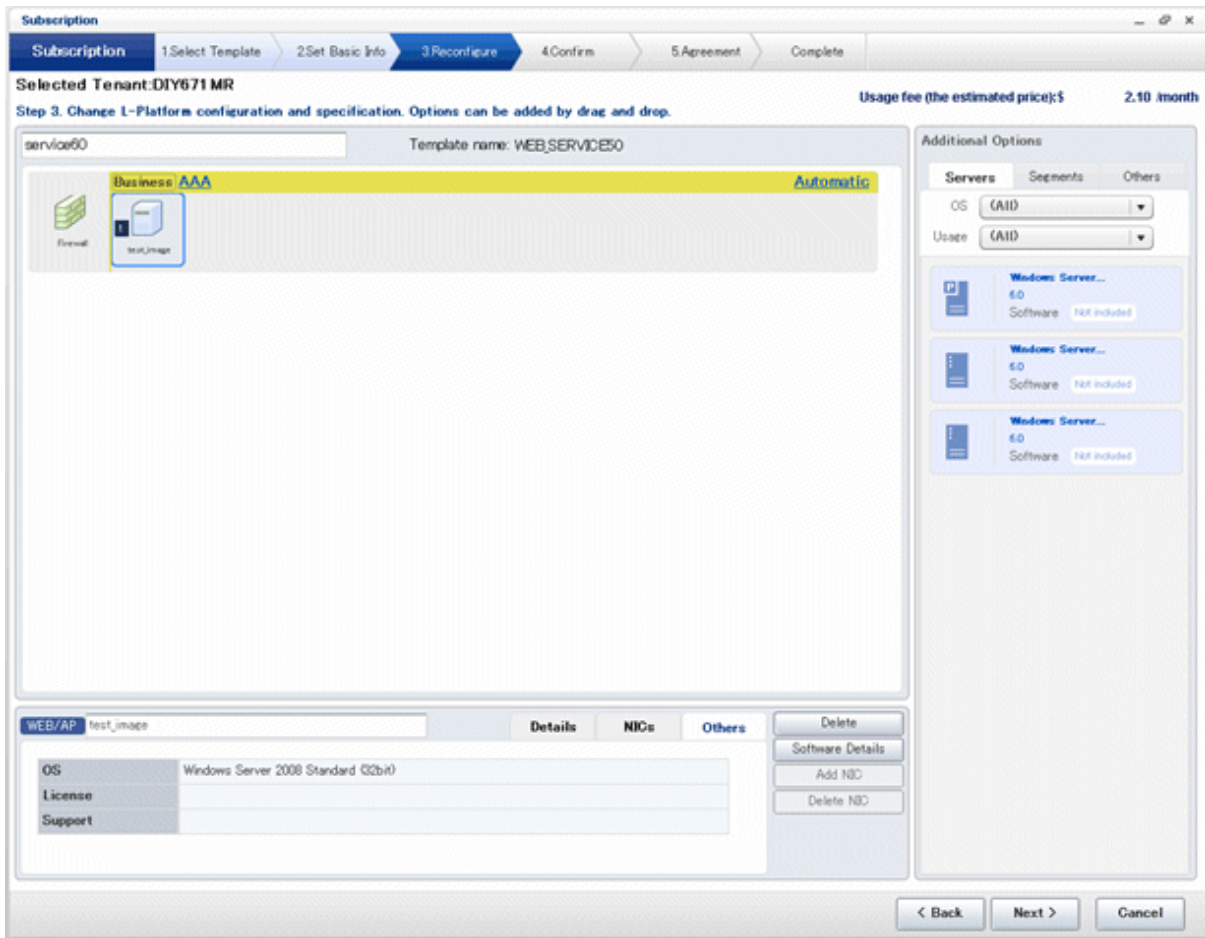
Editing a Physical Server

When a physical server is selected, the allowed physical server depends on the displayed tab.

Details tab

The **Details** tab can be used to select a virtual server type.

A display example of the **Details** tab is shown below.

Part		Description
Host name		Sets the name of a physical server that is in the L-Platform Template. This setting cannot be changed.
Type		From the drop-down menu, select the type (specifications) of the registered server. The CPU, memory size, and System Disk are set according to the selected server type.
Server pool		From the drop-down menu, select the resource name of the server pool that is the server deployment destination. Contact the infra administrator in the event that an error message is displayed indicating that no existing pool can be selected as the server deployment destination.
Reserve server pool		From the drop-down menu, select the resource name of the reserve server pool. Contact the infra administrator in the event that an error message is displayed indicating that no existing pool can be selected as the server deployment destination.
CPU	Number of CPUs	Set the number of CPUs in the physical server. (*) If the upper limit value recorded in the image information differs from the VM pool upper limit value (the number of cores in the VM host with the most cores), a value up to the smaller value can be set. Values outside that range cannot be set.
	performance	Specify the CPU performance of the physical server in GHz units. (*)If the upper limit value recorded in the image information differs from the VM pool upper limit value (the frequency of the VM host with the highest frequency), a value up to the smaller value can be set. Values outside that range cannot be set.

Part		Description
Memory	Size	Specify the memory size of the physical server in GB units. (*) If the upper limit value recorded in the image information differs from the VM pool upper limit value (the free size of the VM host with the largest free memory size), a value up to the smaller value can be set. Values outside that range cannot be set.
System Disk	Storage pool	From the drop-down menu, select the storage pool to be used.
	Size	The disk capacity of the physical server is displayed in GB. The capacity of the system disk cannot be modified.
Boot priority		Sets the priority order when performing batched power supply operations in either the L-Platform or the tenant. Range:1-256.The smaller the value, the higher the priority order. Set to 0 when power supply operations are not carried out in a single batch. Note however that this value cannot be set to 0 at the time of new deployment.

*: The server pool physical server with details closest to the specified CPU and memory information is allocated.

Estimated charges are calculated according to the values entered for the CPU performance and memory capacity when newly deploying a physical server. The performance of the actual server deployed will be the closest possible to the entered values. For this reason, the estimated charges displayed may differ to actual charges. Estimated charges for physical servers that have already been deployed will be calculated according to the actual CPU performance and memory capacity.

NICs tab

Use the **NICs** tab to set the IP address allocated to an NIC.
Note that the IP address can be set only if "manual setting" is specified for the subnet during segment editing. However, since the subnet cannot be changed by reconfiguration after a system is deployed, IP address changes are also not possible.

A display example of the **NICs** tab is shown below. Note that the window shown below is the L-Platform subscription **Reconfigure** page.
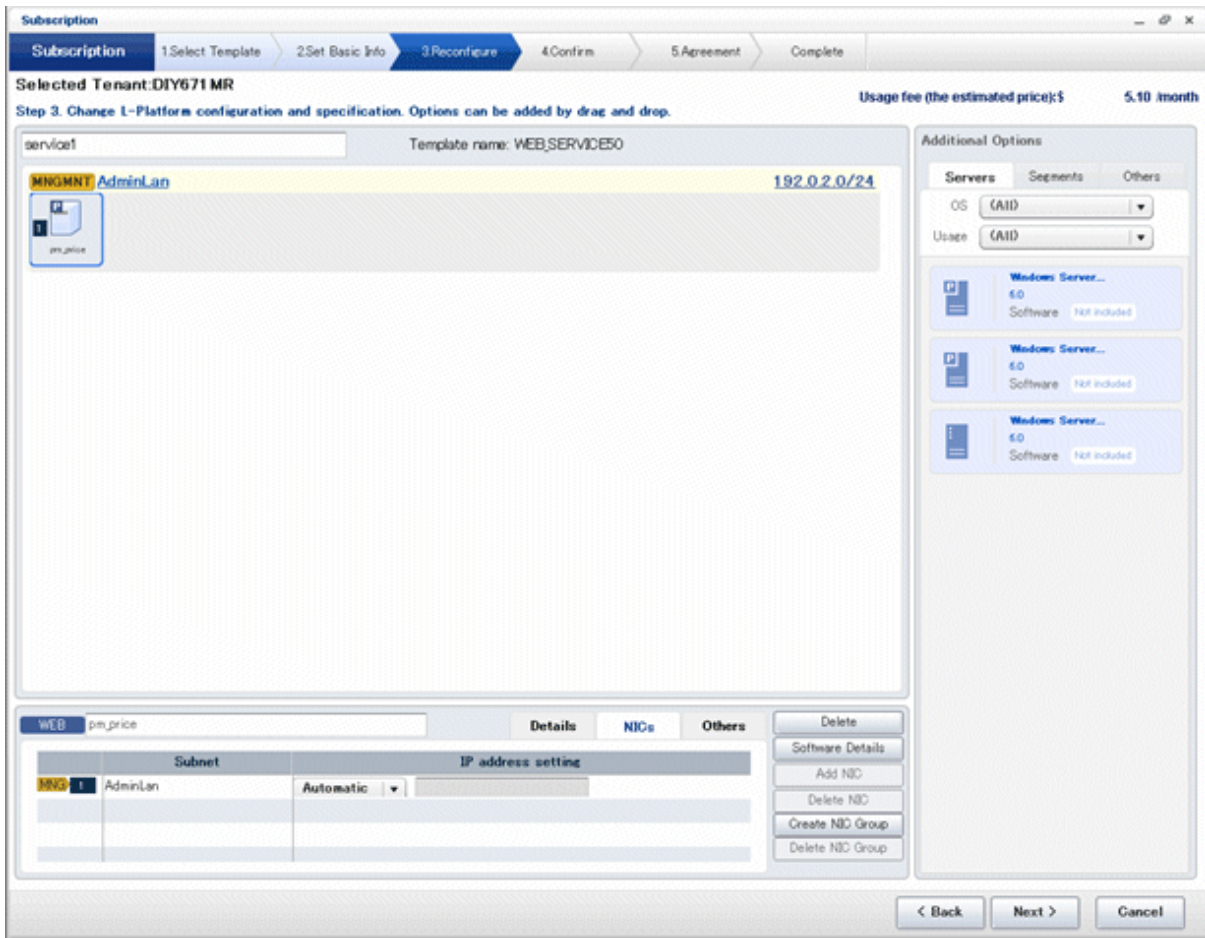
The following two methods are available for specifying an IP address:

- Automatic
  The IP address is set automatically from the subnet.

- Manual
  Enter the IP address directly.
  An error message is displayed if the specified IP address is inconsistent with the network resources.

The **MNG** icon is displayed for the control NIC.

The window below is an example of the display when there are multiple NICs. Note that the window shown below is the L-Platform subscription **Reconfigure** page.
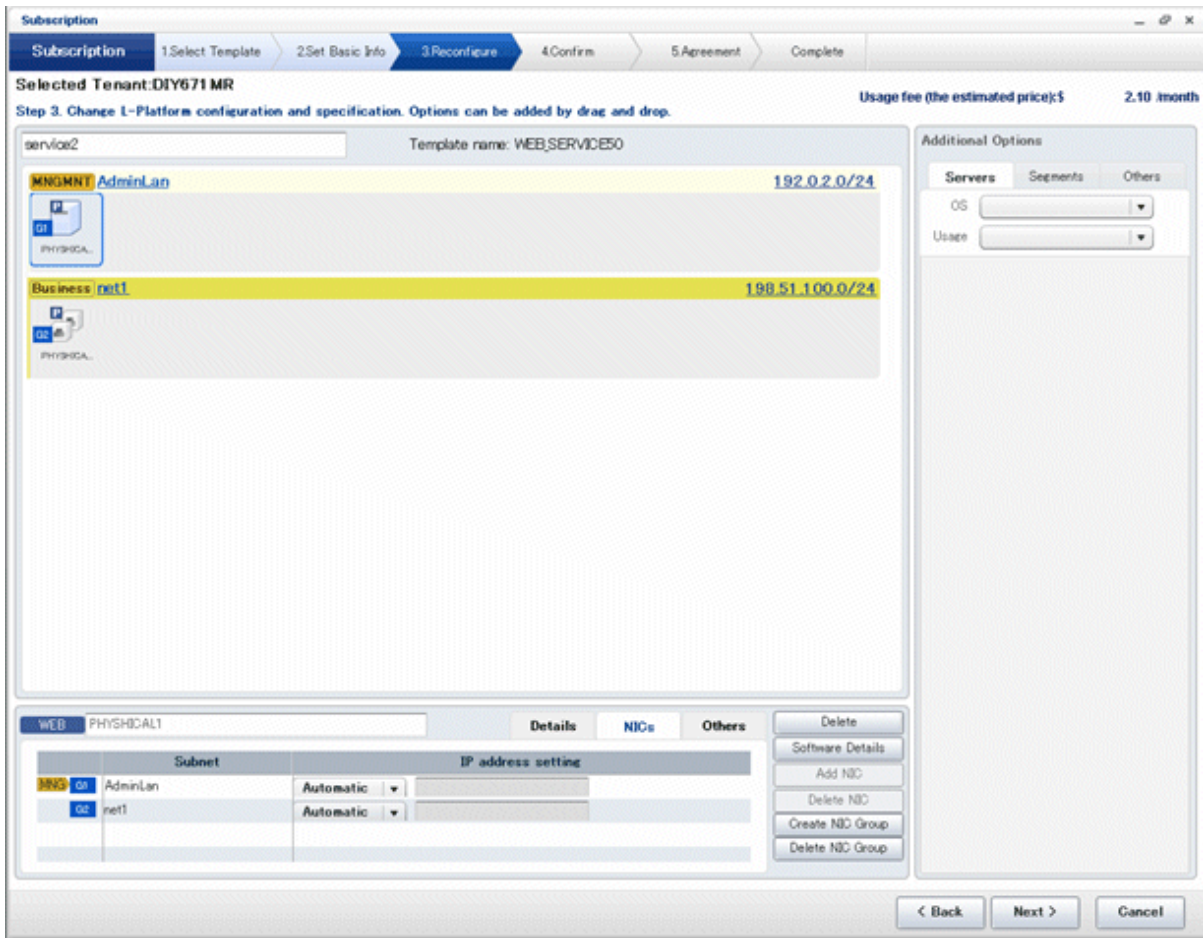
NIC1 is represented by one physical server. When a server is selected, the selected state occurs for all the same servers. A numeric icon is displayed to the bottom left of selected servers. It indicates the NIC number.
Dark-colored servers indicate management NICs, and light-colored servers indicate business NICs.

If a segment is dragged and dropped from the addition option, the number of servers displayed matches the number of NICs specified in the image information of the segment.

NIC Grouping (for Physical Servers)

This section explains NIC grouping.
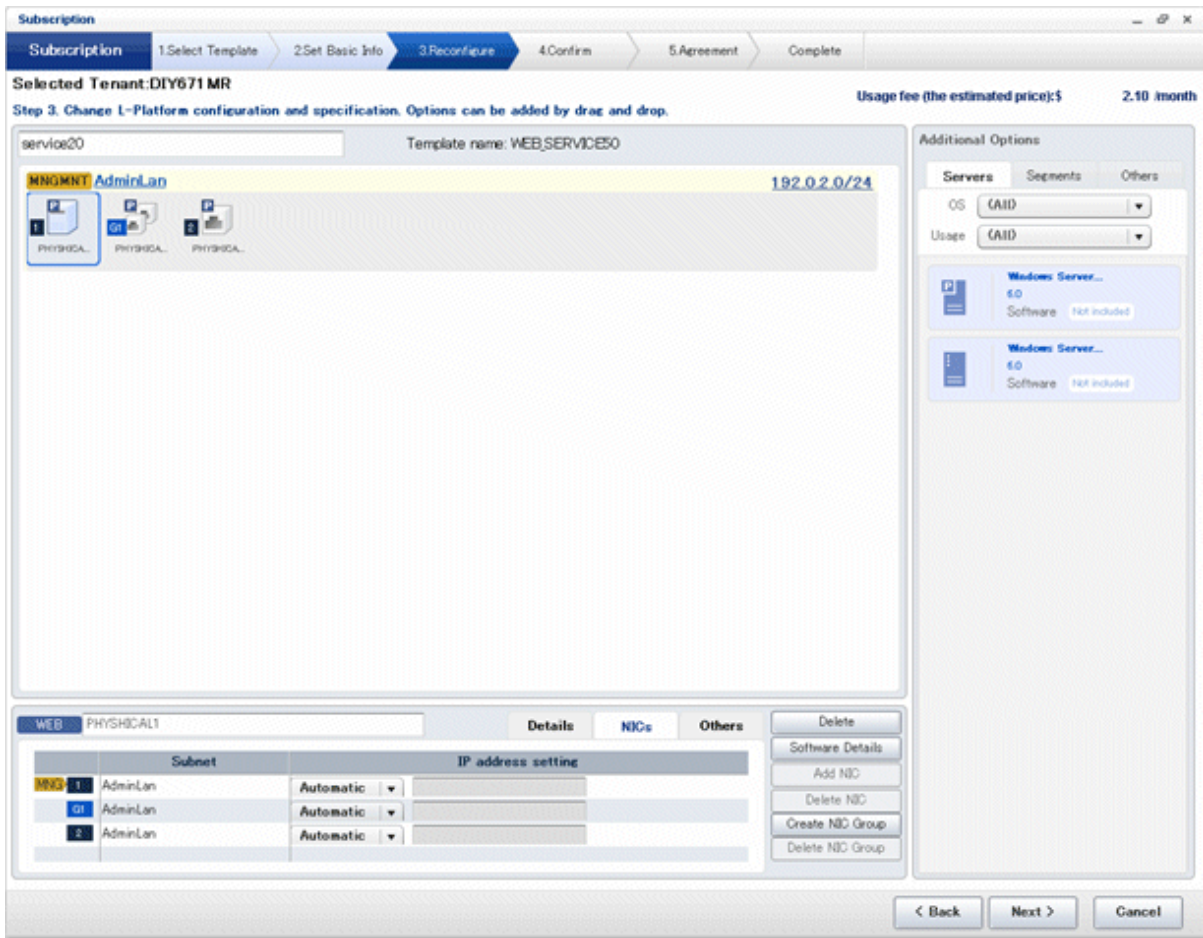
- Making a group

  Select multiple checkboxes, and then click the **Form NIC Group** button. However, Multidata input NIC cannot be grouped. (Control NICs are okay.)

- Cancelling a grouping

  Select multiple checkboxes, and then click the **Delete NIC Group** button.

📖 Note

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- This is possible only during L-Platform subscription. NIC groups cannot be made or cancelled after deployment.

- Two NICs can be grouped. Three or more NICs cannot be grouped.

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Others tab

The **Others** tab can be used to check the operating system installed at a physical server, the middleware and other software, and information on the patches applied to the software.

An example of the **Others** tab is shown below.
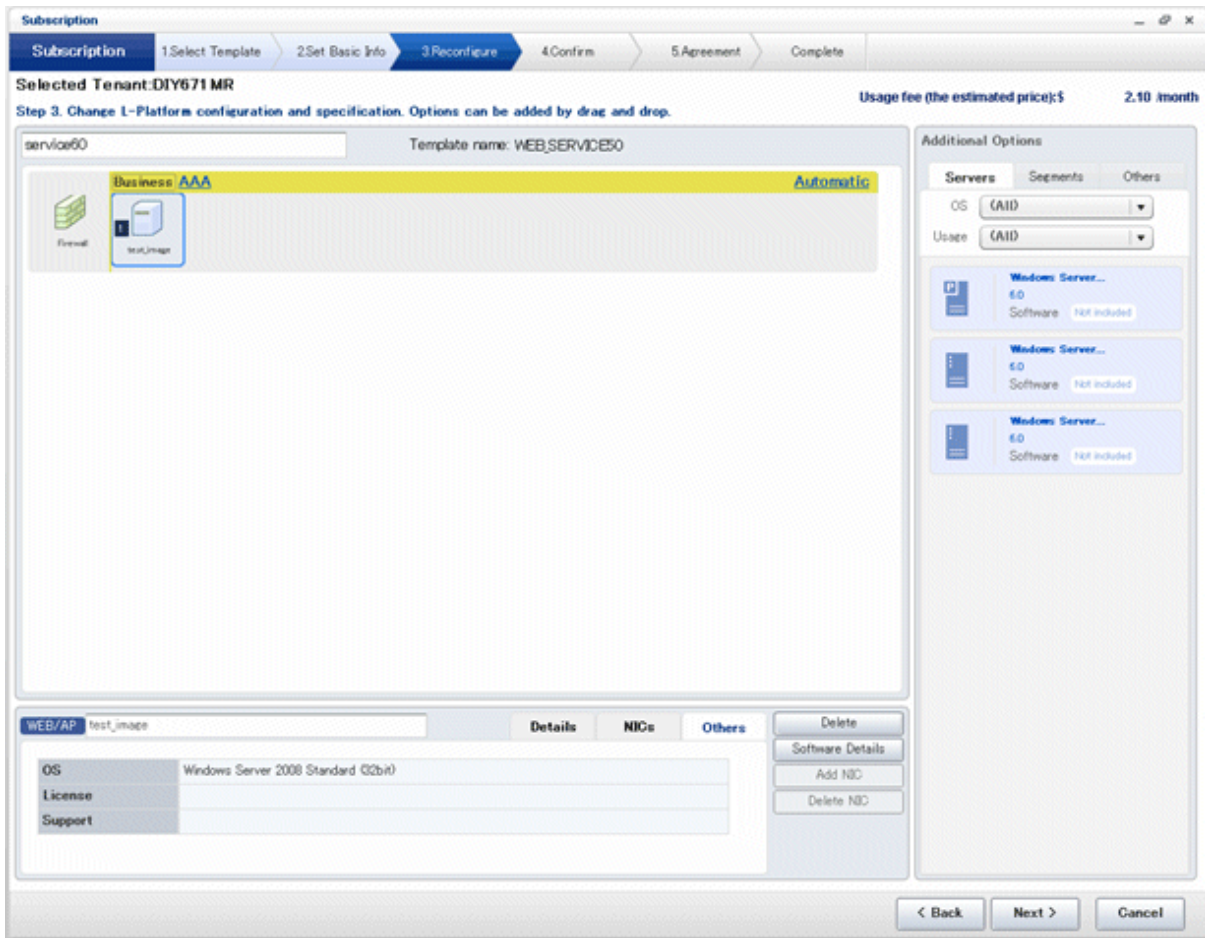
Edit a Disk (for a Virtual Server)

A virtual server to which a disk has been added can be selected. By clicking the button (▼) located to the right of the virtual server name, a selection list of virtual servers and disks is displayed. Select a disk on the list.

Only extended disks can be modified when editing a disk. System disks cannot be edited.

The following example displays the **Reconfigure** page when a disk is selected. The following window shows the **Reconfigure** page used to subscribe to an L-Platform.

Part	Description
Disk name	"disk + serial number" is set automatically as the disk name. The serial number is allocated according to the following rules. - Allocation of serial number starts from 0 for the disks registered in the L-Platform template. - "Number of disks + 1" is allocated to a disk added using Add options. To rename a disk, the new name must be no more than 85 characters long and not include the following characters: `<, >, &, ', " and control characters` A pre-existing name cannot be specified.
Storage pool	From the drop-down menu, select the deployment destination resource pool.
Size	Specify the disk capacity of the virtual server in GB. Specify the lesser of the two values: Enter either the maximum value entered for image information or enter the maximum value of the storage pool, free space size of storages with the most free space size. A value outside the range cannot be set.

Note

- If the virtualization software is Hyper-V, the maximum number of disks after addition is four, including the system disk.

- Only existing disks can be added or deleted if the virtualization software is RHEL-KVM. New disks cannot be added.

Edit a disk (for a physical server)

Note

When extending disks, a physical server must be stopped.

A physical server to which a disk has been added can be selected. By clicking the button (▼) located to the right of the physical server name, a selection list of physical server and disks is displayed. Select a disk on the list.

Only extended disks can be modified when editing a disk. System disks cannot be edited.

The following example displays the **Reconfigure** page when a disk is selected. The following window shows the **Reconfigure** page used to subscribe to a service.

Part	Description
Disk name	"disk + serial number" is set automatically as the disk name. The serial number is allocated according to the following rules. - Allocation of serial number starts from 0 for the disks registered in the L-Platform template. - "Number of disks + 1" is allocated to a disk added using Add options. To rename a disk, the new name must be no more than 85 characters long and not include the following characters: `<, >, &, ', " and control characters` A pre-existing name cannot be specified.
Storage pool	From the drop-down menu, select the deployment destination resource pool.If an existing disk is selected, modification is not possible.
Size	Specify the disk capacity of the virtual server in GB. Specify the lesser of the two values: Enter either the maximum value entered for image information or enter the maximum value of the storage pool, free space size of storages with the most free space size. A value outside the range cannot be set.

Server tab

"Physical server" and "Virtual server" can be selected from **Type**, enabling only servers of the selected type to be displayed.

6.4 Display Event Logs

Event logs of the errors that occurred while using the L-Platform functions can be displayed on the **Event Log** page.

Follow the steps below to display event logs:

1. Select **Event Log** from the operation menu of the **L-Platform** page.
   A list of event logs will be displayed.

Up to 100 logs are displayed on the **Event log** page for duration of up to 14 days starting from the most recent log.

Refer to "Message Stating with VSYS" in "Messages CE" for information on the messages displayed in the event log.

6.5 Select Forward Destination of Application Process

When the application process is enabled, the forward destination of the application process must be selected to use the following functions:

- L-Platform subscription

- L-Platform reconfiguration

- Cancel L-Platform

P Point

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The application process is set by the infra administrator.

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Note

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If the pop-up blocker is enabled and the URL of the ROR Console is not registered with the 'Address of web site to allow' list, the 'Forward screen' window will not be displayed.

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Follow the steps below to select the forward destination of the application process:

1. A **Forward screen** window like the one below is displayed when L-Platform subscription, L-Platform reconfiguration, or L-Platform cancellation is performed.

Item	Description
Forward destination	Select an approver who is the forward destination of the application process. If the process has been set to require no approval, the field will be displayed in grey and cannot be selected.
Reason for application	Specify the reason for application using 100 or less characters.

2. Specify the item and click the **Forward** button.

   A message notifying the forward result will be displayed.
   When forwarding is successful, the subscriber will receive an application acceptance email.

3. Confirm the message, click the **Close** button, and close the **Forward screen** window.

🈁 Note

If an error message is displayed on the **Forward screen**, notify the infra administrator of the contents displayed on the window. After closing the **Forward screen**, close the L-Platform window also.
If an error message is displayed on the forward screen when a service is subscribed to or modified, that subscription will be saved.

🅿 Point

Approving the application process

When an application process is forwarded, an email requesting an approval will be sent to the approver at the forward destination. An approval for the application must be obtained from the approver.
Refer to "Chapter 7 Request " for information on how to approve an application process.
If the process has not been approved, an email requesting an assessment will be sent to the infra administrator.

Action when the mail is not sent

When the email is not sent to the subscriber or the approver, confirm whether the email address registered in the ROR Console is correct.
If it is correct, contact the system administrator to report the user ID and the process instance name for subscription.
When the assessment request email is not sent to the infra administrator, contact the system administrator to report the user ID and the process instance name.

Check the application process status

The subscriber and the approver can check the status of application process.
Refer to "Chapter 7 Request " for information on how to check the status of application process.

6.6 How to Use the L-Platform

This section explains how to use the L-Platform after it is deployed.

Based on the information below, a deployed L-Platform can be accessed using the remote desktop function.

Item	Value
IP address	1. The IP address can be confirmed using the following procedures. 2. Select **Server List** on the **Management** page of **L-Platform Management.** 3. Check IP address of the target server from the list displayed.
User ID	[Windows] Administrator [Linux] Root
Password	The initial password can be confirmed using the following procedures: 1. Select **Service List** on the **Management** page of **L-Platform Management.** 2. Select the target L-Platform and click the **Details** button. 3. Select the target virtual server from the list displayed and click the **Initial PWD** button.

Note

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The initial password is already set up after the L-Platform is deployed. Be sure to change the password when the L-Platform starts to operate.

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Chapter 7 Request

This chapter explains how to operate the application list.

![Note icon] **Note**

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- Application processes are determined by the Infrastructure Administrator and set by the System Administrator. The application list can be used only if an application process is set.

- If Internet Explorer enhanced security (IE ESC) is enabled, the **X** button on popup windows does not operate correctly.
  Refer to the following website for information on how to disable Internet Explorer enhanced security:
  http://www.microsoft.com

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7.1 Checking an Application Status

The application status and past application results can be checked for the following applications:

- Subscribe L-Platform

- L-Platform reconfiguration

- Cancel L-Platform

Perform the following steps to check the status of an application process:

1. Select **Request** from the ROR console

2. Select either **My Tasks** or **My Completed Tasks** from the **Task Filters** drop-down list on the My Task window.

   - To check the status of applications in progress

     Select **My Tasks** from the **Task Filters** drop-down list on the My Task window. A list of tasks with the status **Active** will be displayed.

   - To check past application results

     Select **My Completed Tasks** from the **Task Filters** drop-down list on the My Task window. A list of tasks with the status **Completed** will be displayed.

   The priority level of a task can be specified on the **Summary** tab under **My Tasks** using numerals from 0 to 2147483647. The default value is 8.
   The higher the number of a task, the higher its priority level. Setting the priority level of tasks also enables them to be sorted in order of priority in task lists.

3. Select the process instance task to be checked and click on the **Details** tab.

   Select the tasks with the following activity names:

   - When checking the status of applications in progress

     - Cancel (subscriber)

     - Approve (approver)

   - When checking past application results

     - Apply or Cancel (subscriber)

     - Approve (approver)

4. Select the **Status** tab on the **Form** panel.

   A list of either application statuses or past application results will be displayed in chronological order.

   Application results are displayed as shown in the image below. It indicates that approval was given to an application which was then dismissed upon assessment.
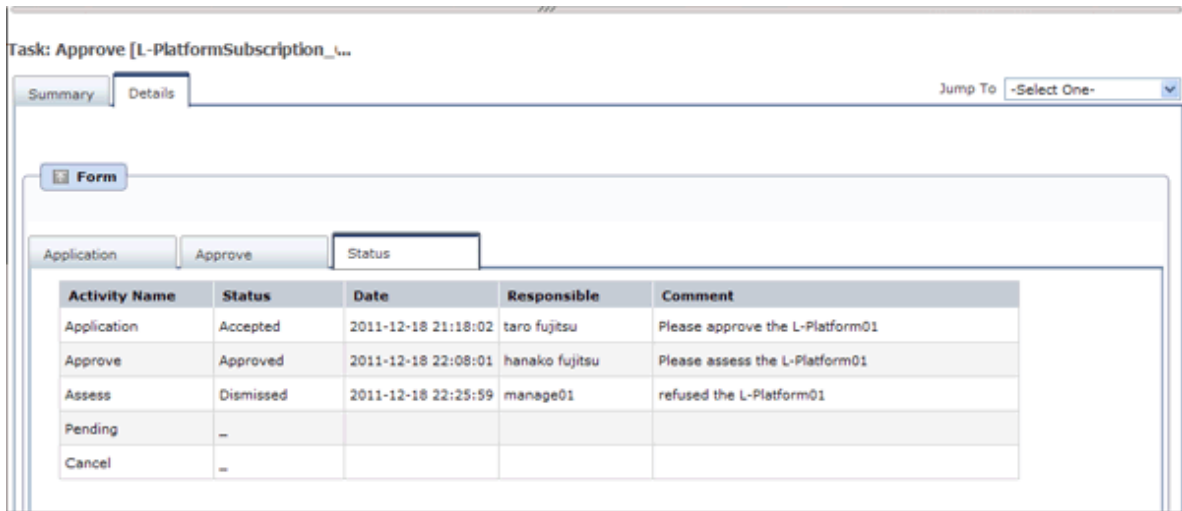
Item	Description	
Activity Name	The task activities will be displayed. Application, Approve, Assess, Pending or Cancel will be displayed. Approve will only be displayed when the application process is set to 'ApproverOnly', while Assess will only be displayed when the application process is set to 'JudgeOnly'.	
Status	Application	Accepted

Item	Description	
	Approve	One of the following responses will be displayed: - Approval waiting - Approved - Approved (Error) - Rejected - _ (*1)
	Assess	One of the following responses will be displayed: - Approval waiting - Accepted - Accepted (Error) - Dismissed - _ (*1) - Blank (*2)
	Pending	One of the following responses will be displayed: - Pending - Cancel - _ (*1) - Blank (*2)
	Cancel	One of the following responses will be displayed: - Cancel - _ (*1) - Blank (*2)
Date	The date and time of execution will be output in the following format: YYYY-MM-DD HH:MM:SS	
Responsible	Displays the executor.	
Comment	Displays any comments that were input at the time of Application, Approve, Assess or Pending.	

*1: Displayed when the process was not executed.

*2: Displayed when the process has not been executed.

The following illustrates an example of the application status confirmation window:

- When the application process is set to 'Default'

  Indicates that the application has been accepted and the task is complete.

Activity Name	Status	Date	Responsible	Comment
Application	Accepted	2011-12-19 02:41:59	taro fujitsu	Please approve the L-Platform05
Approve	Approved	2011-12-19 02:44:17	hanako fujitsu	Approved the L-Platform05. Please assess this.
Assess	Accepted	2011-12-19 02:45:47	manage01	Assessed the L-Platform05.
Pending	_			
Cancel	_			

- When the application process is set to 'ApproverOnly'

  Indicates that the application is awaiting approval.

Activity Name	Status	Date	Responsible	Comment
Application	Accepted	2011-12-19 02:13:46	taro fujitsu	Please approve the L-Platform04
Approve	Approval waiting			
Pending				
Cancel				

- When the application process is set to 'JudgeOnly'

  Indicates that an error has occurred with the application during acceptance of the assessment and the task has been reserved.

Activity Name	Status	Date	Responsible	Comment
Application	Accepted	2011-12-19 02:29:31	taro fujitsu	Please assess the L-Platform05
Assess	Accepted (Error)	2011-12-19 02:34:28	manage01	
Pending	Pending			
Cancel				

7.2 Cancelling an Application

Subscribers can cancel an application that they have issued.
A subscriber is a user who issued any of the following applications:

- Subscribe use L-Platform

- L-Platform reconfiguration

- Cancel L-Platform

Perform the following steps to cancel an application process:

1. From the ROR Console, select **Request** tab.

2. In the Task Filters drop-down list on the My Tasks window, select **My Tasks**.
   A list of tasks with the status Active is displayed.
   In the **Priority** field in **My Tasks** under the **Summary** tab, give the tasks a priority using a number between 0 and 2147483647. The default value is 8.
   The higher the number of a task, the higher its priority level. Setting the priority level of tasks also enables them to be sorted in order of priority in task lists.

3. Select the task with the activity name "Cancel" on the process instance that you want to cancel, and then click the **Details** tab.

4. Select the **Application** tab on the **Form** panel.
Check the content of the application.

5. Click the **0: Cancel** button on the Make Choice panel.

The selected application process is cancelled.

P Point

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Dealing with error notifications from tenant users

The tenant administrator will be notified in the event that an error occurs when a tenant user cancels an application. Upon receiving this notification, the tenant administrator should then advise the infra administrator of the process instance name in which the error occurred, together with the details of the error, and request the infra administrator to investigate the error and deal with it accordingly.

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Note

- If the **0: Cancel** button on the Make Choice panel is clicked without the **Details** tab being selected or without the **Status** tab on the **Details** tab being selected, the following message is displayed:

> All the forms are not accessed in Details Tab. Do you want to continue?

To continue processing without checking the form, click the **OK** button. To check the form, click the **Cancel** button, and then select the **Details** tab or select the **Status** tab on the **Details** tab.

- If the error below is issued when cancelling an application, provide the Tenant Administrator with the name of the process instance that issued the error and the error details, and ask for the error to be investigated and fixed.
When the **Details** button is clicked on the window shown below, error details are displayed.
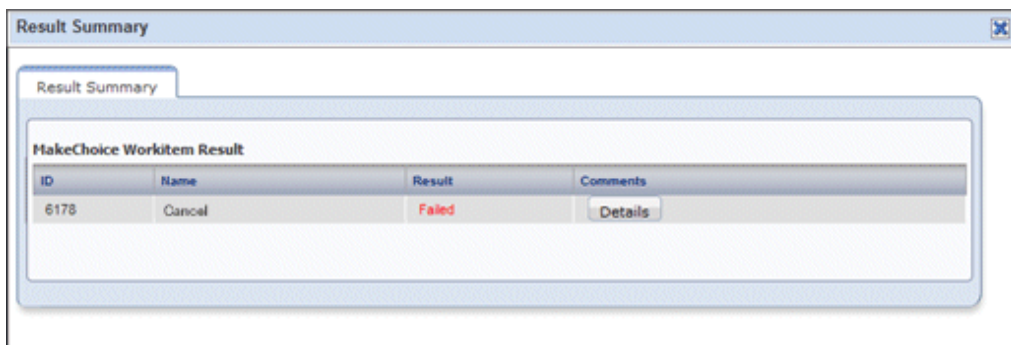
7.3 Approving an Application

An approver approves application processes.
The approver is the Tenant Administrator specified as the forwarding destination at the time of application.

Point

If the requirement to be approved is set for an application process, an approver approves the application process. When the application process is forwarded, an approval request email is sent to the approver.

Perform the following steps to approve an application process:

1. Click the URL given in the approval request email. Alternatively, login to the ROR console and select the **Request** tab.

   A window like the one shown below is displayed.
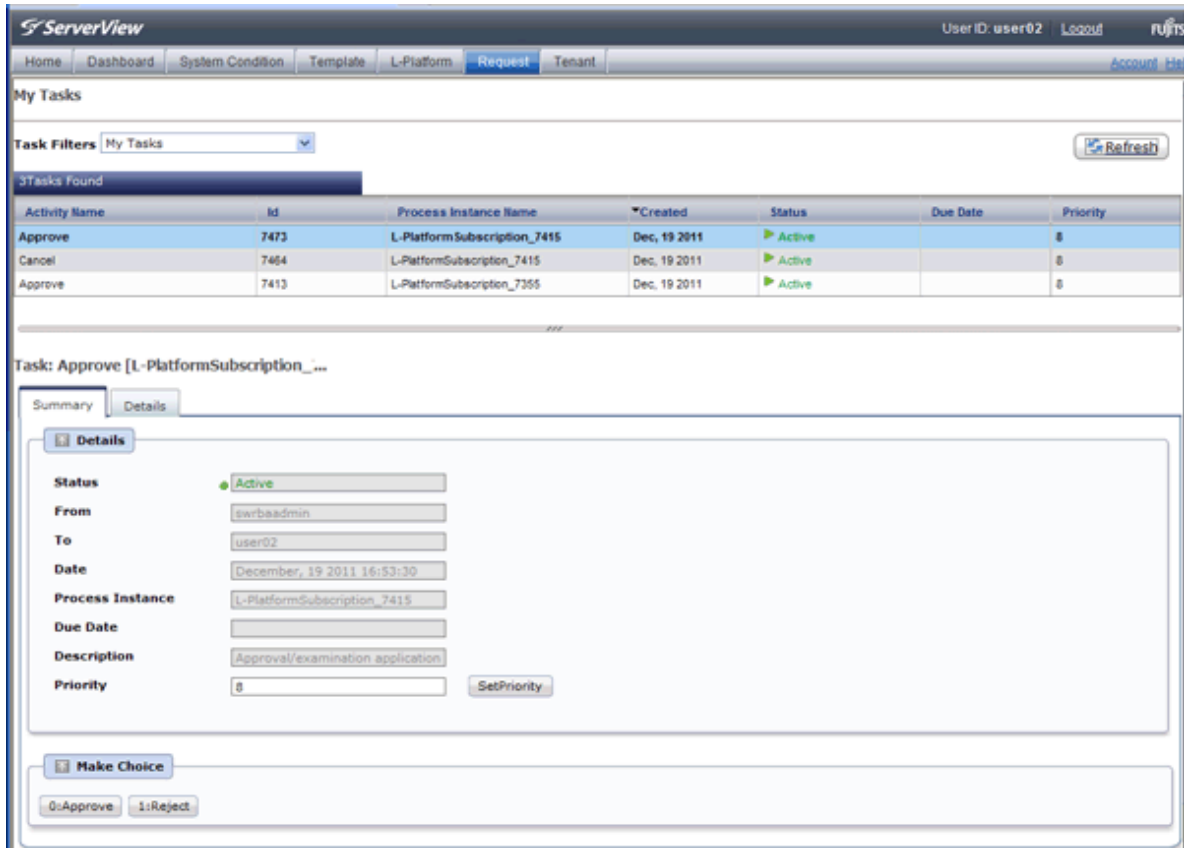
2. In the Task Filters drop-down list on the My Tasks window, select **My Tasks**.

   A list of tasks that are not yet approved is displayed.
   In the **Priority** field in **My Tasks** under the **Summary** tab, give the tasks a priority using a number between 0 and 2147483647. The default value is 8.
   The higher the number of a task, the higher its priority level. Setting the priority level of tasks also enables them to be sorted in order of priority in task lists.

3. Select the process instance task, and then click the **Details** tab.

4. Select the **Application** tab on the **Form** panel.
   Check the content of the application.
   For L-Platform usage applications (when the L-Platform template has been reconfigured) and for L-Platform reconfiguration applications, information from prior to any modifications can also be displayed under **Details**.

Furthermore, estimated price for corresponding L-Platform templates can be displayed as accounting information by selecting **Details** on the **Application** tab on the **Form** panel.

5. Select the **Approve** tab.
   If required, enter a comment in **Approval comment**.

6. Click either the **0: Approve** button or the **1: Reject** button on the MakeChoice panel.

   If an error occurs during approval processing after the **0: Approve** button is clicked, an error notification email is sent to the Infrastructure Administrator.
   If the **1: Reject** button is clicked, a rejection notification email is sent to the subscriber.

![P] Point

Application process assessment

Application process assessment is performed by the Infrastructure Administrator.

If the requirement to be assessed is set for an application process, an assessment request email is sent to the Infrastructure Administrator when the approver clicks the **0: Approve** button. When the Infrastructure Administrator accepts the application, the requested processing is performed.

If the requirement to be assessed is not set for an application process, the requested processing is performed when the approver clicks the **0: Approve** button.

Accounting checks

Estimated price for the L-Platform template will only be displayed when the accounting display settings have been enabled by a system administrator.

Note that the estimated price will indicate the prices below, and be aware that this display will not change even if the L-Platform template prices are modified.

- Prices at the time of a new L-Platform usage application

- For L-Platform usage applications from a 'save configuration', prices are as per the time of the L-Platform save configuration

- Prices at the time of L-Platform reconfiguration

![G] Note

- If the **0: Approve** button or the **1: Reject** button on the Make Choice panel is clicked without the **Details** tab being selected or without the **Status** tab on the **Details** tab being selected, the following message is displayed:

  > All the forms are not accessed in Details Tab. Do you want to continue?

  To continue processing without checking the form, click the **OK** button. To check the form, click the **Cancel** button, and then select the **Details** tab or select the **Status** tab on the **Details** tab.

- If the requirement to be assessed is not set for an application process and an L-Platform management function occurs during application approval, an error notification email is sent to the Infrastructure Administrator.

- If the error below is issued when approving an application, provide the Infrastructure Administrator with the name of the process instance that issued the error and the error details, and ask for the error to be investigated and fixed.
  When the **Details** button is clicked on the window shown below, error details are displayed.
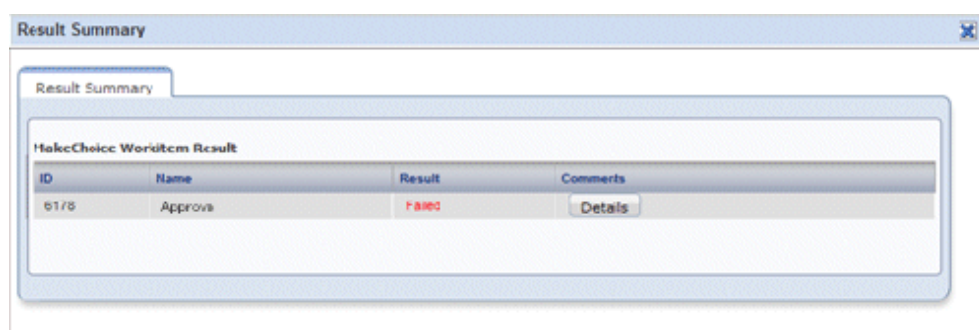
Chapter 8 Tenant

This chapter explains how to manage tenants.

8.1 Overview of Tenant Management

The information of users belonging to the same tenant as the logged in user can be managed using the tenant management windows of the ROR Console.

This section provides an overview of tenant management.

Tenant management windows

The table below shows a list of tenant management windows.

Classification	Window	Explanation
User management	User List	Displays a list of the users of the tenant to which the user belongs
	Register User (direct registration)	Registers a tenant user directly
	Register User (pre-registration)	Registers a provisional account for use when a tenant user registers
	Modify User	Modifies the selected user information
	Delete User	Deletes the selected user (multiple selections possible)
	Change User Password	Changes the password for the selected user

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The following two methods are available for registering tenant users:

- Tenant users perform their own user registration using a provisional account registered by the Tenant Administrator from the Register User window.

- The Tenant Administrator registers tenant users from the Register User window.

The System Administrator sets the tenant user registration method.
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📑 Note
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- The following operations cannot be performed in relation to the Tenant Administrator:

    - User modification

    - User deletion

    - User password change

- Depending on the directory services operation settings, it may not be possible to change the user password. The System Administrator sets the directory services operation settings.
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Tenant management window display method

Use the following method to display the tenant management windows:

- On the ROR Console, select the **Tenant** tab.

8.2 Displaying a User List

A list of users belonging to the same tenant as the logged in user can be displayed in the **User List** window.

Perform the following steps to display a list of users:

1. Click the **Tenant** tab on the ROR Console.
   The **User List** window is displayed.

Item	Explanation
Tenant Information	The following information is displayed for the tenant to which the user belongs: - Tenant name - Tenant display name - E-mail address

User List	The following information on users belonging to the tenant shown at "Tenant information" is displayed in a list:
	
	 - User ID
	
	 - User name
	
	 - Role
	  - Tenant Administrator (tenant_admin)
	  - Tenant operator (tenant_operator)
	  - Tenant monitor (tenant_monitor)
	  - Tenant user (tenant_user)
	
	 - E-mail address
	
	 - Description
	
	 - Date registered

Clear all button	Removes the selected state from all items in the list.
Register user button	Displays either the Register User window that is used to register a new user directly, or the Register User window that is used for pre-registration of a new user. (*1)

Item	Explanation
Modify button	Displays the Modify User window that is used to modify the information of the selected user. This operation is possible when only one user is selected.
Change password button	Displays the Change User Password window that is used to change the password for a selected user. This operation is possible when only one user is selected. Depending on the system settings, this button may not be displayed.
Delete button	Displays the Delete User window that is used to delete selected users. This operation is possible only when one or more users are selected. Up to 100 users can be selected at one time.

*1: Either the window for direct registration of a new user or the window for pre-registration of a new user is displayed, depending on which tenant user registration method is set. The System Administrator sets the tenant user registration method.

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The list displays 10 users at one time. Click the ▶ icon to display the next 10 users, or click the ◀ icon to display the previous 10 users.
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2. To display the most recent information, click the 🔄 icon.

8.3 Registering a User

The **Register User** window can be used to register a new user.

Perform the following steps to register a new user:

1. In the **User List** window, click the **Register user** button.
   The **Register User** window is displayed.

2. In the **Register User** window, specify the information for the user being registered.
    The window below is the sample of using OpenDS for the directory service.

Item	Explanation
Tenant Information	The following information is displayed for the tenant that is registering the user: - Tenant name - Tenant display name - E-mail address
User ID	[When using OpenDS for the directory service] Specify the user ID. Specify a character string of 4 to 31 characters consisting of single-byte lower-case alphabetics and numerics, hyphens (-), underscores (_), and periods (.), and starting with a single-byte alphanumeric. This specification is mandatory.

Item	Explanation
	[When using Active Directory for the directory service] Specify the user ID. Specify a character string of 4 to 20 characters consisting of single-byte lower-case alphabetics and numerics, hyphens (-), underscores (_), and periods (.), and starting with a single-byte alphanumeric. Period cannot be used as the last character. This specification is mandatory. Note that, if the specified user ID is already in use, the message below is displayed when the **Confirm** button is clicked. In this case, change the user ID. `User ID has already registered.`
Description	Specify an explanation of the user's user ID.
Role	The following user role is displayed: - Tenant user (tenant_user)
Password	Specify the user password. Specify between 8 and 64 characters, using single-byte alphanumerics and symbols. Depending on the system settings, this button may not be displayed.
Password (confirm)	Re-enter the user password for confirmation purposes. Depending on the system settings, this button may not be displayed.
Personal Information	
E-mail address	Use up to 64 characters to specify the user's e-mail address. This specification is mandatory.
E-mail address (confirm)	Re-enter the user's e-mail address for confirmation purposes. This entry is mandatory.
Name	Specify the user's first name, middle name and last name using up to 15 characters for each. The specification of first name and last name is mandatory.
Company name or Organization name	Specify the company name or organization name using up to 30 characters.
Emergency Contact Information	
E-mail address	Use up to 64 characters to specify the e-mail address for receiving emergency notifications.
E-mail address (confirm)	Re-enter the emergency contact e-mail address for confirmation purposes.
Telephone number	Specify the emergency contact phone number.

3. Click the **Confirm** button.
   The confirmation window is displayed.

4. Check the user information, and then click the **Register** button.
   The completion window is displayed.

5. Click the **Back to User List** button to return to the **User List** window.

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When user registration is completed, the registration contents are sent to the e-mail address of the registered user, the Tenant Administrator, and the tenant.

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8.4 Registering a Provisional Account

The **Register User** window can be used for pre-registration of a new user.

Perform the following steps to register a provisional user account:

1. In the **User List** window, click the **Register user** button.
   The **Register User** window is displayed.

2. In the **Register User** specify the information for the user to register.

Item	Explanation
E-mail address	Use up to 64 characters to specify the user's e-mail address. This specification is mandatory.
E-mail address (confirm)	Re-enter the user's e-mail address for confirmation purposes. This entry is mandatory.

3. Check the user information, and then click the **Apply** button.
   The registration application acceptance completion window is displayed.

4. Click the **Back to User List** button to return to the **User List** window.

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New user registration tasks

When the user registration application is accepted, a registration instruction e-mail is sent to the operator's e-mail address and the specified e-mail address. Have the operator ask the added user to perform the registration procedures provided in the instruction e-mail.
Note that the registration application becomes invalid if the registration procedure is not performed within 24 hours of registration application acceptance completion.

When user registration is completed, the registration contents are sent to the e-mail address of the registered user, the Tenant Administrator, and the tenant.

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8.5 Modifying a User

The **Modify User** window can be used to modify user information.

Perform the following steps to modify user information:

1. On the **User List** window, select the targeted user, and then click the **Modify** button.
   The **Modify User** window is displayed.

2. In the **Modify User** window, edit the value of the item being changed.

Item	Explanation
User ID	Displays the user ID of the user targeted for modification. The user ID cannot be changed.
Description	Specify an explanation of the user's user ID.
Role	Select one of the following as the user's role: - Tenant Administrator (tenant_admin) - Tenant Operator (tenant_operator) - Tenant Monitor (tenant_monitor) - Tenant user (tenant_user)
Personal Information	
E-mail address	Use up to 64 characters to specify the user's e-mail address. This specification is mandatory.
Name	Specify the user's first name, middle name and last name using up to 15 characters for each. The specification of first name and last name is mandatory.
Company name or organization name	Specify the company name or organization name using up to 30 characters.
Emergency Contact Information	
E-mail address	Use up to 64 characters to specify the e-mail address for receiving emergency notifications.
Telephone number	Specify the emergency contact phone number.

3. Click the **Confirm** button.
   The confirmation window is displayed.

4. Check the contents being changed, and then click the **Modify** button.
   The completion window is displayed.

5. Click the **Back to User List** button to return to the **User List** window.

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When user modification is completed, the modified contents are sent to the e-mail address of the user targeted for modification, the Tenant Administrator, and the tenant.
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8.6 Deleting a User

The **Delete User** window can be used to delete users. Up to 100 users can be deleted at one time.

Perform the following steps to delete a user:

1. In the **User List** window, select one or more users to be deleted, and then click the **Delete** button.
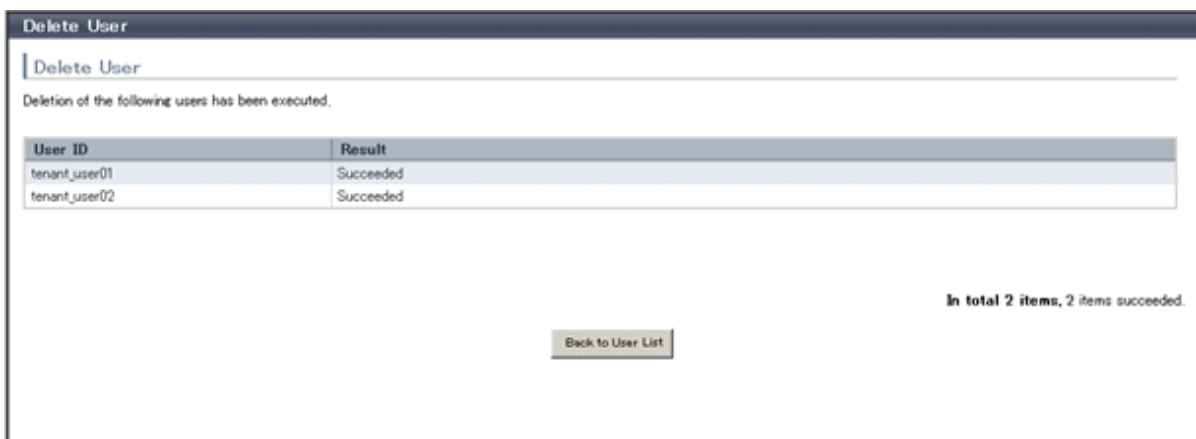   The **Delete User** window is displayed.

2. Check the users targeted for deletion, and then click the **Delete** button.
   The confirmation window is displayed.

3. To proceed with deletion, click the **OK** button.
   The deletion results are displayed in the completion window.

Note

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If deletion failed for some users, check the cause and then repeat the operation.

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4. Click the **Back to User List** button to return to the **User List** window.

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When user deletion is completed, deleted user unit deletion notification is sent to the e-mail address of the deletion target users, the Tenant Administrator, and the tenant.

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8.7 Changing a User Password

The **Change User Password** window can be used to change user passwords.

Perform the following steps to change a user password:

1. In the **User List** window, select the target user, and then click the **Change password** button.
   The **Change User Password** window is displayed.

Item	Explanation
User ID	Displays the user ID of the target user. The user ID cannot be changed.
Password	Specify the password. Specify between 8 and 64 characters, using single-byte alphanumerics and symbols. The password is case-sensitive. This specification is mandatory.
Password (confirm)	Re-enter the new password for confirmation purposes. This entry is mandatory.

2. Enter the password to be changed, and then click the **Change** button.
   The user password is changed and the completion window is displayed.

3. Click the **Back to User List** button to return to the **User List** window.

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When user password change is completed, the password change notification is sent to the e-mail address of the user targeted for the new password, the Tenant Administrator, and the tenant.

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Chapter 9 Account

This chapter explains account operations.

9.1 Referencing User Information

The **Account** window can be used to display the user information of logged in users. Perform the following operations to view user information.

1. Select the **Account** link on the ROR Console.
   The **Account** window is displayed in a new window.

Item	Explanation
User ID	Displays the user ID of the user
Description	Displays an explanation of the user
Role	Displays the user's role
Personal Information	
E-mail address	Displays the user's email address
Name	Displays the user's name
Company name or organization name	Displays the company name or organization name
Emergency Contact Information	
E-mail address	Displays the email address that receives emergency notifications
Telephone number	Displays the phone number for emergency contact
Modify account button	When clicked, displays the Modiry account window used to change user information
Change password button	When clicked, displays the Change password window used to change a password

Note

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With some directory services operation settings, the **Modify account** and **Change password** buttons may not be displayed. Directory services operation settings are set by the System Administrator.

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2. Click the **Close** button to close the **Account** window.

9.2 Changing User Information

The **Modify account** window can be used to change the user information of a logged in user. Perform the following operations to change the user information:

1. Click the **Modify account** button on the **Account** window.
   The **Modify account** window is displayed.

2. On the **Modify account** window, edit the values of the items to be changed.

Item	Explanation
User ID	Displays the user ID of the user. This cannot be changed.
Description	Enter an explanation of the user in up to 256 characters.
Role	Displays the user's role. This cannot be changed.
Personal Information	
E-mail address	Specify the user's email address in up to 64 characters. This specification is mandatory.
Name	Specify the user's name (first name, middle name and last name) using a maximum of 15 characters for each name. This specification is mandatory, but the middle name can be omitted.
Company name or organization name	Specify the company name or organization name in up to 30 characters.

Item	Explanation
Emergency Contact Information	
E-mail address	Specify the email address that receives emergency notifications, using up to 64 characters.
Telephone number	Specify the phone number to be used for emergency contact.

3. Click the **Confirm** button.

4. The window for confirming changed content is displayed. Check the values, and then click the **Modify** button.
   To change the values again, click the **Back** button to return to the **Modify account** window.

5. Once the **Modify** button is clicked, the user information is updated and the modification completion window is displayed.

6. Click the **Back to Account** button to return to the **Account** window.

9.3 Changing Passwords

The **Change password** window can be used to change the password of a logged in user. Perform the following operations to change a password:

1. Click the **Change password** button on the **Account** window.
   The **Change password** window is displayed.

Item	Explanation
Current password	Enter the current password. This specification is mandatory.
New password	Enter the new password. Specify between 8 and 64 characters using single-byte alphanumerics and symbols. The password is case-sensitive. This specification is mandatory.
New password (confirm)	Re-enter the new password for confirmation purposes. This input is mandatory.

2. Enter the current password and the new password, and then click the **Change** button.
   The password is changed and the modification completion window is displayed.

3. Click the **Back to Account** button to return to the **Account** window.

Glossary

admin client

A terminal (PC) connected to an admin server, which is used to operate the GUI.

admin LAN

A LAN used to manage resources from admin servers.
It connects managed servers, storage, and network devices.

admin server

A server used to operate the manager software of Resource Orchestrator.

agent

The section (program) of Resource Orchestrator that operates on managed servers.

cloning

Creation of a copy of a system disk.

cloning image

A backup of a system disk, which does not contain server-specific information (system node name, IP address, etc.), made during cloning.
When deploying a cloning image to the system disk of another server, Resource Orchestrator automatically changes server-specific information to that of the target server.

Cloud Edition

The edition which can be used to provide private cloud environments.

directory service

A service for updating and viewing the names (and associated attributes) of physical/logical resource names scattered across networks, based on organizational structures and geographical groups using a systematic (tree-shaped structure) management methodology.

Domain

A system that is divided into individual systems using partitioning. Also used to indicate a partition.

Dual-Role Administrators

The administrators with both infrastructure administrator's and tenant administrator's role.

dynamic memory

A function that optimizes physical memory allocation for virtual machines, depending on their execution status on Hyper-V.

global pool

A resource pool that contains resources that can be used by multiple tenants.
It is located in a different location from the tenants.
By configuring a global pool with the attributes of a tenant, it becomes possible for tenant administrators to use the pool.

GUI (Graphical User Interface)

A user interface that displays pictures and icons (pictographic characters), enabling intuitive and easily understandable operation.

Hyper-V

Virtualization software from Microsoft Corporation.

Provides a virtualized infrastructure on PC servers, enabling flexible management of operations.

image file

A system image or a cloning image. Also a collective term for them both.

infrastructure administrator

A user who manages the resources comprising a data center.
infra_admin is the role that corresponds to the users who manage resources.
Infrastructure administrators manage all of the resources comprising a resource pool (the global pool and local pools), provide tenant administrators with resources, and review applications by tenant users to use resources.

LDAP (Lightweight Directory Access Protocol)

A protocol used for accessing Internet standard directories operated using TCP/IP.

LDAP provides functions such as direct searching and viewing of directory services using a web browser.

license

The rights to use specific functions.
Users can use specific functions by purchasing a license for the function and registering it on the manager.

local pool

A resource pool that contains resources that can only be used by a specific tenant.

They are located in tenants.

L-Platform

A resource used for the consolidated operation and management of systems such as multiple-layer systems (Web/AP/DB) comprised of multiple L-Servers, storage, and network devices.

L-Platform template

A template that contains the specifications for servers, storage, network devices, and images that are configured for an L-Platform.

L-Server

A resource defined using the logical specifications (number of CPUs, amount of memory, disk capacity, number of NICs, etc.) of the servers, and storage and network devices connected to those servers.
An abbreviation of Logical Server.

L-Server template

A template that defines the number of CPUs, memory capacity, disk capacity, and other specifications for resources to deploy to an L-Server.

LUN (Logical Unit Number)

A logical unit defined in the channel adapter of a storage unit.

MAC address (Media Access Control address)

A unique identifier that is assigned to Ethernet cards (hardware).

Also referred to as a physical address.

Transmission of data is performed based on this identifier. Described using a combination of the unique identifying numbers managed by/assigned to each maker by the IEEE, and the numbers that each maker assigns to their hardware.

managed server

A collective term referring to a server that is managed as a component of a system.

manager

The section (program) of Resource Orchestrator that operates on admin servers.
It manages and controls resources registered with Resource Orchestrator.

migration

The migration of a VM guest to a different VM host. The following two types of migration are available:

- Cold migration

  Migration of an inactive (powered-off) VM guest.

- Live migration

  Migration of an active (powered-on) VM guest.

network device

The unit used for registration of network devices.
L2 switches and firewalls fit into this category.

NIC (Network Interface Card)

An interface used to connect a server to a network.

OS

The OS used by an operating server (a physical OS or VM guest).

overcommit

A function to virtually allocate more resources than the actual amount of resources (CPUs and memory) of a server.
This function is used to enable allocation of more disk resources than are mounted in the target server.

physical network adapter

An adapter, such as a LAN, to connect physical servers or VM hosts to a network.

physical OS

An OS that operates directly on a physical server without the use of server virtualization software.

physical server

The same as a "server". Used when it is necessary to distinguish actual servers from virtual servers.

primary server

The physical server that is switched from when performing server switchover.

private cloud

A private form of cloud computing that provides ICT services exclusively within a corporation or organization.

public LAN

A LAN used for operations by managed servers.
Public LANs are established separately from admin LANs.

resource

General term referring to the logical definition of the hardware (such as servers, storage, and network devices) and software that comprise a system.

resource pool

A unit for management of groups of similar resources, such as servers, storage, and network devices.

role

A collection of operations that can be performed.

ROR console

The GUI that enables operation of all functions of Resource Orchestrator.

rule set

A collection of script lists for performing configuration of network devices, configured as combinations of rules based on the network device, the purpose, and the application.

server

A computer (operated with one operating system).

server name

The name allocated to a server.

server virtualization software

Basic software which is operated on a server to enable use of virtual machines. Used to indicate the basic software that operates on a PC server.

Single Sign-On

A system among external software which can be used without login operations, after authentication is executed once.

surrogate pair

A method for expressing one character as 32 bits.
In the UTF-16 character code, 0xD800 - 0xDBFF are referred to as "high surrogates", and 0xDC00 - 0xDFFF are referred to as "low surrogates". Surrogate pairs use "high surrogate" + "low surrogate".

system disk

The disk on which the programs (such as the OS) and files necessary for the basic functions of servers (including booting) are installed.

system image

A copy of the contents of a system disk made as a backup.
Different from a cloning image as changes are not made to the server-specific information contained on system disks.

tenant

A unit for the division and segregation of management and operation of resources based on organizations or operations.

tenant administrator

A user who manages the resources allocated to a tenant.
tenant_admin is the role for performing management of resources allocated to a tenant.
Tenant administrators manage the available space on resources in the local pools of tenants, and approve or reject applications by tenant users to use resources.

tenant folder

A resource folder that is created for each tenant, and is used to manage the resources allocated to a tenant.

L-Servers and local pools are located in tenant folders. Also, it is possible to configure a global pool that tenant administrators can use.

tenant user

A user who uses the resources of a tenant, or creates and manages L-Platforms, or a role with the same purpose.

URL (Uniform Resource Locator)

The notational method used for indicating the location of information on the Internet.

virtual server

A virtual server that is operated on a VM host using a virtual machine.

VM (Virtual Machine)

A virtual computer that operates on a VM host.

VMware

Virtualization software from VMware Inc.
Provides a virtualized infrastructure on PC servers, enabling flexible management of operations.

Web browser

A software application that is used to view Web pages.

Xen

A type of server virtualization software.