FUJITSU Software
ServerView Resource Orchestrator
Cloud Edition V3.2.0

User's Guide
for Tenant Administrators

Windows/Linux

Preface

Purpose of This Document

This manual provides an outline of FUJITSU Software ServerView Resource Orchestrator Cloud Edition (hereinafter Resource Orchestrator) and the operations and settings required for setup.

Intended Readers

This document is intended for Tenant Administrator 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.

Structure of This Document

This manual is composed as follows:

Chapter 1 Overview

Explains an overview of the ROR console.

Chapter 2 Login and Logout

Explains how to log in and out of the ROR console.

Chapter 3 Home

Explains the ROR console Home window display.

Chapter 4 Dashboard (Pool Conditions)

Explains how to use pool conditions operations.

Chapter 5 Dashboard (System Conditions)

Explains how to monitor system conditions.

Chapter 6 Dashboard (Capacity Planning)

Explains how to operate capacity planning.

Chapter 7 Template

Explains how to create and manage L-Platform templates.

Chapter 8 L-Platform

Explains how to manage L-Platforms and display the event logs.

Chapter 9 Request

Explains how to operate the application list.

Chapter 10 Tenant

Explains how to manage tenants.

Chapter 11 Accounting

Explains how to operate the usage charge.

Chapter 12 Account

Explains how to perform account operations.

Appendix A Emails Sent during L-Platform Operations

Describes the flow and content of emails sent during L-Platform operations.

Web Site URLs

URLs provided as reference sources within the main text are correct as of September 2016.

Document Conventions

The notation in this manual conforms to the following conventions.

- When there is different information for the different versions of Resource Orchestrator, it is indicated as follows:

[All Editions]	Sections relevant for all editions
[Cloud Edition]	Sections related to Cloud Edition
[Virtual Edition]	Sections related to Virtual Edition

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

[Windows Manager]	Sections related to Windows manager
[Linux Manager]	Sections related to Linux manager
[Windows]	Sections related to Windows
[Linux]	Sections related to Linux
[Red Hat Enterprise Linux]	Sections related to Red Hat Enterprise Linux
[Solaris]	Sections related to Solaris
[VMware]	Sections related to VMware
[Horizon View]	Sections related to VMware Horizon View
[Hyper-V]	Sections related to Hyper-V
[Xen]	Sections related to RHEL5-Xen
[KVM]	Sections related to RHEL-KVM
[Solaris Zones]	Sections related to Solaris Zones (Solaris 10) and Solaris Zones (Solaris 11)
[Solaris Zones (Solaris 10)]	Sections related to Solaris Zones with Solaris 10 VM hosts
[Solaris Zones (Solaris 11)]	Sections related to Solaris Zones with Solaris 11 VM hosts
[OVM for x86]	Sections related to Oracle VM Server for x86 2.2 and Oracle VM Server for x86 3.x
[OVM for x86 2.2]	Sections related to Oracle VM Server for x86 2.2
[OVM for x86 3.x]	Sections related to Oracle VM Server for x86 3.2 and Oracle VM Server for x86 3.3
[OVM for SPARC]	Sections related to Oracle VM Server for SPARC
[Citrix Xen]	Sections related to Citrix XenServer
[Physical Servers]	Sections related to physical servers

- Unless specified otherwise, the blade servers mentioned in this manual refer to PRIMERGY BX servers.

- Oracle Solaris may also be indicated as Solaris, Solaris Operating System, or Solaris OS.

- Oracle Solaris Zones may also be indicated as Solaris Containers or Solaris Container.

- Oracle VM Server for x86 may also be indicated as Oracle VM.

- In Resource Orchestrator, the following servers are referred to as SPARC Enterprise.

  - SPARC Enterprise M3000/M4000/M5000/M8000/M9000

  - SPARC Enterprise T5120/T5140/T5220/T5240/T5440

- In Resource Orchestrator, the following servers are referred to as SPARC M10.

  - SPARC M10-1/M10-4/M10-4S

- Fujitsu M10 is the product name used for SPARC M10 when they are sold outside Japan.

- References and character strings or values requiring emphasis are indicated using double quotes (").

- GUI items are shown enclosed by brackets ([ ]).

- The order of selecting menus is indicated using [ ]-[ ].

- Text to be entered by the user is indicated using bold text.

- Variables are indicated using italic text and underscores.

- The ellipses ("...") in menu names, indicating settings and operation window startup, are not shown.

- The ">" used in Windows is included in usage examples. When using Linux, read ">" as meaning "#".

- When using Resource Orchestrator on Windows 8 and Windows Server 2012, please note the following.
  When OS operations are explained in this manual, the examples assume OSs up to Windows 7 and Windows Server 2008. When using Resource Orchestrator on Windows 8 or Windows Server 2012, take explanations regarding the [Start] menu as indicating the [Apps] screen.
  The [Apps] screen can be displayed by right-clicking on the [Start] screen and then right-clicking [All apps].

- When using Resource Orchestrator on Windows 8.1 and Windows Server 2012 R2, please note the following.
  When OS operations are explained in this manual, the examples assume OSs up to Windows 7 and Windows Server 2008. When using Resource Orchestrator on Windows 8.1 or Windows Server 2012 R2, take explanations regarding the [Start] menu as indicating the [Apps] screen.
  The [Apps] screen can be displayed by swiping the [Start] screen from bottom to top, or clicking the downward facing arrow on the lower-left of the [Start] screen.

Menus in the ROR console

Operations on the ROR console can be performed using either the menu bar or pop-up menus.

By convention, procedures described in this manual only refer to pop-up menus.

Regarding Installation Folder Paths

The installation folder path may be given as C:\Fujitsu\ROR in this manual.

Replace it as shown below.

[Virtual Edition]

- When using Windows 64-bit (x64)

  C:\Program Files (x86)\Resource Orchestrator

- When using Windows 32-bit (x86)

  C:\Program Files\Resource Orchestrator

[Cloud Edition]

C:\Program Files (x86)\Resource Orchestrator

Command Examples

The paths used in command examples may be abbreviated. When using commands, execute them using the paths in the "Name" column in the "Reference Guide (Command) VE" and the "Reference Guide (Command/XML) CE".

Abbreviations

The following abbreviations are used in this manual:

Abbreviation	Products
Windows	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 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) 2012 Standard Microsoft(R) Windows Server(R) 2012 Datacenter Microsoft(R) Windows Server(R) 2012 R2 Essentials Microsoft(R) Windows Server(R) 2012 R2 Standard Microsoft(R) Windows Server(R) 2012 R2 Datacenter Windows Vista(R) Business Windows Vista(R) Enterprise Windows Vista(R) Ultimate Windows(R) 7 Professional Windows(R) 7 Ultimate Windows(R) 8 Pro Windows(R) 8 Enterprise Windows(R) 8.1 Pro Windows(R) 8.1 Enterprise
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
Windows 2003 x64 Edition	Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition
Windows Server 2008	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
Windows 2008 x86 Edition	Microsoft(R) Windows Server(R) 2008 Standard (x86) Microsoft(R) Windows Server(R) 2008 Enterprise (x86)
Windows 2008 x64 Edition	Microsoft(R) Windows Server(R) 2008 Standard (x64) Microsoft(R) Windows Server(R) 2008 Enterprise (x64)
Windows Server 2012	Microsoft(R) Windows Server(R) 2012 Standard Microsoft(R) Windows Server(R) 2012 Datacenter Microsoft(R) Windows Server(R) 2012 R2 Essentials Microsoft(R) Windows Server(R) 2012 R2 Standard Microsoft(R) Windows Server(R) 2012 R2 Datacenter
Windows PE	Microsoft(R) Windows(R) Preinstallation Environment
Windows Vista	Windows Vista(R) Business Windows Vista(R) Enterprise Windows Vista(R) Ultimate
Windows 7	Windows(R) 7 Professional Windows(R) 7 Ultimate

Abbreviation	Products
Windows 8	Windows(R) 8 Pro Windows(R) 8 Enterprise Windows(R) 8.1 Pro Windows(R) 8.1 Enterprise
Windows 10	Windows(R) 10 Pro Windows(R) 10 Enterprise
Linux	Red Hat(R) Enterprise Linux(R) AS (v.4 for x86) Red Hat(R) Enterprise Linux(R) ES (v.4 for x86) Red Hat(R) Enterprise Linux(R) AS (v.4 for EM64T) Red Hat(R) Enterprise Linux(R) ES (v.4 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.5 for x86) Red Hat(R) Enterprise Linux(R) ES (4.5 for x86) Red Hat(R) Enterprise Linux(R) AS (4.5 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.5 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.6 for x86) Red Hat(R) Enterprise Linux(R) ES (4.6 for x86) Red Hat(R) Enterprise Linux(R) AS (4.6 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.6 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.7 for x86) Red Hat(R) Enterprise Linux(R) ES (4.7 for x86) Red Hat(R) Enterprise Linux(R) AS (4.7 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.7 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.8 for x86) Red Hat(R) Enterprise Linux(R) ES (4.8 for x86) Red Hat(R) Enterprise Linux(R) AS (4.8 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.8 for EM64T) 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) 5.8 (for x86) Red Hat(R) Enterprise Linux(R) 5.8 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.9 (for x86) Red Hat(R) Enterprise Linux(R) 5.9 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.10 (for x86) Red Hat(R) Enterprise Linux(R) 5.10 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.11 (for x86) Red Hat(R) Enterprise Linux(R) 5.11 (for Intel64) Red Hat(R) Enterprise Linux(R) 6 (for x86) Red Hat(R) Enterprise Linux(R) 6 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.1 (for x86) Red Hat(R) Enterprise Linux(R) 6.1 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.2 (for x86)

Abbreviation	Products
	Red Hat(R) Enterprise Linux(R) 6.2 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.3 (for x86) Red Hat(R) Enterprise Linux(R) 6.3 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.4 (for x86) Red Hat(R) Enterprise Linux(R) 6.4 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.5 (for x86) Red Hat(R) Enterprise Linux(R) 6.5 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.6 (for x86) Red Hat(R) Enterprise Linux(R) 6.6 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.7 (for x86) Red Hat(R) Enterprise Linux(R) 6.7 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.8 (for x86) Red Hat(R) Enterprise Linux(R) 6.8 (for Intel64) Red Hat(R) Enterprise Linux(R) 7.0 (for Intel64) SUSE(R) Linux Enterprise Server 10 Service Pack 2 for x86 SUSE(R) Linux Enterprise Server 10 Service Pack 2 for EM64T SUSE(R) Linux Enterprise Server 10 Service Pack 3 for x86 SUSE(R) Linux Enterprise Server 10 Service Pack 3 for EM64T SUSE(R) Linux Enterprise Server 11 for x86 SUSE(R) Linux Enterprise Server 11 for EM64T SUSE(R) Linux Enterprise Server 11 Service Pack 1 for x86 SUSE(R) Linux Enterprise Server 11 Service Pack 1 for EM64T Oracle Enterprise Linux Release 6.7 for x86 (32bit) Oracle Enterprise Linux Release 6.7 for 86_64 (64bit) Oracle Enterprise Linux Release 7.2 for x86 (32bit) Oracle Enterprise Linux Release 7.2 for x86_64 (64bit)
Red Hat Enterprise Linux	Red Hat(R) Enterprise Linux(R) AS (v.4 for x86) Red Hat(R) Enterprise Linux(R) ES (v.4 for x86) Red Hat(R) Enterprise Linux(R) AS (v.4 for EM64T) Red Hat(R) Enterprise Linux(R) ES (v.4 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.5 for x86) Red Hat(R) Enterprise Linux(R) ES (4.5 for x86) Red Hat(R) Enterprise Linux(R) AS (4.5 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.5 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.6 for x86) Red Hat(R) Enterprise Linux(R) ES (4.6 for x86) Red Hat(R) Enterprise Linux(R) AS (4.6 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.6 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.7 for x86) Red Hat(R) Enterprise Linux(R) ES (4.7 for x86) Red Hat(R) Enterprise Linux(R) AS (4.7 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.7 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.8 for x86) Red Hat(R) Enterprise Linux(R) ES (4.8 for x86) Red Hat(R) Enterprise Linux(R) AS (4.8 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.8 for EM64T) 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)

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	Red Hat(R) Enterprise Linux(R) 5.5 (for x86)
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	Red Hat(R) Enterprise Linux(R) 6.8 (for Intel64)
	Red Hat(R) Enterprise Linux(R) 7.0 (for Intel64)
Red Hat Enterprise Linux 5	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)
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	Red Hat(R) Enterprise Linux(R) 5.9 (for Intel64)
	Red Hat(R) Enterprise Linux(R) 5.10 (for x86)
	Red Hat(R) Enterprise Linux(R) 5.10 (for Intel64)

Abbreviation	Products
	Red Hat(R) Enterprise Linux(R) 5.11 (for x86) Red Hat(R) Enterprise Linux(R) 5.11 (for Intel64)
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Red Hat Enterprise Linux 7	Red Hat(R) Enterprise Linux(R) 7.0 (for Intel64)
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) 6.1 (for x86) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.1 (for Intel64) Virtual Machine Function 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 Red Hat(R) Enterprise Linux(R) 6.3 (for x86) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.3 (for Intel64) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.4 (for x86) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.4 (for Intel64) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.5 (for x86) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.5 (for Intel64) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.6 (for x86) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.6 (for Intel64) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.7 (for x86) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.7 (for Intel64) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.8 (for x86) Virtual Machine Function

Abbreviation	Products
	Red Hat(R) Enterprise Linux(R) 6.8 (for Intel64) Virtual Machine Function
Xen	Citrix XenServer(R) 5.5 Citrix Essentials(TM) for XenServer 5.5, Enterprise Edition Citrix XenServer(R) 6.0 Citrix Essentials(TM) for XenServer 6.0, Enterprise Edition Red Hat(R) Enterprise Linux(R) 5.3 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.3 (for Intel64) Linux Virtual Machine Function 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 Red Hat(R) Enterprise Linux(R) 5.5 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.5 (for Intel64) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.6 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.6 (for Intel64) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.7 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.7 (for Intel64) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.8 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.8 (for Intel64) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.9 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.9 (for Intel64) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.10 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.10 (for Intel64) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.11 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.11 (for Intel64) Linux Virtual Machine Function
XenServer 6	Citrix XenServer(R) 6.0 Citrix Essentials(TM) for XenServer 6.0, Enterprise Edition
DOS	Microsoft(R) MS-DOS(R) operating system, DR DOS(R)
SUSE Linux Enterprise Server	SUSE(R) Linux Enterprise Server 10 Service Pack 2 for x86 SUSE(R) Linux Enterprise Server 10 Service Pack 2 for EM64T SUSE(R) Linux Enterprise Server 10 Service Pack 3 for x86 SUSE(R) Linux Enterprise Server 10 Service Pack 3 for EM64T SUSE(R) Linux Enterprise Server 11 for x86 SUSE(R) Linux Enterprise Server 11 for EM64T SUSE(R) Linux Enterprise Server 11 Service Pack 1 for x86 SUSE(R) Linux Enterprise Server 11 Service Pack 1 for EM64T

Abbreviation		Products
Oracle Enterprise Linux		Oracle Enterprise Linux Release 6.7 for x86 (32bit) Oracle Enterprise Linux Release 6.7 for 86_64 (64bit) Oracle Enterprise Linux Release 7.2 for x86 (32bit) Oracle Enterprise Linux Release 7.2 for x86_64 (64bit)
Solaris		Oracle Solaris 10 05/09 (Update7) Oracle Solaris 11 11/11 Oracle Solaris 11.1 Oracle Solaris 11.2
OVM for x86 2.2		Oracle(R) VM Server for x86 2.2
OVM for x86 3.x	OVM for x86 3.2	Oracle VM Server for x86 v3.2.x
	OVM for x86 3.3	Oracle VM Server for x86 v3.3.x
OVM for SPARC		Oracle(R) VM Server for SPARC
Oracle VM Manager		Oracle(R) VM Manager
Citrix XenServer		Citrix XenServer(R) 6.0 Citrix XenServer(R) 6.0.2 Citrix XenServer(R) 6.1.0 Citrix XenServer(R) 6.2.0
ESC		ETERNUS SF Storage Cruiser
GLS		PRIMECLUSTER GLS
Navisphere		EMC Navisphere Manager
Solutions Enabler		EMC Solutions Enabler
MSFC		Microsoft Failover Cluster
Solaris		Oracle Solaris 10 05/09 (Update7) Oracle Solaris 11 11/11 Oracle Solaris 11.1 Oracle Solaris 11.2
SCVMM		System Center Virtual Machine Manager 2008 R2 System Center 2012 Virtual Machine Manager System Center 2012 R2 Virtual Machine Manager
VMware		VMware vSphere(R) 4 VMware vSphere(R) 4.1 VMware vSphere(R) 5 VMware vSphere(R) 5.1 VMware vSphere(R) 5.5 VMware vSphere(R) 6
VMware ESX		VMware(R) ESX(R)
VMware ESX 4		VMware(R) ESX(R) 4
VMware ESXi		VMware(R) ESXi(TM)
VMware ESXi 5.0		VMware(R) ESXi(TM) 5.0
VMware ESXi 5.1		VMware(R) ESXi(TM) 5.1
VMware ESXi 5.5		VMware(R) ESXi(TM) 5.5
VMware ESXi 6.0		VMware(R) ESXi(TM) 6.0
VMware Infrastructure Client		VMware(R) Infrastructure Client
VMware Tools		VMware(R) Tools
VMware vSphere 4.0		VMware vSphere(R) 4.0

Abbreviation	Products
VMware vSphere 4.1	VMware vSphere(R) 4.1
VMware vSphere 5	VMware vSphere(R) 5
VMware vSphere 5.1	VMware vSphere(R) 5.1
VMware vSphere 5.5	VMware vSphere(R) 5.5
VMware vSphere 6.0	VMware vSphere(R) 6.0
VMware vSphere Client	VMware vSphere(R) Client
VMware vCenter Server	VMware(R) vCenter(TM) Server
VMware vClient	VMware(R) vClient(TM)
VMware FT	VMware(R) Fault Tolerance
VMware DRS	VMware(R) Distributed Resource Scheduler
VMware DPM	VMware(R) Distributed Power Management
VMware Storage VMotion	VMware(R) Storage VMotion
VMware vDS	VMware(R) vNetwork Distributed Switch
VMware Horizon View	VMware Horizon View 5.2.*x* VMware Horizon View 5.3.*x* VMware Horizon 6.0 (with View)
VIOM	ServerView Virtual-IO Manager
SVOM	ServerView Operations Manager
BladeLogic	BMC BladeLogic Server Automation
Excel	Microsoft(R) Office Excel(R) 2003 Microsoft(R) Office Excel(R) 2007 Microsoft(R) Office Excel(R) 2010 Microsoft(R) Office Excel(R) 2013
Excel 2003	Microsoft(R) Office Excel(R) 2003
Excel 2007	Microsoft(R) Office Excel(R) 2007
Excel 2010	Microsoft(R) Office Excel(R) 2010
Excel 2013	Microsoft(R) Office Excel(R) 2013
Internet Explorer	Windows(R) Internet Explorer(R) 8 Windows(R) Internet Explorer(R) 9 Windows(R) Internet Explorer(R) 10 Internet Explorer(R) 11
Firefox	Firefox(R)
ServerView Agent	ServerView SNMP Agents for MS Windows (32bit-64bit) ServerView Agents Linux ServerView Agents VMware for VMware ESX Server
RCVE	ServerView Resource Coordinator VE
ROR	FUJITSU Software ServerView Resource Orchestrator
ROR VE	FUJITSU Software ServerView Resource Orchestrator Virtual Edition
ROR CE	FUJITSU Software ServerView Resource Orchestrator Cloud Edition
Resource Coordinator	Systemwalker Resource Coordinator Systemwalker Resource Coordinator Virtual server Edition

Abbreviation	Products
Resource Coordinator VE	ServerView Resource Coordinator VE Systemwalker Resource Coordinator Virtual server Edition
Resource Orchestrator	FUJITSU Software ServerView Resource Orchestrator
SVFAB	ServerView Fabric Manager

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Contents

Chapter 1 Overview

This chapter explains the ROR console.

1.1 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.

The operation window regarding L-Platform and user information and the dashboard window for monitoring resource operation status and usage rate of resource pools are provided for infrastructure administrators. 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
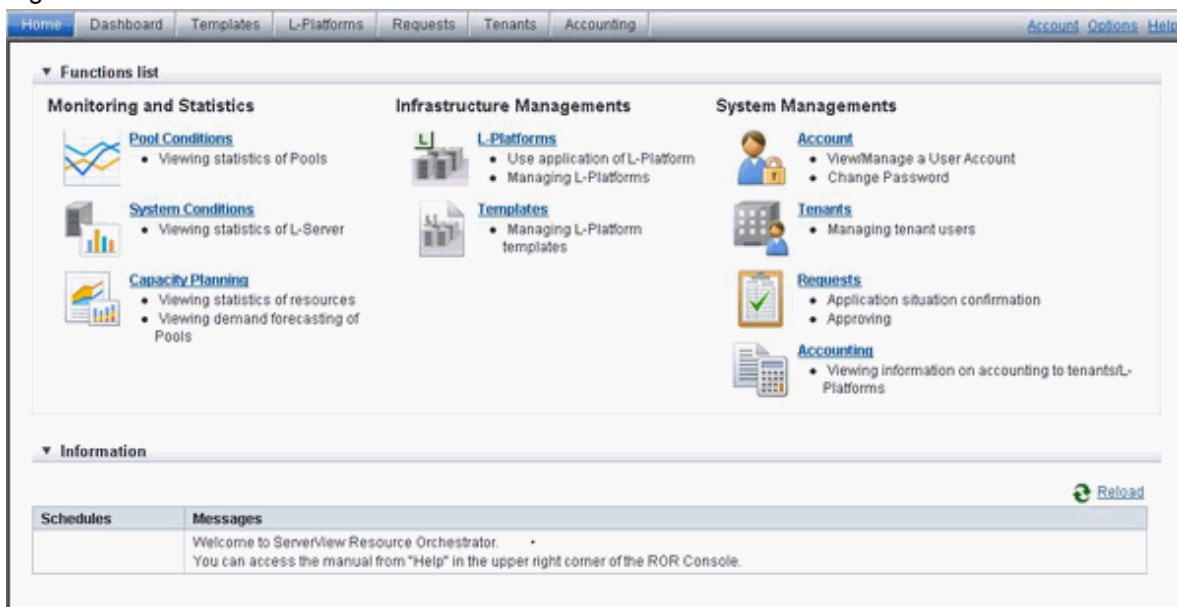
The table below shows the functions provided by the ROR console.

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

Function	Overview	Tenant Administrator	Tenant user
Home	The window displayed immediately after login to the ROR console. A function list and notifications are displayed.	Yes	Yes
Dashboard(Pool Conditions)	Displays the resource pool usage status	Yes	No
Dashboard (System Conditions)	Displays L-Server performance information and configuration information	Yes	Yes
Dashboard(Capacity Planning)	Displays the demand for resource pools and perform simulations of VM guest reallocations.	Yes	Yes

Function	Overview	Tenant Administrator	Tenant user
Template	A window for managing L-Platform Templates	Yes	No
L-Platform	A window for managing L-Platform	Yes	Yes
Request	A window for assessing and approving L-Platform usage applications and other applications from tenant users	Yes	Yes
Accounting	Usage charge for L-Platforms is displayed.	Yes	No
Tenant	A window for managing tenants and users belonging to tenants	Yes	No
Account	A window for changing a logged in user's information and password	Yes	Yes
Option	Sets the [Home] Tab as the window displayed at login.	Yes	Yes
Help	Displays this product's manual	Yes	Yes

Yes: Displayed (However, some functions may not be displayed according to the user's access rights. For details on privileges, check with the infrastructure administrator.)

No: Not displayed
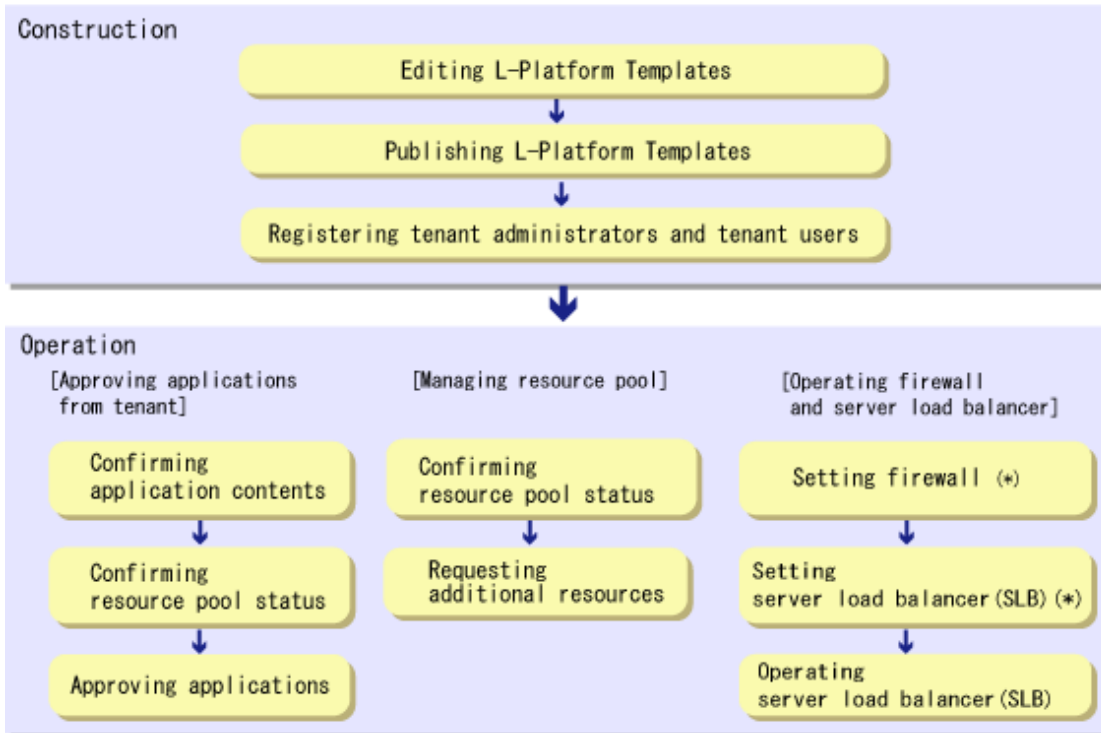
Refer to "Chapter 2 Home", and subsequent chapters for information on these functions.

1.2 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)

* Note: This is required if there is a firewall or server load balancer (SLB).

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 "7.3.3 Editing L-Platform Template" for details.

2. Publishing L-Platform Templates
   Publish the L-Platform Template to tenant users.
   Refer to "7.3.5 Publishing and Hiding L-Platform Template" for details.

3. Registering Tenant Administrator and tenant users
   Register the Tenant Administrator and tenant users.
   Refer to "10.3 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 "9.1 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 4 Dashboard (Pool Conditions)" for details.

3. Approving applications
   Approve the content of applications from the Tenant Administrator and tenant users.
   Refer to "9.3 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 4 Dashboard (Pool Conditions)" for details.

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

[Operations on the Firewall/Server Load Balancer (SLB)]

1. Configuring the firewall
   Configure the firewall if necessary.
   Refer to "8.3.9 Setup Firewall" for details.

2. Configuring the server load balancer (SLB)
   Configure the server load balancer (SLB) if necessary.
   Refer to "8.3.11 Server Load Balancer (SLB) Settings" and "8.7 Server Load Balancer (SLB) Operation Procedure" for details.

3. Operating the server load balancer (SLB)
   Operate the server load balancer (SLB) if necessary.
   Refer to "8.3.12 Server Load Balancer (SLB) Operations" and "8.7 Server Load Balancer (SLB) Operation Procedure" for details.

Chapter 2 Login and Logout

This chapter describes how to open and close the ROR console.

Preparations

Before opening the ROR console, be sure to read the following instructions and restrictions.

- The ROR console uses the Web browser's standard fonts and is designed to be viewed in a window of 1024 by 768 pixels or larger. When using a monitor with a higher resolution than this, it is recommended to enlarge the screen size. If the Web browser is resized by a significant amount, the display quality may deteriorate.

- Surrogate pair characters cannot be used on the ROR Console.

- In environments where the admin server is Windows, and multiple IP addresses are used, when a login window with a different URL from the address bar's URL in which the IP address or host name (FQDN) is specified, the warning may not disappear. Also, the following may occur.

    - The login window is not displayed

    - A certificate error occurs even though the certificate is registered

Use the following procedure as the corrective action for the above.

- For Windows Server 2008

    Set a higher priority for binding of the network adapter used on the admin LAN than for other network adapters.

![Example icon] **Example**

. . . .

When changing the order of priority of network adapter binding in Microsoft(R) Windows Server(R) 2008 R2 Enterprise

1. Click the [Start] button, and then click [Control Panel].

2. When [Network and Internet] is displayed, click this item.

    When [Network and Internet] is not displayed, proceed to the next step without clicking.

3. Click [Network and Sharing Center], and click [Change adapter settings] in the left side of the window.

4. Click [Advanced Settings] in the [Advanced] menu.

    When the [Advanced] menu is not displayed, push the [Alt] key.

5. From the list of [Connections] in the [Adapters and Bindings] tab, click the target network adapter, and the "Up" or "Down" buttons to change the order of priority of connections.

6. Click the [OK] button.

. . . .

- For Windows Server 2012 or later

    Set the interface metric value smaller than any other interfaces used by the admin server.
    The metric values of each interface can be checked by using the "netstat -r" command.

![Example icon] **Example**

. . . .

For Microsoft(R) Windows Server(R) 2012 Standard

1. Press the [Windows Logo] + [R] keys.

    The [Run] dialog is displayed.

2. Enter "ncpa.cpl", and click the [OK] button.

3. Right-click [Network Interface], and click [Properties].

4. Click [Internet Protocol Version 4(TCP/IPv4)], and then click [Properties].

5. Click [Advanced] on the [General] tab.

6. Clear the [Automatic metric] checkbox on the [IP Settings] tab, and enter the metric [Interface metric] field.

- When opening the ROR console with Internet Explorer, read the following additional instructions and restrictions.

  - When accessing the ROR console, be sure to enable the Compatibility View in Internet Explorer. Select [View]-[Encoding] in Internet Explorer, and check if [Auto-Select] is checked. If [Auto-Select] is not checked, select it.

  - When downloading files using the ROR console, it is necessary to disable [Do not save encrypted pages to disk] in the Advanced Settings of the browser.

  - The ROR console uses JavaScript, Active Script, Cookies, and IFRAMEs. These must be enabled in the Web browser settings before using the ROR console. Use 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.

  - When opening the ROR console right after launching a Web browser, a warning window concerning the site's security certificate will be displayed.
    The following message is displayed: "There is a problem with this web site's security certificate.". This warns the user that Resource Orchestrator uses a self-signed certificate to encrypt its HTTPS (SSL) communication with the Web browser.
    Resource Orchestrator generates a unique, self-signed certificate for each admin server during manager installation.
    Within a firewall-protected intranet, a network where the risk of identity theft is low, or where all correspondents are trusted, there is no risk in using self-signature certificates for communications. Accept the warning to display the Resource Orchestrator login screen.
    The login screen can be displayed by selecting the following option: "Continue to this web site (not recommended).".

  - The background of the address bar will become red and the words "Certificate Error" will be displayed on the right side of the address bar of the login screen, the ROR console, and BladeViewer.
    Furthermore, the Phishing Filter may show a warning on the status bar. These warnings are referring to the same self-signed certificate issue discussed in the previous bullet. It is safe to continue with the current browser settings.

  - To stop displaying the security certificate warning screen and the certificate error icon, create a certificate associated with the IP address or hostname of the admin server and add it to the Web browser.
    Refer to "Appendix B HTTPS Communications" in the "Design Guide CE" for details.

  - Add the URL of the ROR console to the "Trusted sites" of the browser.

- When opening the ROR console with Firefox, read the following additional instructions and restrictions.

  - Confirm that the "Allow pages to choose their own fonts, instead of my selections above" is checked in the [Advanced] setting in [Options]-[Content]-[Fonts & Colors]. If it is not checked, check it.

  - The ROR console uses JavaScript, Cookies, and IFRAMEs. These must be enabled in the Web browser settings before using the ROR console. Use 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.

  - Create a certificate associated with the IP address or hostname of the admin server and add it to the Web browser.
    Refer to "Appendix B HTTPS Communications" in the "Design Guide CE" for detail instructions to create and install certificate.

Opening the ROR Console

This section explains how to access the ROR console.

Start a Web browser from an admin client and specify the URL of the ROR console for connection.
If the port number was changed, specify the new port number.

When using internal authentication, the login window for Resource Orchestrator will be displayed.
When Single Sign-On has been configured, the login window for Single Sign-On is displayed.
However, when Single Sign-On authentication has already been performed, the ROR console can be started without displaying the login window.

For details on Single Sign-On, refer to "Chapter 12 Configuring Single Sign-On" in the "Design Guide CE".

```
URL: https://Admin_server_FQDN:23461/
```

On a Windows admin server, the ROR console can also be opened by selecting [start]-[All Programs]-[Fujitsu]-[Resource Orchestrator]-[ROR console].

📒 Note

- - If the login screen is not displayed, check that the following settings are correct.

    - URL entered in address bar of the Web browser.

    - The proxy settings of the Web browser are correct.

    - The firewall settings on the admin server are correct.

- - If already logged in from another Web browser window, login may be performed automatically (without displaying the login screen).

Login

- - In the login screen, enter the following items, and click the [Login] button.
    The ROR console is displayed after a successful login.

    - User ID

    - Password

- - When logging in for the first time, the [Home] tab is displayed. When logging in for the second time and successive times, the tab that was displayed at the last logout is displayed.

    It is also possible for each user to set whether the [Home] tab is to be displayed at login. To change the option, click "Options" in the upper right corner of the ROR Console. This option is not reflected on the backup site during switchover due to Disaster Recovery. Each user has to change the option individually after switchover.

- - When login to the ROR console fails using Single Sign-On authentication, configuration of the environment may have failed.

    Stop the manager, and reconfigure Single Sign-On.
    For details on how to reconfigure Single Sign-On, refer to "8.10 Reconfiguring Single Sign-On" in the "Operation Guide CE".

Logout

To log out, select "Logout" in the global header, and click the [OK] button in the confirmation dialog.

📒 Note

- - If the Web browser is closed without logging out first, user authentication may be skipped the next time Resource Orchestrator is accessed. In that case, users will be automatically logged in using the previously used session.
    It is advised that the users log out properly after using the ROR console or BladeViewer.

- If the ROR console or BladeViewer has been opened simultaneously in several Web browser windows, those login sessions may be terminated.

. . . .

Exit

To exit the ROR console, simply close the Web browser window.

Chapter 3 Home

This chapter explains the ROR Console Home window.

When the ROR Console is started, the Home window is displayed. Refer to "Chapter 2 Login and Logout" 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 triangle icon next to the Function list to toggle Display/Hide.

- Information

  Information from the System Administrator and Infrastructure Administrator is displayed.

Chapter 4 Dashboard (Pool Conditions)

This chapter explains how to use pool condition operations.

4.1 Pool Conditions Overview

The Pool Conditions can be used to monitor resource pool use.

This section provides an overview of the Pool Conditions.

Pool Conditions window

The Pool Conditions displays charts for each of the following resource pools:

- VM pool (CPU) (*1)

- VM pool (memory) (*1)

- Storage pool

- Network pool

- Server pool (*2)

- Address pool (*2)

> *1: The charts for overall volume, used volume, and L-Servers available for deployment will not consider VM hosts installed on physical L-Servers and registered in VM pools, and that operate on a physical server released during physical server reconfiguration.
>
> * 2: Only displayed if physical servers are registered to the server pool. Also, the information of the address set resources of the global IP address are not displayed.

Resource pool types

There are two types of resource pool:

- Infrastructure Administrator: Global pools

- Tenant Administrator: Local pools managed by the Tenant Administrator

- Dual-role administrator: Global pools and local pools

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 (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.

4.2 Pool Conditions Display

Perform the following steps to display the Pool Conditions:

1. From the ROR console, select the [Dashboard] tab, then select [Pool Conditions] in the displayed sub tab.

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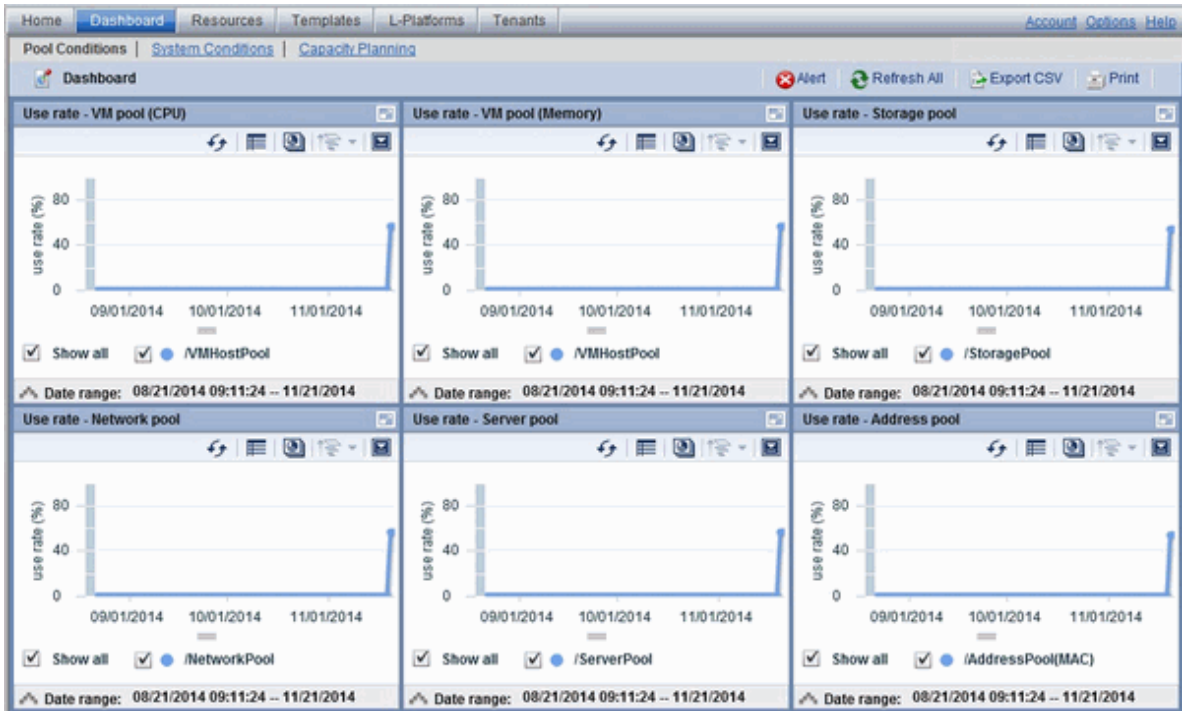
The following table lists the six types of charts available.

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. Also, the information of the address set resources of the global IP address are not displayed.

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
	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.

Icon	Explanation
	- 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. - History: Cannot be used. - Show relational alerts: Displays the [Alert List (For Each Chart)] window. (The displayed window cannot be used). - 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.
![enlarge icon]	Enlarges the chart display

2. Display detailed information in other charts.

   If required, display detailed information in other charts.
   Refer to "4.3 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 (![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.
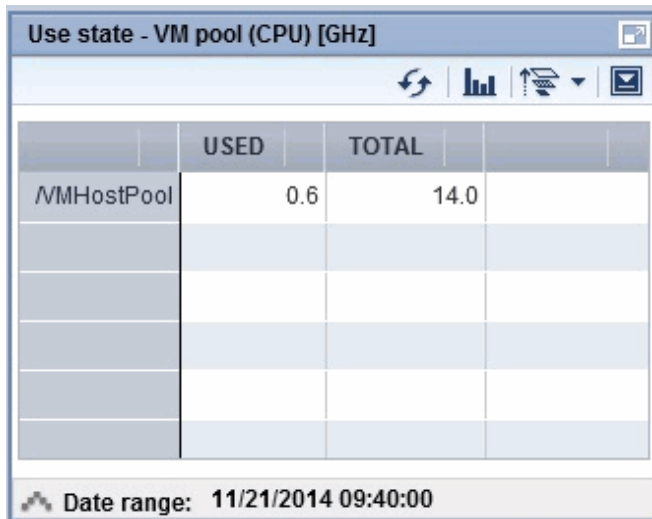
P Point
. . . .

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

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

   - If the administrator changes the setting of the Pool Conditions 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 Infrastructure Administrator.

4.3 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.

The use rate graph displays the daily average. The displayed data will be updated every five minutes.

A VM pool (Memory) window example is shown below.
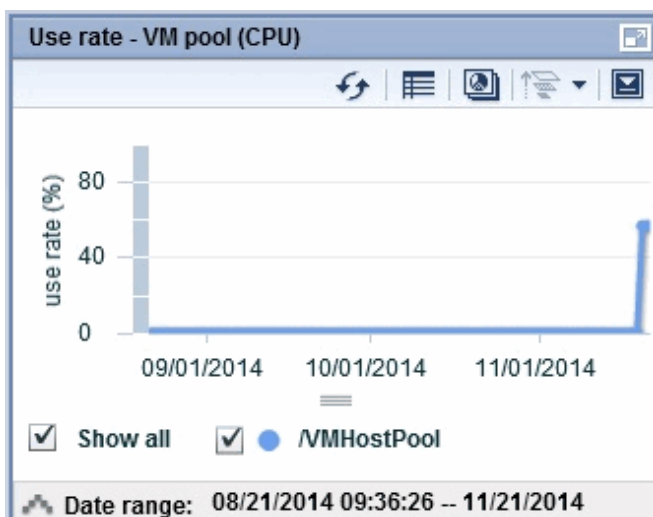
Detailed information can be displayed in other charts in the resource pool charts.

The data displayed in the detailed information will be updated every five minutes.

The table below shows the detailed information and usage scenarios. Refer to Step 2 under "4.2 Pool Conditions Display" for information on the operation method.

The table below shows the other charts.

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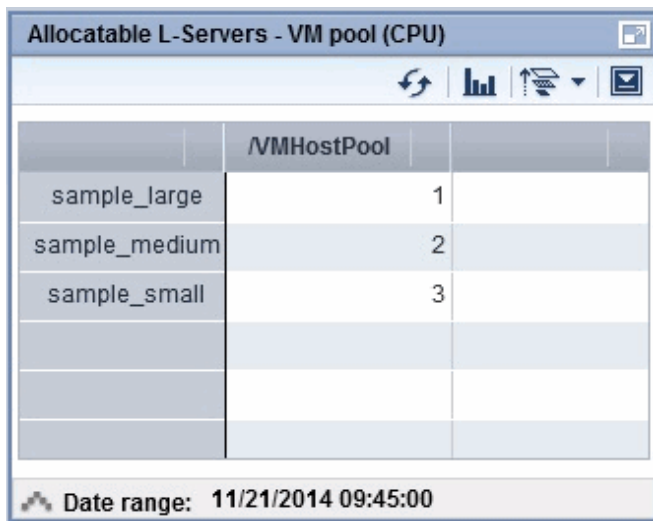
*2: For all storage pools that have thin provisioning function enabled, zero is displayed as the number of L-Servers that can be deployed, regardless of the L-Platform Template type. Specify thin provisioning function enable/disable separately for each storage pool.

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

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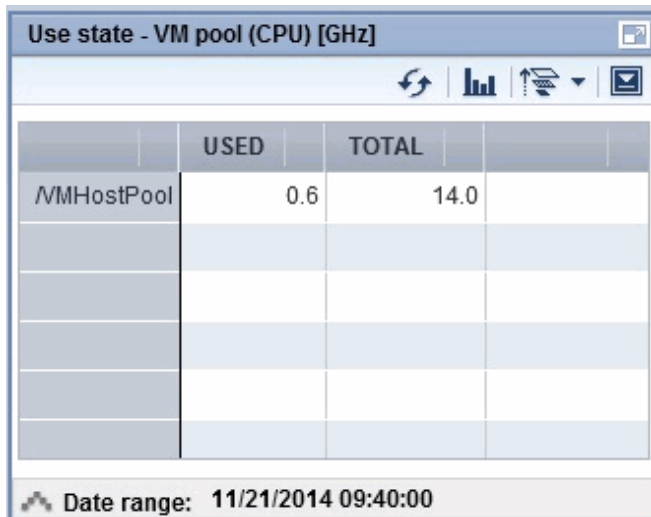
- Example: L-Servers that can be deployed is shown below.

Allocatable L-Servers - VM pool (CPU)		
	/VMHostPool	
sample_large	1	
sample_medium	2	
sample_small	3	

Date range: 11/21/2014 09:45:00

4.4 Alert List Display

When the [Alert] button is clicked from the Pool Conditions window, the [Alert list (all)] window will be displayed.
This window cannot be used for the local pools managed by the tenant administrators, since they cannot be the target of the alert settings.

Chapter 5 Dashboard (System Conditions)

This chapter explains how to monitor system conditions.

The configuration information of L-Platforms and L-Servers and the performance information of L-Servers can be checked in the operational status.

Note

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

> 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.

5.1 System Conditions Display Range

The system conditions 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

5.2 L-Platform System Conditions Display

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

1. From the ROR console, select the [Dashboard] tab, then select [System Conditions] in the displayed sub tab.

   The [System Conditions] window is displayed.

2. In the [System Conditions] window, select the [Tree Display] tab.

   The configuration of all owned tenants is displayed in the tree at the left.
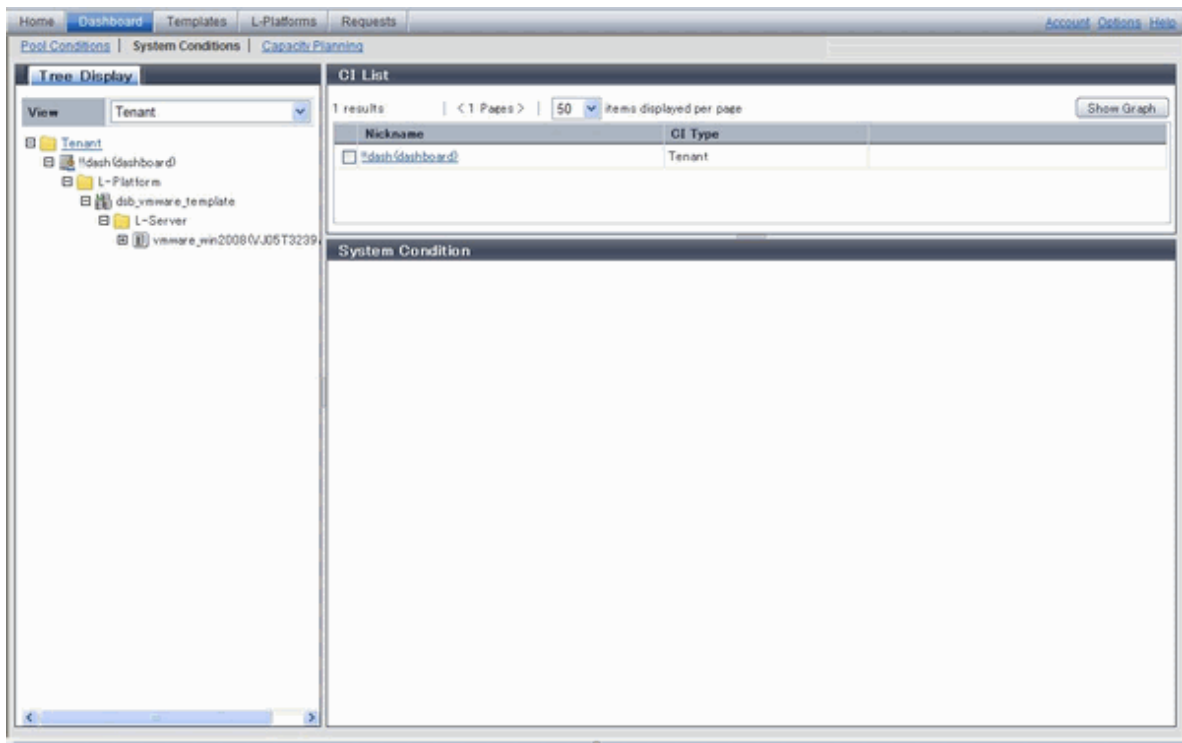
🅿 Point

....

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.

....

3. From the tree at the left, select the L-Platform for which to display the system conditions.

   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 conditions is displayed in the lower part of the CI list. Refer to "5.2.1 System Conditions Display" for information on the displayed system conditions.

   The table below explains the displayed items.

Item	Explanation
Nickname	Displays the display name of the configuration item. If the CI list Nickname link is clicked, the configuration information of the target tenant, L-Platform or L-Server is displayed in a separate window. Refer to "5.2.2 Configuration Information Display" for the displayed configuration information. 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)")

Item	Explanation
	- 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)")
CI Type	This column displays the configuration item type. The CI type displayed depends on the element selected in the tree at the left. 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

Note

. . . .

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.

. . . .

5.2.1 System Conditions Display

The system conditions of the L-Platforms selected in the system conditions window CI list is displayed as a graph at [System Conditions] 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 conditions contents can be switched by clicking the [System Conditions] tabs.

The table below shows the contents under the [System Conditions] 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 server virtualization software is Hyper-V, RHEL5-Xen, Solaris Zones, OVM for x86 3.x, and OVM for SPARC.

*4: The disk R/W count is not displayed if the server virtualization software is Hyper-V, RHEL-KVM, Solaris Zones, and OVM for SPARC.

*5: The memory usage is not displayed if the server virtualization software is Hyper-V, and OVM for SPARC. However, this is displayed if the setting for the dynamic memory in Hyper-V is enabled.

*6: The network usage is not displayed if the server virtualization software is Hyper-V, Solaris Zones, and OVM for SPARC. It is also not displayed if the physical L-Server is Linux/Solaris.

📛 Note

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

- When the server virtualization software of managed servers is VMware, RHEL5-Xen, RHEL-KVM, OVM for x86 3.x, or OVM for SPARC, the graph is not displayed when the manager is stopped because the data cannot be collected.
  Also, when data cannot be collected temporarily due to restarting of the manager and so on, some of the data is not displayed.

- The system conditions 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 Infrastructure 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)

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

- System conditions 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 conditions 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
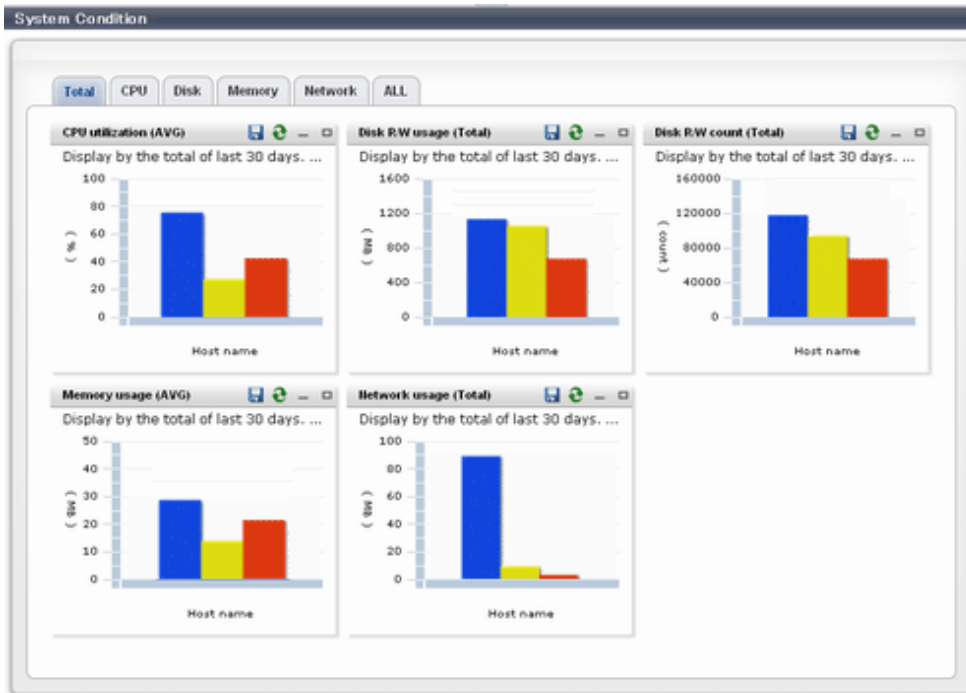
- [All] tab
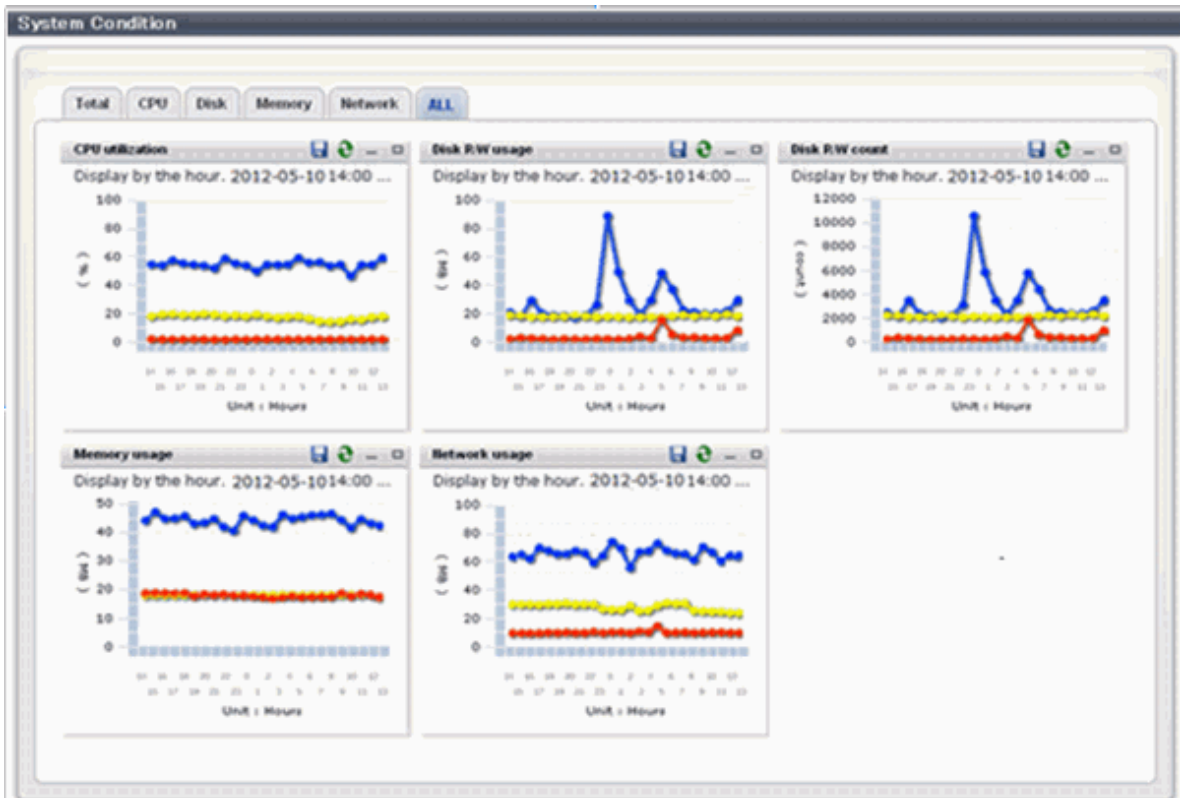
At each tab, the following icons displayed in the title bar can be used:

Icon	Tool tip	Explanation
	Update	Updates the displayed contents

Icon	Tool tip	Explanation
	Download CSV file	Downloads the graph data in CSV format
—	Minimize	Minimizes the specified window
▢	Maximize	Maximizes the specified window
⧉	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 (*)		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/Solaris: 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 - OVMSPARC_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 for physical servers Processer utilization
	vmgcused	CPU utilization	%	Output only for VMware Physical CPU utilization per 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

Graph type	Column name	Explanation	Unit	Description
	xenpcused	CPU utilization	%	Output for RHEL5-Xen/OVM for x86 3.x CPU utilization (total utilization of virtual CPUs set in the domain)
	xencpun	Number of virtual CPUs in the domain	number	Output for RHEL5-Xen/OVM for x86 3.x
	Nickname	VM name		
	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
	zonecpucappct	CPU utilization	%	Output for Solaris Zones CPU utilization (utilization of virtual CPUs set in the zone)
	ovmcpupcent	CPU utilization	%	Output for OVM for SPARC CPU utilization (utilization of virtual CPUs set in the domain)
Disk R/W usage	sdattim	Collection start time (*)		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/Solaris: 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/Solaris
	iokwrite	Disk write usage	Kbytes	Output only for Linux/Solaris
	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 for VMware/RHEL5-KVM/physical server

Graph type	Column name	Explanation	Unit	Description
	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 (*)		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/Solaris: 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/Solaris read count
	iowrite	Disk write count		Output only for Linux/Solaris 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 for RHEL5-Xen/OVM for x86 3.x Virtual block device read count
	vbdwr	Disk write count		Output for RHEL5-Xen/OVM for x86 3.x Virtual block device write count
	Nickname	VM name		Output for VMware/RHEL5-Xen/OVM for x86 3.x /physical server
Memory usage	sdattim	Collection start time (*)		yyyy-mm-dd HH:mm:ss
	resrcid	Resource ID		- in case of physical servers and Windows: MEMORY - in case of physical servers and Linux/Solaris: FREEMEM

Graph type	Column name	Explanation	Unit	Description
	recid	Record ID		Output any of the following - WIN_MEMORY - UX_MEMFREE - VMW_MEM - HV_DMEM_VM - 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 for RHEL5-Xen/OVM for x86 3.x Memory capacity allocated to domain
	Nickname	VM name		
	kvmmemused	Memory usage	Mbytes	Output only for RHEL-KVM Memory capacity allocated to domain
	zonepmemused	Memory usage	Kbytes	Output for Solaris Zones Memory capacity allocated to zone
Network utilization	sdattim	Collection start time (*)		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)	

Graph type	Column name	Explanation	Unit	Description
	ifbytin	Network usage (received)	bytes	Output only for Windows Amount of received data(byte)
	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 for RHEL5-Xen/OVM for x86 3.x Amount of data sent by virtual network interface
	xenkbrx	Network usage (received)	Kbytes	Output for RHEL5-Xen/OVM for x86 3.x Amount of data received by virtual network interface
	Nickname	VM name		Output for VMware/RHEL5-Xen/RHEL-KVM/OVM for x86 3.x/and physical servers with Windows OS
	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

* Note: 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.

5.2.2 Configuration Information Display

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

When the Nickname link in the CI list of the system conditions 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 6 Dashboard (Capacity Planning)

This chapter describes capacity planning operations. Scenarios are prepared in the [Capacity Planning] window to suit any operational purpose. Analysis and planning are facilitated by checking each report in turn

Note

If the character " ' " is used in the display name of a tenant, it is displayed as the character "_" on the Capacity Planning window.

6.1 Report Types

This section describes the types of reports for each category. Refer to "6.3 Operations Using Scenarios" for information on the categories.

VMware resource allocation optimization

Reports	Display item	Description
VMware res. usage cond. (List of virtual machine)	- CPU (usage amount and rate) - Memory (usage amount and rate)	Displays the virtual machines located in VM hosts and the resource usage status.

Resource pool

Reports Reports	Display item	Description
VM pool(CPU) (demand forecast)	VM pool(CPU) (demand forecast)	Perform regression analysis based on historical CPU usage and memory usage to anticipate future resources that will be used.
VM pool(Memory) (demand forecast)	VM pool(Memory) (demand forecast)	
Storage pool (demand forecast)	Storage pool (demand forecast)	
Network pool (demand forecast)	Network pool (demand forecast)	
Server pool (demand forecast)	Server pool (demand forecast)	
Address pool (demand forecast)	Address pool (demand forecast)	

6.2 Capacity Planning Operations

This section explains capacity planning operations.

How to open the Configuration Management screens

1. From the ROR console, select the [Dashboard] tab, then select [Capacity Planning] in the displayed sub tab.

2. The [Capacity Planning] window will be displayed.

Note

Do not perform operations in the [Capacity Planning] window using the right-click shortcut menu.

Capacity planning layout

When started, the following [Capacity Planning] window is displayed:
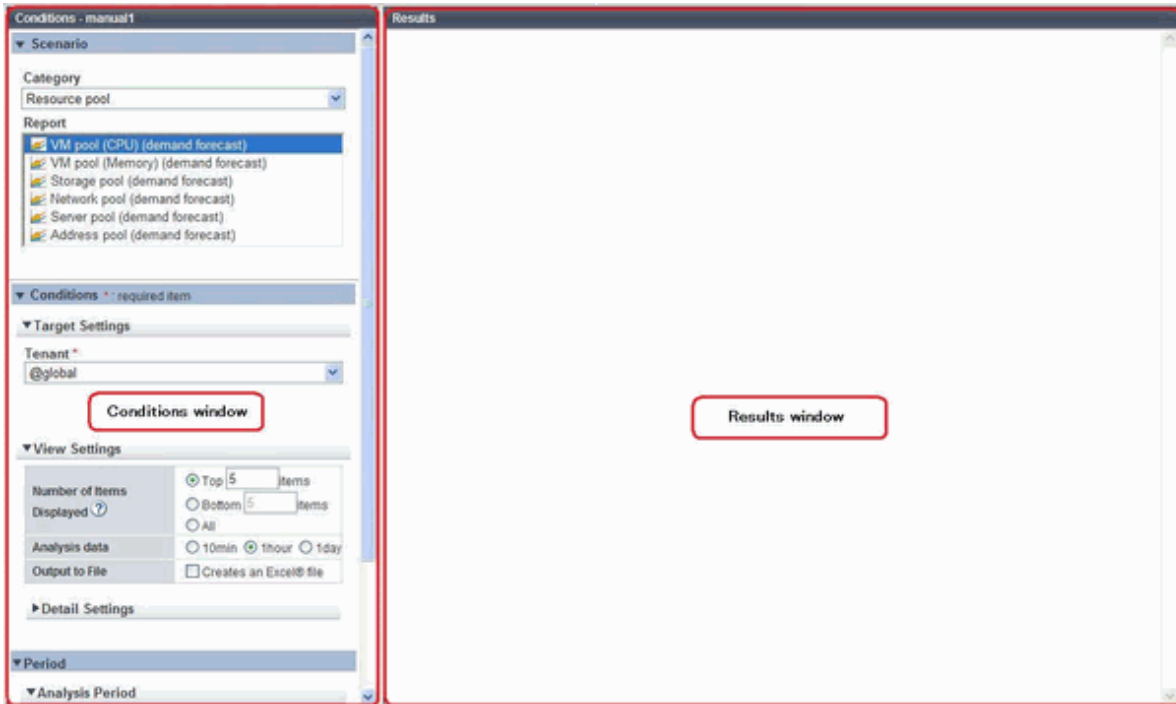
The [Capacity Planning] window is made up of the following elements:

Component	Description
[Conditions] window	Set categories, reports, and the analysis conditions for the various reports. Operations in this window are described in following sections:
[Results] window	The contents of the reports are displayed.

Conditions window layout

Basic operations in the conditions window

Component	Description
Category	Select a category that matches the purpose of operation.
Report	Select a report that matches the purpose of operation.
Target Settings	A specification relating to the target of the report.
View Settings	Specify report data intervals, number of display items, and file output. The way to specify the number of display items depends on the type of report.

Component	Description
	Available memory capacity is used to avoid system stoppages due to extremely low memory availability, so is extracted from the lowest up. The number of data items that can be displayed in the graph is approximately up to 10.
Period	Specify the periods for analysis.
Operation button (Display)	Button for displaying the results of analysis as a report (content).

6.2.1 Scenario

Scenarios are prepared in the [Capacity Planning] window to suit any operational purpose. Analysis and planning is possible by checking each report in turn.

Category

Categories are divided into types to match different purposes of operation.
The reports can be selected once the category is selected.
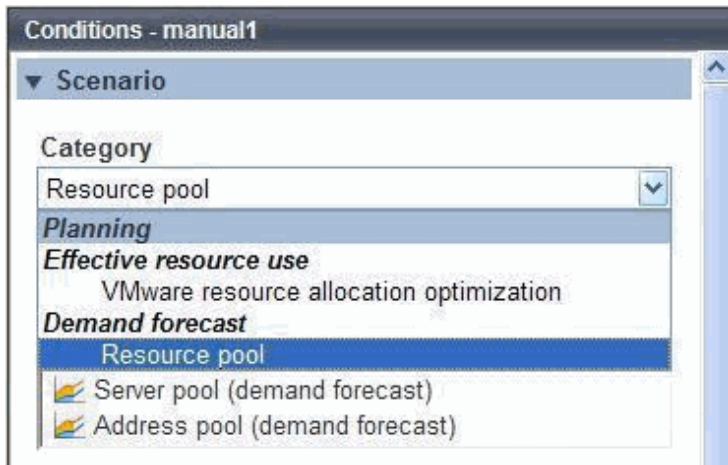
Report

Select the appropriate report.
The items in [Conditions] depend on the report selected.
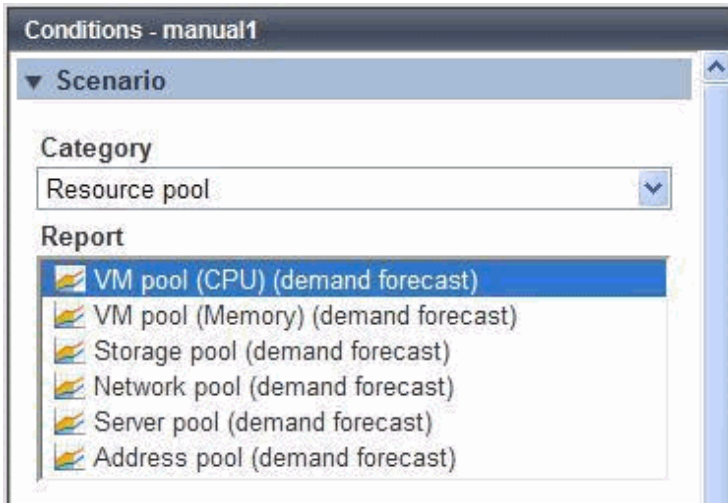
6.2.2 Conditions

6.2.2.1 Target Settings

When a report is specified, the following items are displayed: The items displayed are report specific.
The following is an example window when Tenant and Host are specified:

The items that are specified are explained below for the different types.

Tenant specified

Item	Description
Tenant	Select the tenant to be analyzed from the tenant menu.

Tenant and Host specified

Item	Description
Tenant	Select the tenant to be analyzed from the tenant menu.
Host	Select the host to be analyzed from the host menu. The host menu displays the hosts that have been registered with the selected tenant. This will be empty if a host is not registered in the tenant. Select the tenant where the host is registered.

6.2.2.2 View Settings

The following explains specifications relating to the number of display items, data intervals, and file output:

The items to be set differ depending upon the report type.

Item	Description
Number of Items Displayed	Select the number of data items to use for analysis. The number of data items can be selected as follows: - **Top (Bottom)** An integer between 1 and 1000 can be entered. Only the entered number of data items will be displayed. If there is a large amount of data to be displayed, it may be difficult to read the graphs. Therefore, it is recommended you specify 10 items only. - **All** All data will be displayed.
Operating time	Specify the time period to output the results of the analysis.
Analysis data	Select the data interval to use for analysis. The following data intervals can be selected: - **10 min** Data retention period: 7 days Appropriate for analysis of about one day's worth of data. - **1 hour** Data retention period: 6 weeks Appropriate for analysis of about one week's worth of data. - **1 day** Data retention period: 13 months Appropriate for analysis of one month or mores' worth of data. It may not be possible to select this with some report types or methods of analysis.
Output to File	The content of the results window is output as an Excel file. If the [Creates an Excel(R) file] check box is selected, the [Save in Excel(R) format] button becomes active at the bottom of the results window.Click this button and the displayed content can be downloaded in Excel format. Disable clipboard redirection if operation is to be performed using a remote desktop connection. If downloading files from the [Save in Excel(R) format] button, the "xlsx" or "xlsm" extension files can be downloaded. Note that you must enable the macro if the "xlsm" extension file is opened.

Detail Settings

As, depending on the report type, the [Detail Settings] area may be displayed, the items to be set may differ.
The [Detail Settings] area is shown closed when a report is selected. Click the title bar of the [Detail Settings] to edit advanced settings.

Item	Description
Threshold (Arbitrariness)	Specify the pool usage rates that will be tolerated on the consolidation destination server (optional). If this is specified, it is shown as a red line in the graph.

6.2.3 Period

This section explains periods.

Analysis Period

Item	Description
Start date End date	Specify the period of the analysis. Select the minute, hour, day, month and year using a drop-down list box to select the date and time that analysis will start and stop.

📖 Note

If a period prior to the data retention period is specified, no data will be displayed.

Refer to Analysis data in "6.2.2.2 View Settings" for information on data retention periods.

Forecast Date

This can be specified for the following reports:

- VM pool(CPU) (demand forecast)

- VM pool(Memory) (demand forecast)

- Storage pool (demand forecast)

- Network pool (demand forecast)

- Server pool (demand forecast)

- Address pool (demand forecast)

Item	Description
Date	Forecasting is performed up to the specified date. Select the day, month and year using a drop-down list box to select the date.

6.2.4 Operation Buttons (Display)

The operation buttons are explained below.

Button	Description
Display	Report is created based on the specified conditions. Reports are displayed in the results window.

The message "Loading..." is displayed while the content is being generated. While this message is displayed, the [Display] button will be disabled.

6.2.5 Results Window

This section describes the operations that can be performed on the displayed content, including displayed report content.

Table sorting

When a column header is selected in the table in the results window, the table is resorted using the selected column as the key. Sorting can be toggled between ascending and descending order.

🔵 Note

Numerical sorting works correctly only when all values in the specified column are numerical values. Sorting cannot be performed correctly if the column includes non-numerical data such as null values.

Save in CSV format / Save in Excel(R) format / Print

The following buttons are displayed at the bottom of the results window.

Button	Description
Save in CSV format	This link enables the displayed range of data to be downloaded in CSV format. Refer to "6.2.6 CSV File Items" for information on the downloaded CSV file items. Depending on your environment, the file might not be preserved and the content of CSV might not be displayed on the screen. In this case, please refer to "Preservation of CSV file" of the following information.
Save in Excel(R) format	This is displayed if the [Creates an Excel(R) file] checkbox is selected in the display settings for the condition settings window. This link enables the displayed content to be downloaded in Excel(R) format.
Display in separate window	It is possible to show the currently displayed content in a separate window. Additionally, you can display other content in multiple windows to facilitate side-by-side comparison.
Print	This button appears when you click the [Display in separate window] button. It prints the displayed content.

📘 Information

Preservation of CSV file

There are the following ways of preservation of CSV file.

Relation setting of CSV file

Please set it with the machine that is opening a browser where the phenomenon is generated as follows.

1. Right-click an arbitrary CSV file and open the property.

2. Click the [Change] button of the [General] tab.

3. Select an arbitrary program (for instance, Note Pad etc.) from [Select A Program To Open] and click [OK].

However, the phenomenon might be generated even when this setting is done depending on the environment. In this case, please preserve the object file in the following way.

Preserving objects in the file

It is possible to download it without the setting by the following procedure.

1. Right-click on [Save in CSV format] button of the report screen.

2. Select [Save Target As] (*) from the displayed menu.

* Note: [Save Link As] in case of Firefox

When the Resource pool category is selected

The table with the latest information for the resource pool shows the value at the point of Date and time/Date time. However, it changes as shown below depending upon the specification of [Conditions]-[View Setting]-[Analysis data].

- "10min" is specified:

    "Date and time" in the extreme right column is the average value of the time period after 10 minutes have elapsed.

- "1hour" is specified:

  "Date and time" in the extreme right column is the average value of the time period after 1 hour has elapsed.

- "1day" is specified:

  "Date time" in the extreme right column is the average value of the time period after 1 day has elapsed.

P Point
....

ALL_ROR_SERVER, which includes all servers within tenants, is displayed in [Host Name] at the top of the results window.
....

6.2.6 CSV File Items

Use the [Save in CSV format] button to display downloaded CSV file items by category.
Note that the CSV file encoding is Shift-JIS.

6.2.6.1 Effective resource use (VMware resource allocation optimization)

This section describes CSV file items for different reports.

VMware rsc. usage cond. (List of virtual machine)

Item	Column name	Explanation	Unit	Description
CPU	sdattim	Collection start time		yyyy/mm/dd HH:mm:ss
	sysname	System name		
	resrcid	Resource ID		VMware unique ID is specified before the colon, and the virtual machine name is specified after the colon.
	recid	Record ID		VMW_GCPU
	consflag	Interval (flag displayed)		- If collection interval is 10 minutes: 1 - If collection interval is 1 hour: 2 - If collection interval is 24 hours: 3
	consintl	Interval	second	- If collection interval is 10 minutes: 600 - If collection interval is 1 hour: 3600 - If collection interval is 24 hours:86400
	coverage	Data coverage ratio		Displays the ratio of data collected during the interval from 0 through 1
	vmgcused	CPU utilization	%	
	vmgcallmin	resource allocation (reserved) of a resource pool or a virtual machine	MHz	
	vmgcallmax	resource allocation (Limit) of a resource pool or a virtual machine	MHz	If there is no limit, -1 will be displayed.
	vmgcallshrs	resource allocation (Shared) of a resource pool or a virtual machine	MHz	The value for the shared memory of a VMware virtual machine

Item	Column name	Explanation	Unit	Description
	vmgcnumcpu	CPU number	number	
	vmgcusemhz	Virtual machine CPU usage	MHz	
Memory	sdattim	Collection start time		yyyy/mm/dd HH:mm:ss
	sysname	System name		
	resrcid	Resource ID		VMware unique ID is specified before the colon, and the virtual machine name is specified after the colon.
	recid	Record ID		VMW_MEM
	consflag	Interval (flag displayed)		- If collection interval is 10 minutes: 1 - If collection interval is 1 hour: 2 - If collection interval is 24 hours: 3
	consintl	Interval	second	- If collection interval is 10 minutes: 600 - If collection interval is 1 hour: 3600 - If collection interval is 24 hours:86400
	coverage	Data coverage ratio		Displays the ratio of data collected during the interval from 0 through 1
	vmgmallim	reserved memory of a resource pool or a virtual machine	Kbytes	
	vmgmallmax	upper limit memory size of a resource pool or a virtual machine	Kbytes	If there is no limit, -1 will be displayed.
	vmgmallsh	shared memory of a resource pool or a virtual machine	Kbytes	The value for the shared memory of a VMware virtual machine
	vmgmmems	Physical memory size	Mbytes	resource pool or virtual machine units
	vmgmtm	Estimated size of the working set	Mbytes	resource pool or virtual machine units
	vmgmacest	Ratio of physical memory in use	%	resource pool or virtual machine units (instant value)<VMware ESX>

Note

About the data output as CSV

At the collection start time, information for the analysis period is output. Data for anticipated periods in the future is not output.

6.2.6.2 Demand Forecast (Resource pool)

This section describes CSV file items for different reports.

VM pool (CPU) (demand forecast)

Column name	Explanation	Unit	Description
sdattim	Collection start time		yyyy/mm/dd HH:mm:ss

Column name	Explanation	Unit	Description
sysname	System name		
resrcid	Resource ID		tenanl name:/pool name
recid	Record ID		ROR_VMPOOLCPU
consflag	Interval (flag displayed)		- If collection interval is 10 minutes: 1 - If collection interval is 1 hour: 2 - If collection interval is 24 hours: 3
consintl	Interval	second	- If collection interval is 10 minutes: 600 - If collection interval is 1 hour: 3600 - If collection interval is 24 hours:86400
coverage	Data coverage ratio		Displays the ratio of data collected during the interval from 0 through 1
vmpoolprocused	VMPool CPU usage	GHz	
vmpoolproctotal	VMPool CPU total size	GHz	

VM pool (Memory) (demand forecast)

Column name	Explanation	Unit	Description
sdattim	Collection start time		yyyy/mm/dd HH:mm:ss
sysname	System name		
resrcid	Resource ID		tenanl name:/pool name
recid	Record ID		ROR_VMPOOLMEM
consflag	Interval (flag displayed)		- If collection interval is 10 minutes: 1 - If collection interval is 1 hour: 2 - If collection interval is 24 hours: 3
consintl	Interval	second	- If collection interval is 10 minutes: 600 - If collection interval is 1 hour: 3600 - If collection interval is 24 hours:86400
coverage	Data coverage ratio		Displays the ratio of data collected during the interval from 0 through 1
vmpoolmemused	VMPool memory usage	Gbytes	
vmpoolmemtotal	VMPool total memory	Gbytes	

Storage pool (demand forecast)

Column name	Explanation	Unit	Description
sdattim	Collection start time		yyyy/mm/dd HH:mm:ss
sysname	System name		
resrcid	Resource ID		tenanl name:/pool name
recid	Record ID		ROR_STORAGEPOOL
consflag	Interval (flag displayed)		- If collection interval is 10 minutes: 1

Column name	Explanation	Unit	Description
			- If collection interval is 1 hour: 2
			- If collection interval is 24 hours: 3
consintl	Interval	second	- If collection interval is 10 minutes: 600
			- If collection interval is 1 hour: 3600
			- If collection interval is 24 hours:86400
coverage	Data coverage ratio		Displays the ratio of data collected during the interval from 0 through 1
vmpoolserverused	StoragePool usage	Gbytes	
vmpoolservertotal	StoragePool total capacity	Gbytes	

Network pool (demand forecast)

Column name	Explanation	Unit	Description
sdattim	Collection start time		yyyy/mm/dd HH:mm:ss
sysname	System name		
resrcid	Resource ID		tenanl name:/pool name
recid	Record ID		ROR_NETWORKPOOL
consflag	Interval (flag displayed)		- If collection interval is 10 minutes: 1
			- If collection interval is 1 hour: 2
			- If collection interval is 24 hours: 3
consintl	Interval	second	- If collection interval is 10 minutes: 600
			- If collection interval is 1 hour: 3600
			- If collection interval is 24 hours:86400
coverage	Data coverage ratio		Displays the ratio of data collected during the interval from 0 through 1
vmpoolnetworkused	Number of addresses being used by NetworkPool	number	
vmpoolnetworktotal	Total number of NetworkPool addresses	number	

Server pool (demand forecast)

Column name	Explanation	Unit	Description
sdattim	Collection start time		yyyy/mm/dd HH:mm:ss
sysname	System name		
resrcid	Resource ID		tenanl name:/pool name
recid	Record ID		ROR_SERVERPOOL
consflag	Interval (flag displayed)		- If collection interval is 10 minutes: 1
			- If collection interval is 1 hour: 2
			- If collection interval is 24 hours: 3

Column name	Explanation	Unit	Description
consintl	Interval	second	- If collection interval is 10 minutes: 600 - If collection interval is 1 hour: 3600 - If collection interval is 24 hours:86400
coverage	Data coverage ratio		Displays the ratio of data collected during the interval from 0 through 1
vmpoolserverused	Number of servers used by ServerPool	number	
vmpoolservertotal	Total number of ServerPool servers	number	

Address pool (demand forecast)

Column name	Explanation	Unit	Description
sdattim	Collection start time		yyyy/mm/dd HH:mm:ss
sysname	System name		
resrcid	Resource ID		tenanl name:/pool name
recid	Record ID		ROR_ADDRESSPOOL
consflag	Interval (flag displayed)		- If collection interval is 10 minutes: 1 - If collection interval is 1 hour: 2 - If collection interval is 24 hours: 3
consintl	Interval	second	- If collection interval is 10 minutes: 600 - If collection interval is 1 hour: 3600 - If collection interval is 24 hours:86400
coverage	Data coverage ratio		Displays the ratio of data collected during the interval from 0 through 1
vmpooladdressused	Number of addresses used by AddressPool	number	
vmpooladdresstotal	Total number of AddressPool addresses	number	

 Note

About the data output as CSV

At the collection start time, information for the analysis period is output. Data for anticipated periods in the future is not output.

6.3 Operations Using Scenarios

6.3.1 Optimization of Resources Allocated to a Virtual Machine : [VMware resource allocation optimization]

The virtual machines with low resource usage rates are detected from the L-Servers held. Using the results, any excess resources that have been allocated can be reviewed, or added to where they are lacking, thereby optimizing resource allocations.
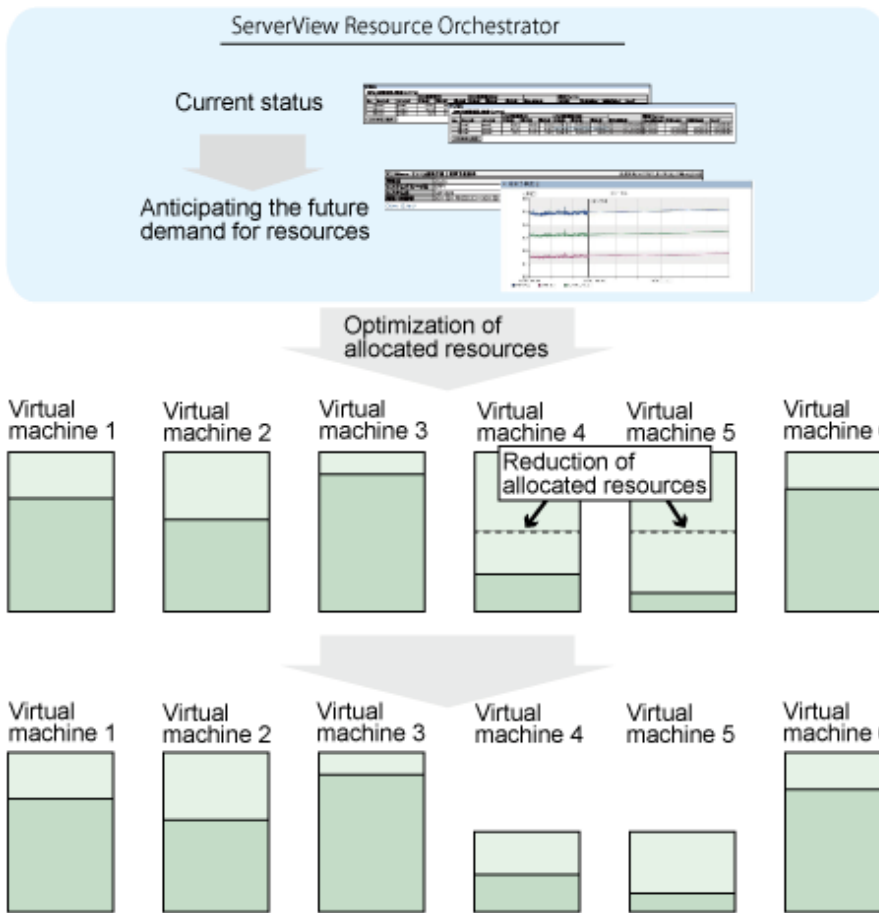
This section describes the procedure for attempting to optimize resource by using the [VMware resource allocation optimization] category scenario.

Understanding the current status

In the [Capacity Planning] window, select the [VMware rsc. usage cond. (List of virtual machine)] report of the [VMware resource allocation optimization] category, set the analysis conditions and display the report.

Refer to "6.2 Capacity Planning Operations" for information on how to configure analysis conditions.

CPU usage rate

No .	Category	System name	Virtual machine name	AVG	MAX	MIN	CPU number	Reservation(
1	CPU usage rate(%)	192.0.2.1	tech_ct-6N74UUIHZ-S-0001-30	2.03	5.06	1.85	1.00	100.0
2	CPU usage rate(%)	192.0.2.1	tenant-A-6N8FXZ3KH-S-0001-130	4.66	7.30	3.98	3.00	1,500.0
3	CPU usage rate(%)	192.0.2.1	xie-UBWWDXG0W-S-0001-55	1.00	1.18	0.97	3.00	3,000.0

CPU usage

No .	Category	System name	Virtual machine name	AVG	MAX	MIN	CPU number	Reservation(
1	CPU usage(MHz)	192.0.2.1	tech_ct-6N74UUIHZ-S-0001-30	36.72	95.25	33.17	1.00	100.0
2	CPU usage(MHz)	192.0.2.1	tenant-A-6N8FXZ3KH-S-0001-130	29.39	47.00	24.89	3.00	1,500.0
3	CPU usage(MHz)	192.0.2.1	xie-UBWWDXG0W-S-0001-55	5.76	6.83	5.64	3.00	3,000.0

[Save in CSV format]

▼ Memory

Memory usage rate

No.	Category	System name	Virtual machine name	AVG	MAX	MIN	Hardware memory capacity(MB)	Rese

Sort by CPU usage and memory usage to detect virtual machines with available resources and reduce the allocation of resources to virtual machines with low usage rates.

6.3.2 Anticipating the Future Demand for Resources : [Resource pool]

Use the past resource pool usage to anticipate the demand for resource pools.

By determining inadequate resource amounts beforehand, it is possible to plan for the expansion of facilities.

This section describes the procedure for anticipating future resource demand for resources by using the [Resource pool] category scenarios.

Demand Forecast

In the [Capacity Planning] window, select the appropriate report of the [Resource pool] category, set the analysis conditions and display the report.

Refer to "6.2 Capacity Planning Operations" for information on how to configure analysis conditions.
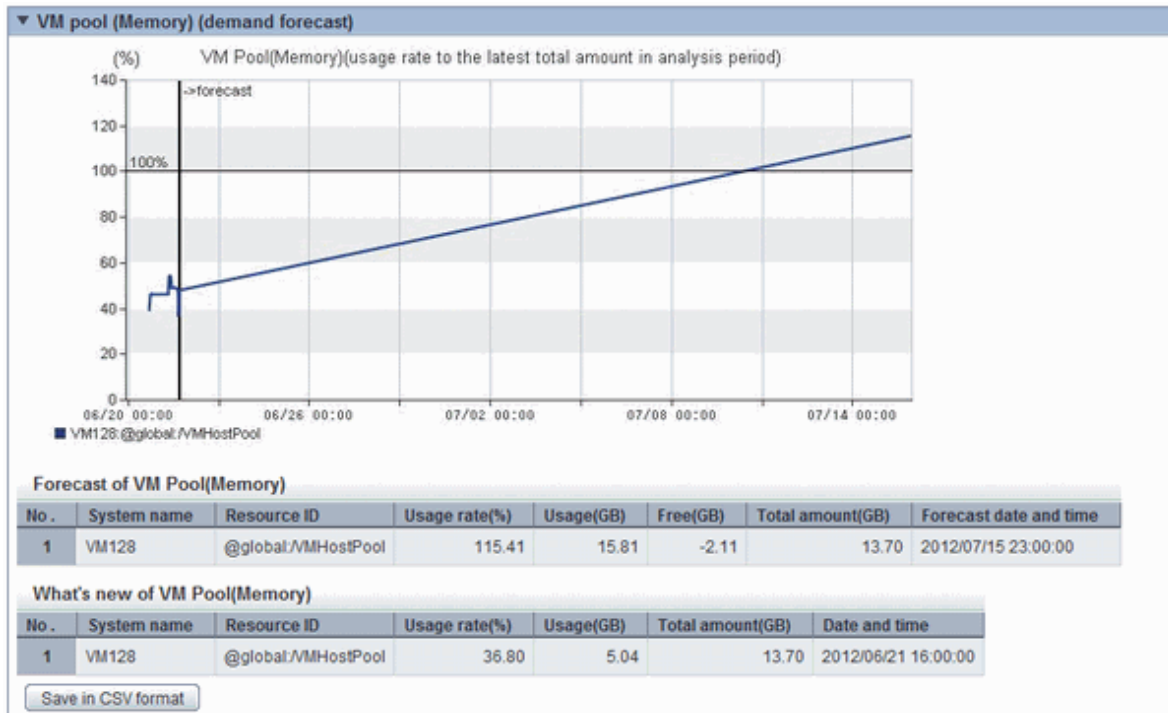
Perform regression analysis based on past CPU usage and memory usage to anticipate the resources that will be used.

Chapter 7 Template

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

7.1 L-Platform Template Overview

This section provides an overview of L-Platform templates.

### 7.1.1 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 7.1 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.
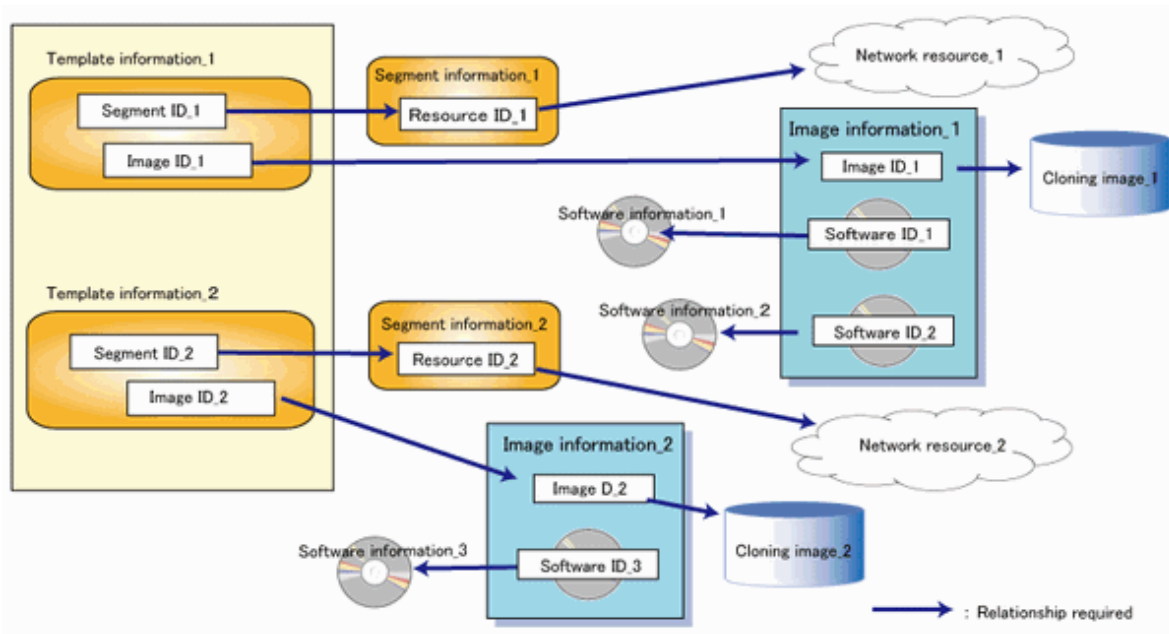
7.1.2 Flow of L-Platform Template Creation

This section describes the flow when creating an L-Platform template.

7.1.2.1 Preparation for L-Platform Template Creation

The following steps are required prior to creating an L-Platform template:

- Create network resources

    Refer to "5.6 Registering Network Resources" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" for information on how to create network resources.

- Create the L-Server Template

    Refer to "Chapter 15 L-Server Template Operations" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" for information on how to create L-Server templates.

- Create the cloning image

    Refer to "17.5.1 Collecting and Registering" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" for information on how to create cloning images.

7.1.2.2 Create the L-Platform Template

The following steps are required to create an L-Platform template:

1. Create the software information

2. Create the image information

3. Create the segment information

4. Create the template information

Note that segment information can also be created before the software information.

7.1.2.3 Publish the L-Platform Template

After creation, L-Platform templates must be published before they can be used for creating L-Platforms.

7.1.3 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.

7.1.4 Notes if Using a Firewall

Depending on the configuration of the L-Platform template, a template with a firewall is either using a ruleset or not. Check with the infrastructure administrator for details.

7.1.5 Notes on Using VDI (Virtual Desktops)

When using VDI (Virtual Desktop), note the following points.

- It is not possible to mix images for VDI coordination and images not for VDI coordination in an L-Platform template.

    When an image for VDI coordination is deployed in an L-Platform template, do not deploy images not for VDI coordination in the same L-Platform template.

7.2 Explanation of Windows

This section explains the [Templates] tab of the ROR console.

The following figure shows the [Templates] tab of the ROR console.
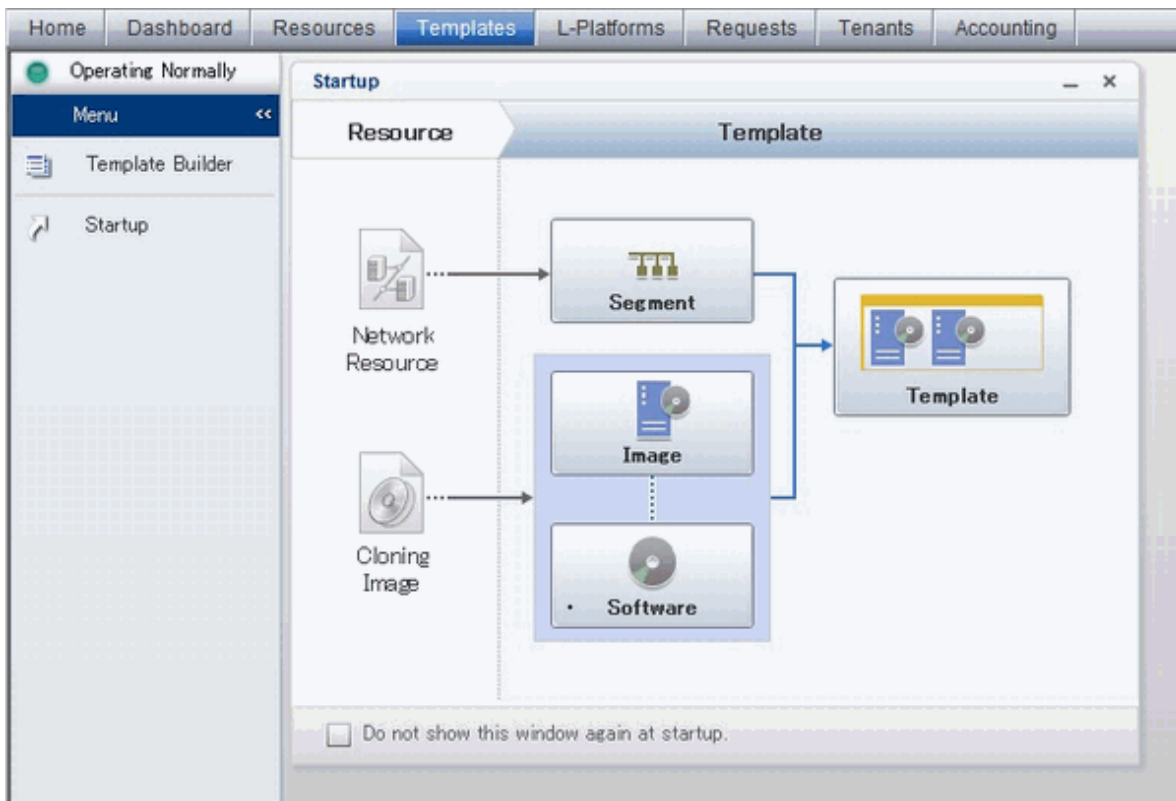
7.2.1 Menu

The following are the menus displayed in the [Templates] tab of the ROR console:

Template Builder

The [L-Platform Template] window will be displayed.

Startup

The [Startup] window is displayed.

🗒 **Note**

. . . .

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.

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7.2.2 Startup Window

The steps to compile the information that makes up L-Platform templates are displayed as buttons in the [Startup] window displayed in the [Templates] tab of the ROR console.

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

7.2.3 L-Platform Template Window

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

- Selecting [Template builder] from the menu

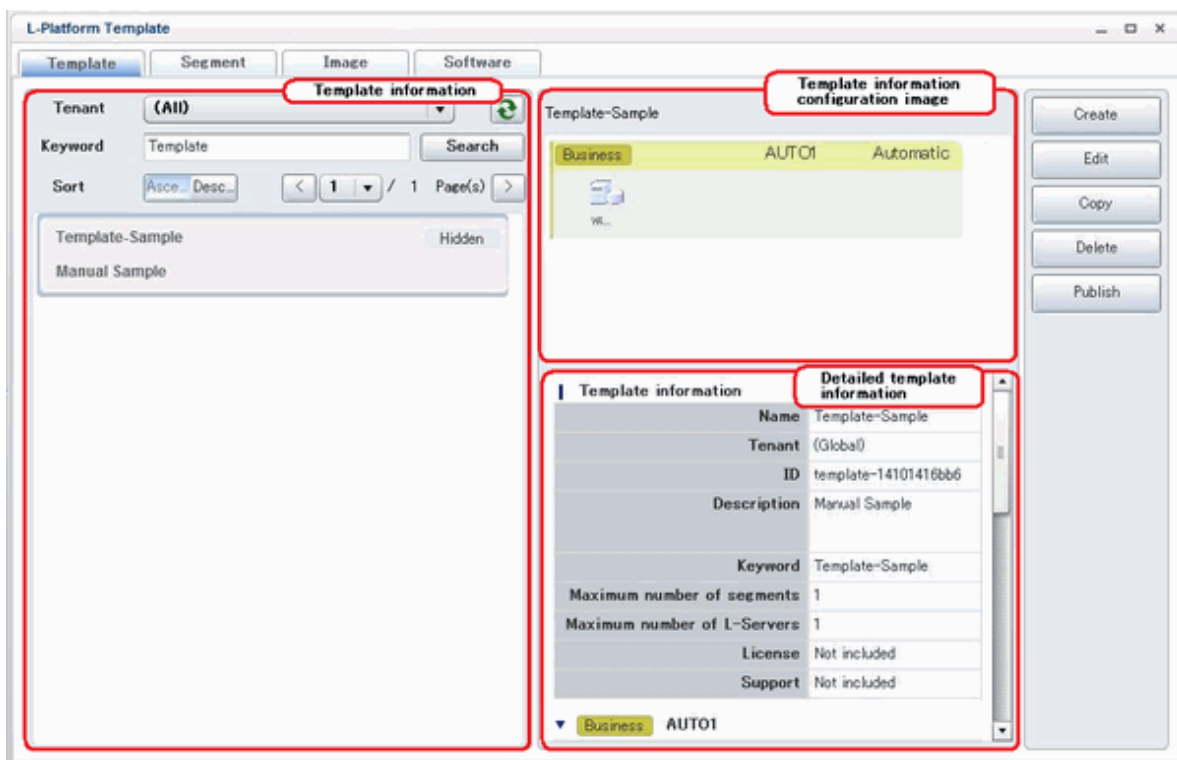- Clicking the button image of an information type on the [Startup] window

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 7.2 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

7.2.3.1 Template Tab

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

Window Explanation

The following explains the [Template] tab window:

Pane name	Explanation
Template information	Located on the left side of the page, contains template information. The list can be displayed in ascending or descending order. The list can be filtered by tenant and by keyword. Strings included in the keyword filter are those that were specified in "keyword" in basic information of the template information. Clicking the reload button ( ) resets sorting, pages, and selected states.
Template information configuration image	Located on the upper right side of the page, displays the configuration image for the template information selected in "Template information".

Pane name	Explanation
Detailed template information	Located on the lower right side of the page, displays details about the template information selected in "Template information".

Explanation of Buttons

The following explains the buttons in the [Template] tab:

Button name	Explanation
Edit	Edits the contents of existing registered template information. Refer to "7.3.3 Editing L-Platform Template" for details.
Copy	Creates new template information based on existing registered template information. Refer to "7.3.2 Copying L-Platform Template" for details.
Delete	Deletes template information. Refer to "7.3.4 Deleting L-Platform Template" for details.
Publish	Publishes an L-Platform template. Refer to "7.3.5 Publishing and Hiding L-Platform Template" for details.
Hide	Hides an L-Platform template. Refer to "7.3.5 Publishing and Hiding L-Platform Template" for details.

7.2.3.2 Segment Tab

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

Window Explanation

The following explains the [Segment] tab window:

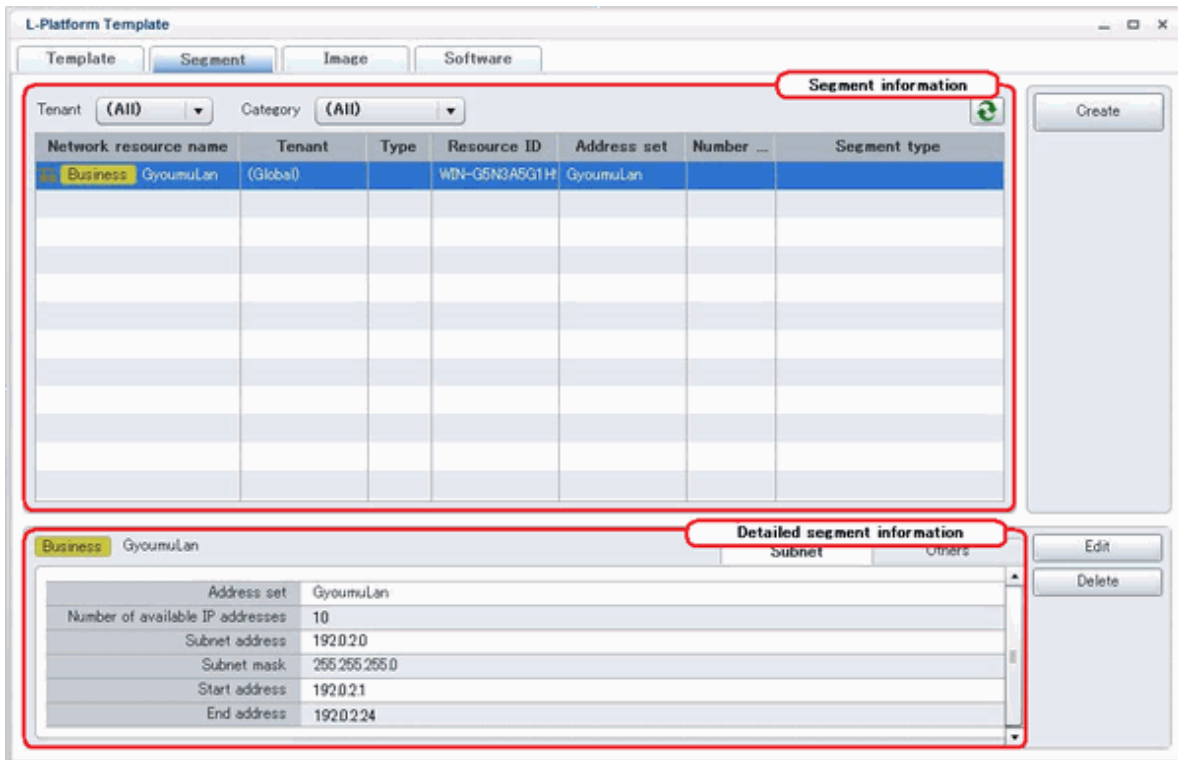| Pane name	Explanation
Segment information	Located on the left side of the page, lists segment information. The list can be displayed in ascending or descending order. To change the sequence, click the header (Category, Network resource name, etc.). The list can be filtered by tenant and by category (Business, Management). Strings included in the keyword filter are those that were specified in "keyword" in basic information of the template information. Clicking the reload button (![reload icon]) resets sorting, pages, and selected states.
Detailed segment information	Located on the lower side of the page, displays details about the segment information selected in "Segment information".

Icons displayed in "Segment information" are as follows:

Icon	Explanation	Icon	Explanation
	Management segment		Business segment
	Management segment with admin LAN allocated		The associated network resource does not exist.

Explanation of Buttons

The following explains the buttons in the [Segment] tab:

Button name	Explanation
Create	Creates new segment information. Refer to "7.3.1 Creating New L-Platform Template" for details.
Edit	Edits the contents of existing registered segment information. Refer to "7.3.3 Editing L-Platform Template" for details.
Delete	Deletes segment information. Refer to "7.3.4 Deleting L-Platform Template" for details.

7.2.3.3 Image Tab

The following figure shows the [Image] tab of the [L-Platform Template] window.
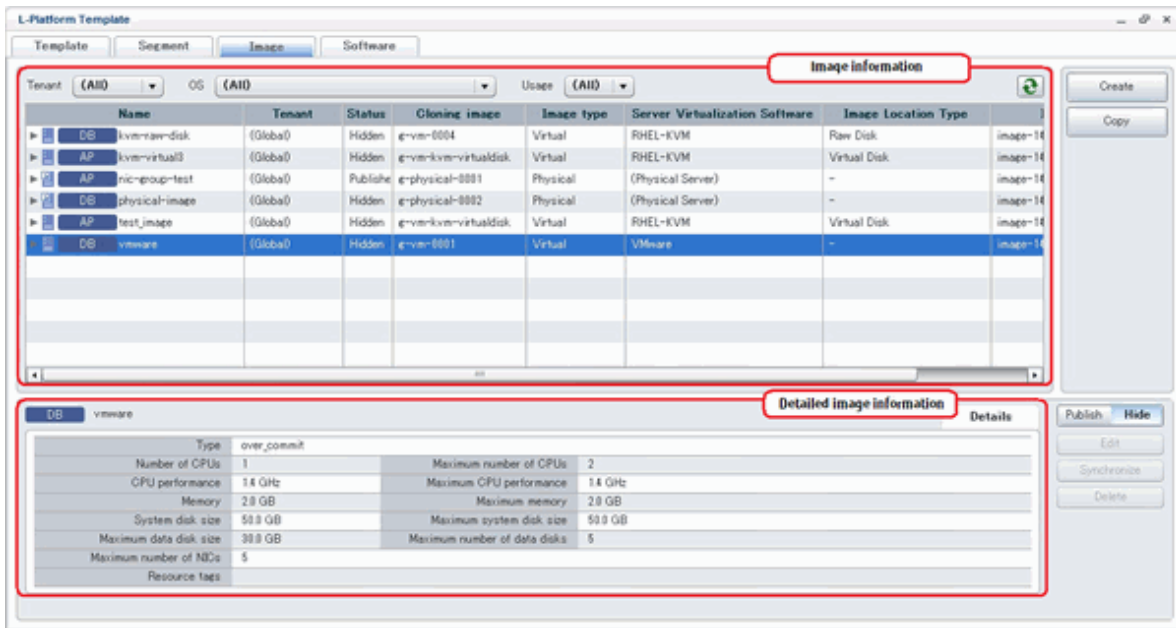
Window Explanation

The following explains the [Image] tab window:

Button name	Explanation
Image information	Located on the top of the page, lists image information. Note that the software information and patch information included in the image information is also displayed in tree format. The display sequence can be changed to ascending or descending order. To change the sequence, click the header (Name, ID, etc). The list can be filtered by tenant, OS, or by usage. Clicking the reload button ( ) resets sorting and selected states.
Detailed image information	Located on the bottom of the page, displays details about the image information, software information, or patch information selected in "Image information". If the cloning image associated with image information includes a data disk, a [Disk] tab is displayed.

Icons displayed in "Image information" are as follows:

Icon	Explanation	Icon	Explanation
	Virtual image information without data disks		Physical image information without data disks
	Virtual image information with data disks		The associated cloning image does not exist.

Explanation of Buttons

The following explains the buttons in the [Image] tab:

Button name	Explanation
Create	Creates new image information. Refer to "7.3.1 Creating New L-Platform Template" for details.
Copy	Creates new image information based on existing registered image information. Refer to "7.3.2 Copying L-Platform Template" for details.
Publish	Publishes image information. Refer to "7.3.6 Publishing Image Information" for details.

Button name	Explanation
Hide	Hides image information. Refer to "7.3.6 Publishing Image Information" for details.
Edit	Edits the contents of existing registered image information. Refer to "7.3.3 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 "7.3.7 Synchronizing Image Information" for details.
Delete	Deletes image information. Refer to "7.3.4 Deleting L-Platform Template" for details.

7.2.3.4 Software Tab

The following figure shows the [Software] tab of the [L-Platform Template] window.
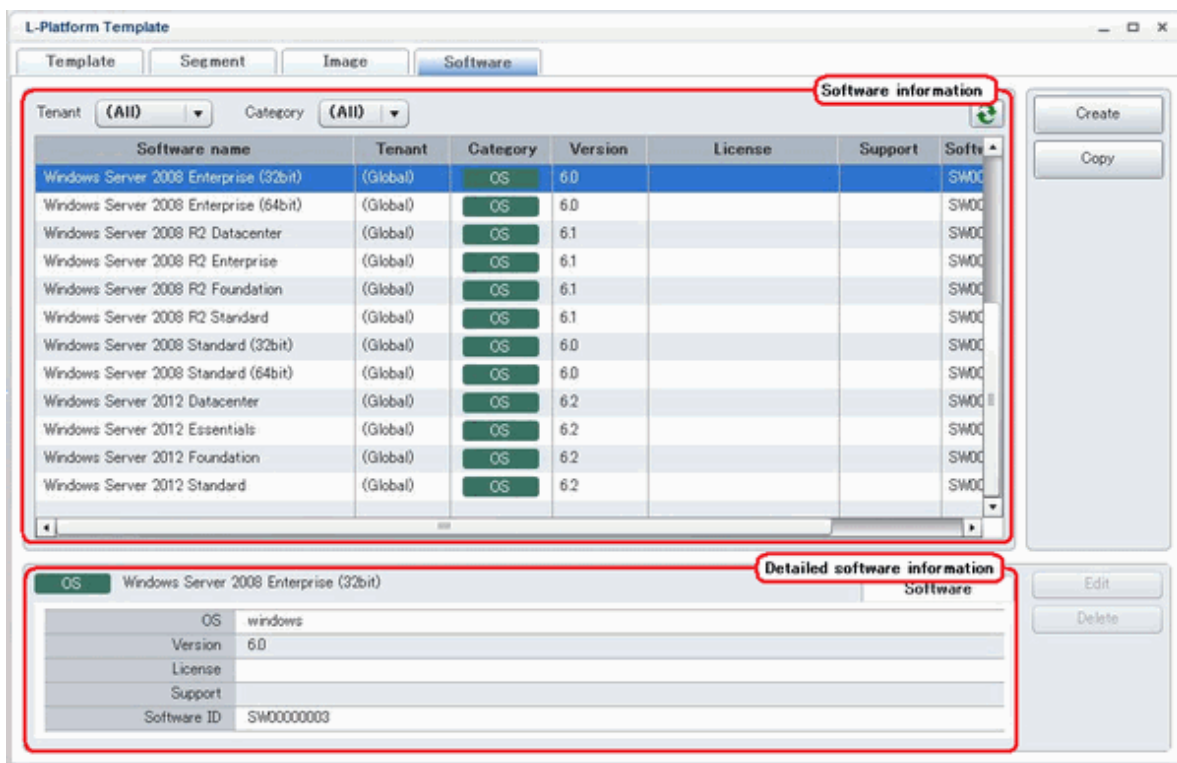
Window Explanation

The following explains the [Software] tab window:

Pane name	Explanation
Software information	Located on the top of the page, lists software information that was created. The display sequence can be changed to ascending or descending order. To change the sequence, click the header (category, software name, etc.). The list can be filtered by tenant. Clicking the reload button (![reload]) resets sorting and selected states.
Detailed software information	Located on the bottom of the page, displays details about the software information selected in "Software information".

Explanation of Buttons

The following explains the buttons in the [Software] tab:

Button name	Explanation
Create	Creates new software information. Refer to "7.3.1 Creating New L-Platform Template" for details.
Copy	Creates new software information based on existing registered software information. Refer to "7.3.2 Copying L-Platform Template" for details.
Edit	Edits the contents of existing registered software information. Refer to "7.3.3 Editing L-Platform Template" for details.
Delete	Deletes the software information. Refer to "7.3.4 Deleting L-Platform Template" for details.

7.3 L-Platform Template Operations

This section explains L-Platform template operations.

7.3.1 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 "7.4 Items to Set for Each Type of L-Platform Template Information" for information 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.

 Point
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In case of L-Platform templates, a server NIC is only located if it is allocated. When defining multiple NICs, click the target server, and then click the [Add NIC] button to add the required number of NICs.
The number of server NICs that can be allocated is the maximum number allowed for image information.
. . . .

7.3.2 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 "7.4 Items to Set for Each Type of L-Platform Template Information" for information 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.

P Point
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In case of L-Platform templates, a server NIC is only located if it is allocated. When defining multiple NICs, click the target server, and then click the [Add NIC] button to add the required number of NICs.
The number of server NICs that can be allocated is the maximum number allowed for image information.
....

7.3.3 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 "7.4 Items to Set for Each Type of L-Platform Template Information" for information 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
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- 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.

- In case of L-Platform templates, a server NIC is only located if it is allocated. When defining multiple NICs, click the target server, and then click the [Add NIC] button to add the required number of NICs.
  The number of server NICs that can be allocated is the maximum number allowed for image information.
....

7.3.4 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.
. . . .

7.3.5 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.

Point

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Note the following points when the L-Platform template you are publishing includes a server load balancer:

- The server load balancer needs to be configured after the L-Platform is deployed

  Explain this point to the tenant user. Also explain the virtual IP address, any other parameters, and the values to be set in them to the tenant users so that the server load balancer is configured properly.

- Server load balancer operations use rulesets

  Explain the rulesets used during operation to the tenant user. Also explain parameters and the values to be set in the rulesets to the tenant user.

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7.3.6 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.

7.3.7 Synchronizing Image Information

Cloning image resource IDs are held in the image information.

If a 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 "7.4 Items to Set for Each Type of L-Platform Template Information" for information 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.

Point

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- Synchronizing of image information is not possible if template information that uses the target image information has been published, or the target image information has been published.

- When updating a cloning image, collect it using the same name.

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 Information

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When synchronizing image information, if the target image information has been used in an L-Platform template that has been deployed, or the image information has been published, perform the following procedure before performing synchronization, but after hiding the image information.

1. On the [L-Platform Template] window, select [Template].

2. Select the L-Platform template that uses the target image information from the template information list, and click [Hide].

3. Select the [Image] tab

4. Select the target image information from the image information list and click [Hide].

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7.4 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:

- Creating New L-Platform Template

- Copying L-Platform Template

- Editing L-Platform Template

- Synchronizing Image Information

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

7.4.1 Software Information

This section explains software information.

Explanation of Items

The following explains software information items:

Item name	Explanation
Category	Enter the software category. Note that only "OS" can be specified.
OS	Select one of the following software operating systems: - Windows - Linux - Windows (64 bit) - Linux (64 bit) - Solaris - Other
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 (an ASCII character string excluding <, >, &, ", and ') for the software version

Item name	Explanation

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 can be specified only when the operating system is Windows.
	
	  - If the server virtualization software is RHEL-KVM.
	    The operating systems that can be specified for the guest OS are Windows Server 2008 R2 and Windows Server 2012.
	
	  - If the server virtualization software is OVM for x86 or Citrix XenServer, the guest OS will not use this setting.
	
	  - If the server virtualization software is Citrix XenServer:
	    The guest OS will not use this setting with some cloning images. Check with the infrastructure administrator whether the guest OS will use this setting with cloning image.

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, all the following items are reset:

- Tenant and keyword filtering

- Sorting

- Pages

- Selected states

7.4.2 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.

7.4.2.1 Select Image Page

On the [Select Image] page, select the cloning image that will be used in the image information.
The list of cloning images that can be used will be displayed.

Explanation of Items

The following explains the items in the [Select Image] page:

Item name	Explanation
Tenant	Tenant name of the image pool in which the cloning image is stored. If the image pool is a global pool, "(Global)" will be displayed.
Cloning image	Cloning image name.
Data disk	Number of connected data disks.
Image type	Cloning image type. One of the following will be displayed: - "Virtual": For a virtual server cloning image - "Physical": For a physical server cloning image
Server Virtualization Software	Server virtualization software of the cloning image. One of the following will be displayed: [VMware] "VMware" [Hyper-V] "Hyper-V" [KVM] "RHEL-KVM" [Solaris Zones] "Solaris Zones" [Citrix Xen] "Citrix XenServer" [OVM for x86 2.2] "OVM for x86" [OVM for x86 3.x] "OVM for x86" [OVM for SPARC] "OVM for SPARC" [Physical Servers] "(Physical Server)"
Image Location Type	Type of the disk resource where the cloning image is stored. If the server virtualization software is RHEL-KVM, one of the following will be displayed: - "Raw Disk": For a disk resource created beforehand - "Virtual Disk": For a disk resource created automatically from the virtual storage resource Check with the infrastructure administrator for details. For other server virtualization softwares, "-" will be displayed.
Creation date	Date of the cloning image creation.
Comment	Comment registered in the cloning image.

Operation Procedure

Follow the procedure below for operations at the [Select Image] page:

1. Select a cloning image from the list.

2. Click the [Next] button.

   The [Set Basic Info] page is displayed.

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If the server virtualization software is OVM for x86 or Citrix XenServer, cloning images with data disks are not supported.
Such a cloning image will be handled as a cloning image without a data disk.

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7.4.2.2 Set Basic Info Page

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

Explanation of Items

The following explains the items in the Set Basic Info page:

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

Type	Selects the registered L-Server template.
	The following L-Server templates will not be displayed:
	
	- 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.
	
	- L-Server templates with data disks are not displayed.
	  Register the number of disks as 1 when using with an L-Platform template.
	
	- If the server virtualization software is OVM for x86, L-Server templates specifying OVM 2.x(Oracle VM) are not displayed.
	
	- L-Server templates with different cloning images and server virtualization products are not displayed.

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
VDI	Select whether to perform VDI coordination. When performing VDI coordination, select the [Enabled] checkbox. This can only be specified when creating the information of a new image. - When performing VDI coordination, it is assumed that the software necessary for VDI coordination has been installed on the cloning image that is used for the image information. - When performing VDI coordination, deployment is only possible in the L-Platform template. Addition to an already deployed L-Platform is not possible. - VDI coordination is only possible when the OS of a cloning image is Windows 7, Windows 8, or Windows 8.1. If VDI coordination is attempted with an OS other than the above, deployment will fail.
System disk	Specify the size of the system disk for the server to be deployed. Range: 0.1-99999.9 GB. If one of the following conditions is satisfied, specify the same size as the system disk of the cloning image, because the system disk will be deployed with that size regardless of this setting. - The server virtualization software is OVM for x86 or Citrix XenServer. - The server virtualization software is RHEL-KVM, and the image location type of the cloning image is "Virtual Disk".
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. When the [Don't set upper value] check box is selected, behavior will be as if the maximum value of the registered VM pool has been 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. When the [Don't set upper value] check box is selected, behavior will be as if the maximum value of the registered VM pool has been specified. When using Resource Orchestrator and server virtualization software, if the recognized physical CPU performance values are different, specify a value less than the smaller of the two. This cannot be specified if the server virtualization software is OVM for SPARC.
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. When the [Don't set upper value] check box is selected, behavior will be as if the maximum value of the

Item name	Explanation
	registered VM pool has been specified. If the server virtualization software is RHEL-KVM, setting this value may be required. Specify a value according to the notification from the infrastructure administrator.
Maximum number of data disks	Specifies the maximum number of data disks that can be added to the server. Range: 0-99. However, if the image includes a data disk, the minimum will be the maximum value of the data disk number.
Maximum data disk size	Specifies the maximum size of the data 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. However, if the image includes a data disk, the minimum will be the largest disk capacity of all appended data disks. When the [Don't set upper value] check box is selected, behavior will be as if the maximum value of the registered storage pool has been specified.
Maximum system disk size	Specifies the maximum size of the system disk size in GB, which can be specified when creating a new L-Platform. The minimum allowed value is the disk size of the cloning image, and the maximum allowed value is the upper limit of the registered storage pool. When the Don't set upper value check box is selected, behavior will be as if the maximum value of the registered storage pool has been specified.
Maximum number of NICs	Specifies the number of NICs. Range: 1-99.
Administrator	When all the following conditions are satisfied, specify the administrator user name using a character string containing up to eight characters (Only alphanumeric characters can be specified). - The server virtualization software is Solaris Zones. - The OS of the cloning image is Solaris 11. When omitted, check with the infrastructure administrator about the administrator user name.

Initial password	Enter up to 85 characters (excluding <, >, &, ", and ') for the password for the users below.
	 [Windows]
	 Specified password is set to OS.
	 If this setting is omitted, an automatically-generated password will be set in the OS.
	
	 - When the server virtualization software is VMware or Hyper-V:
	   The local administrator account password will be configured.
	
	 - When the server virtualization software is RHEL-KVM
	   The local administrator account password will be configured. The operating systems that can be specified for the guest OS are Windows Server 2008 R2 and Windows Server 2012. For other OSs, please specify the same password as the one that has been set in the cloning image.
	
	 - When the server virtualization software is OVM for x86
	   The local administrator account password will be configured. The password specified here is not set in the OS. Specify the same password as the one that has been set in the cloning image.
	
	 - When the server virtualization software is Citrix XenServer
	
	   Specify the password for the local administrator account. The password specified here is not set in the OS even when specified with some cloning images. Please specify the same password set in the cloning image. Check with the infrastructure administrator whether the guest OS can be set with cloning image.
	
	 [Linux]
	 Specifies the superuser password. The password specified here is not set in the OS. Specify the same password as the one that has been set in the cloning image.
	
	 [Solaris]
	
	 - When the server virtualization software is Solaris zone
	   Specify the superuser password. The specified password is set in the OS. If this setting is omitted, an automatically-generated password will be set in the OS.

Item name	Explanation
	- When the server virtualization software is OVM for SPARC Specify up to 8 characters for the super user password. The specified password is set in the OS. If this setting is omitted, an automatically-generated password will be set in the OS. [Other] Specify the password for default users (such as the super user) that can log in. The password specified here is not set in the OS. Specify the same password as the one that was set in the cloning image.
Initial password (confirm)	Specifies the same value as Initial password.
Root role password	When all the following conditions are satisfied, specify the Root role password using a character string containing up to 255 characters ($<$, $>$, &, ", ' cannot be specified). 　- The server virtualization software is Solaris Zones. 　- The OS of the cloning image is Solaris 11. 　- Specify "root" or another value in [Administrator user name] (Do not omit it). If all the conditions are met and the Root role password is omitted, an automatically generated password will be set in the OS.
Root role password (confirm)	Specifies the same value as Root role 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: 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.

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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.

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7.4.2.3 Select Software Page

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

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.
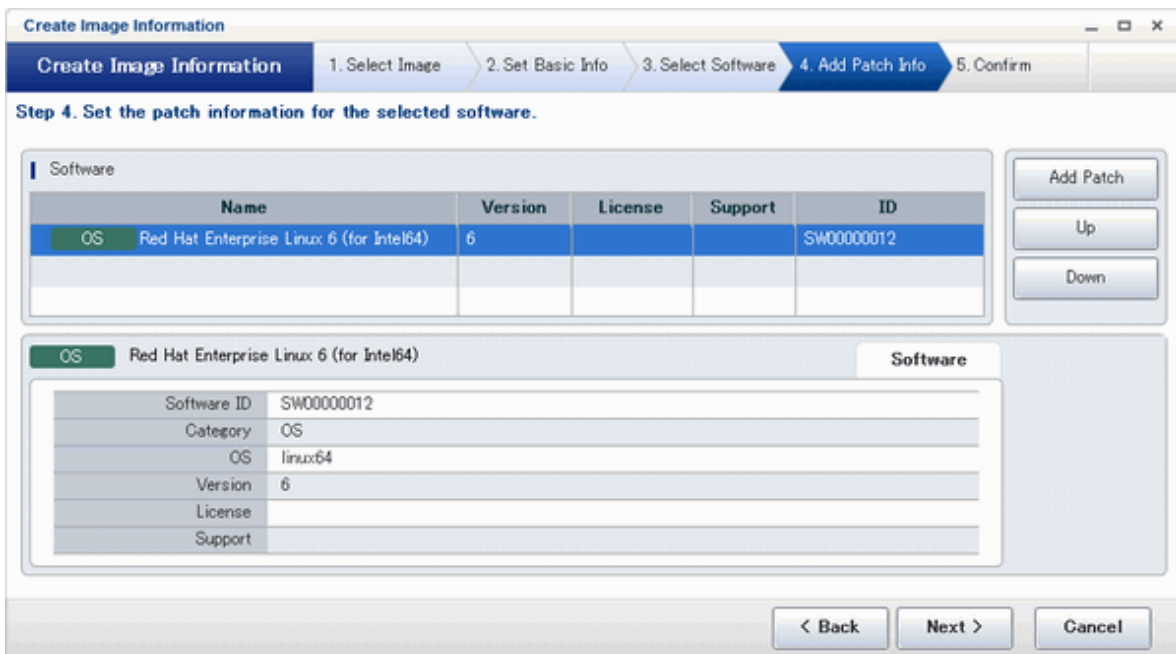
   The [Add Patch Info] page is displayed.

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

7.4.2.4 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.

Window Explanation

The following explains the [Add Patch Info] page:

Pane name	Explanation
Patch information	Located on the top of the page, lists software and patch information.
Detailed patch information	Located on the bottom of the page, displays details about the software information or patch information selected in "Patch information".

Explanation of Buttons

The following explains the buttons in the [Add Patch Info] page:

Button name	Explanation
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

Button name	Explanation
	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.

Explanation of Items

The following explains items in the [Add Patch] tab:

Item name	Explanation
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.

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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.

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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.

7.4.2.5 Confirm Page

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

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, all the following items are reset:

- Tenant, operating system, and usage filtering

- Sorting

- Selected states

7.4.3 Segment Information

This section explains segment information.

Explanation of Items

The following explains segment information items:

Item name	Explanation
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. When network resources are set in the segment information defined in the firewall and server load balancer (SLB) rulesets, specify the same string as was specified in "Segment Type (segment identifier)" in the parameter file of the ruleset.

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**

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When the [Segment] tab list window is displayed, all the following items are reset:

- Tenant and category filtering

- Sorting

- Selected states are all reset.

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7.4.4 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.

7.4.4.1 Set Basic Info Page

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

Explanation of Items

The following explains the items in the [Set Basic Info] page:

Item name	Explanation
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. Case is not distinguished for half-width and full-width alphanumerics.
Firewall	The name of the ruleset that is being used is displayed. This item is not displayed when you use a firewall without using a ruleset.
Number of segments	The number of segments is displayed. This item is displayed only when you use a firewall without using a ruleset.
Connection destination	The connection destination external to the L-Platform is displayed. This item is displayed only when you use a firewall without using a ruleset.

Item name	Explanation
SLB Usage	The SLB usage method is displayed. This is displayed when configuration is performed according to the auto-configuration mode of the network device (SLB).
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 ruleset is selected, the values specified in the ruleset are used as the initial value. This item is not displayed when you use a firewall without using a ruleset.
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. If this value has been specified by the infrastructure administrator in a configuration file, then that value will be used. Check with the infrastructure administrator what is the maximum allowed value.
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.

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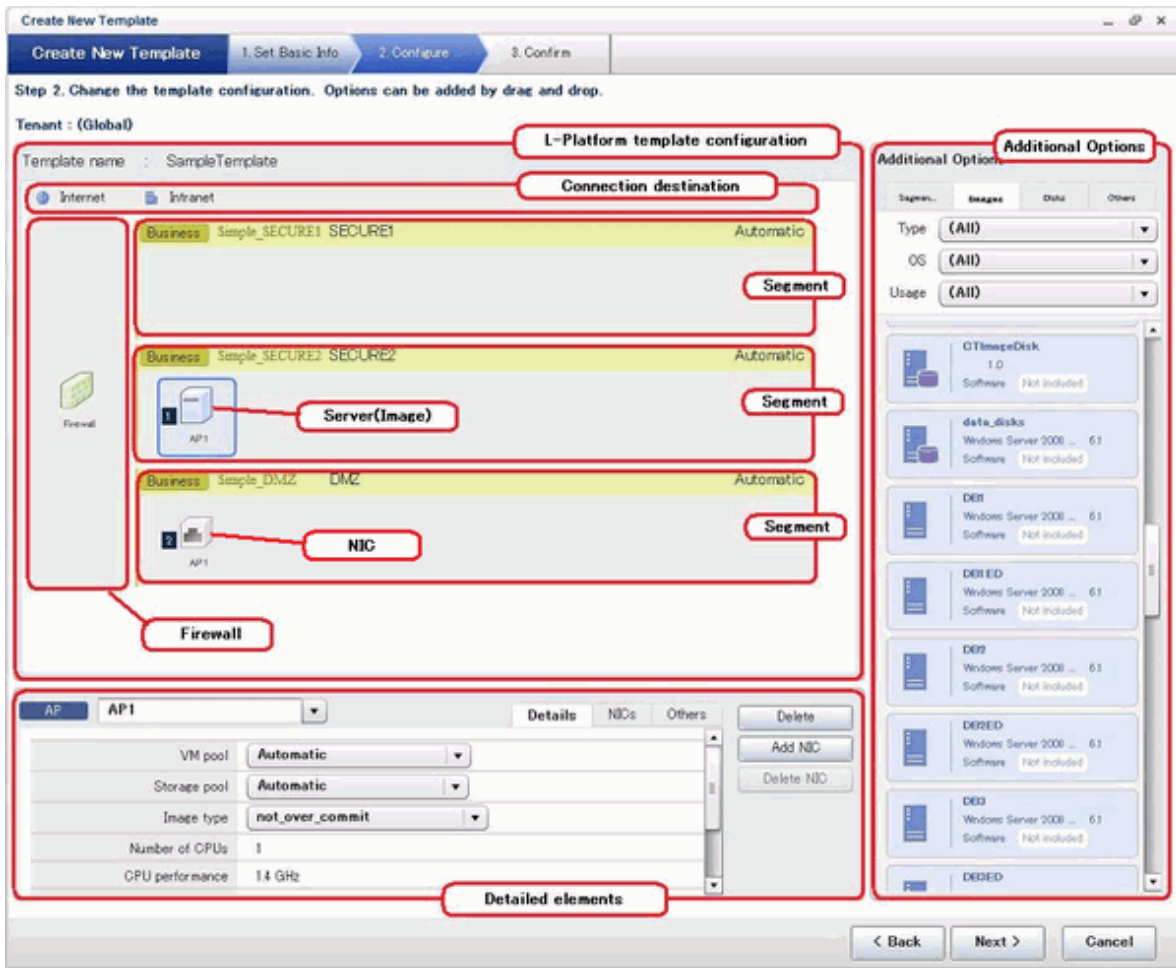
If an input item contains an error, and error message is displayed. If an error message is displayed, refer to the error message and correct the setting.

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7.4.4.2 Configure Page

Configure the composition of various elements using the [Configure] page.

The [Configure] page is shown below.

Window Explanation

The following explains the [Configure] page:

Pane name	Explanation
L-Platform template configuration	Top of the page; displays the configuration of an L-Platform template. The displayed elements are the connection destination, firewall, segments, server load balancer, servers (images), and disks.
Additional Options	Right side of the page; lists the elements (segments, images, disks, and server load balancer) that can be added to "L-Platform template configuration". The listed elements can be added to the L-Platform template configuration by dragging and dropping them to "L-Platform template configuration". To add a disk to the virtual server or physical server, drag from the list displayed in the [Disk] tab of [Additional Options] and drop it here.
Detailed elements	Lower part of the page; displays details about the elements selected in "Configuration of an L-Platform template" and enables their content to be edited. Click [Delete] to enable elements to be deleted from "L-Platform template configuration". Click the [Add NIC] button to add NICs. The [Add NIC] button is enabled only when NICs can be added. Click the [Delete NIC] button to delete selected NICs.

Icons displayed in the "L-Platform template configuration" are as follows:

Icon	Explanation	Icon	Explanation
	Connection to an intranet		Connection to the Internet

Icon	Explanation	Icon	Explanation
	Virtual server without data disks		Virtual server with a single data disk
	Virtual server with multiple data disks		Physical server without data disks
	Physical server with a single data disk		Physical server with multiple data disks
	NIC of a Virtual server		NIC of a Physical server
	Grouped NICs		Firewall
	Server Load Balancer (SLB)		

The icons to indicate NICs or servers that are targets for server load balancer (SLB) distribution when the SLB displayed on the "L-Platform template configuration" is selected are as shown below.
The following examples show a virtual server NIC and a virtual server with a single data disk. There are similar icons for various other NICs and servers.

Icon	Explanation	Icon	Explanation
	Virtual server NIC for SLB distribution		Virtual server, with a single data disk, for SLB distribution

Icons displayed in [Additional Options] area are as follows:

Icon	Explanation	Icon	Explanation
	Virtual image information without data disks		Physical image information without data disks
	Virtual image information with data disks		Management segment
	Business segment		Management segment with admin LAN allocated
	Disconnected disk		Connected disk
	Server Load Balancer (SLB)		

Information

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Hover the mouse over the icons displayed in [Additional Options] to check details about the image information, such as the name, OS, segment name, disk name, label, and comments.

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Explanation of Items (Connection Destination)

If an external connection destination is set in the L-Platform template, the connection destination is displayed as an icon.

Explanation of Items (Firewall)

This section explains the items displayed in "Detailed elements" if a firewall was selected in "L-Platform template configuration". If you use a firewall without using a ruleset, this item cannot be referenced because you cannot select a firewall.

Item name	Explanation
Firewall name	Enter up to 32 bytes (an ASCII character string excluding <, >, &, ", and ') for the firewall name.
Ruleset	Displays the name of the ruleset.
Description	Displays the ruleset description.

Note

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When deploying a firewall, images for VDI coordination are not supported.

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Explanation of Items (Firewall Parameters)

Click [Setting] for firewall to display the [Firewall] window.

A list of parameters defined in the ruleset is displayed in the [Firewall] window. If you use a firewall without using a ruleset, this item cannot be referenced because you cannot select a firewall.

Pane location	Item name	Explanation
Top	Selected ruleset	Displays the name of the ruleset.
	Description	Displays the ruleset description.
Middle	Segment/Server	The names of the segments or servers are displayed where the parameters are enabled. "-" is displayed for parameters unrelated to the segment or server.
	Parameter	Displays the names of the parameters.
	Description	Displays the parameter descriptions.
	Value	Enter the value to be set for the parameter.
Bottom	Description of the selected parameter	The description of the parameter in the row being pointed at is displayed.

Explanation of Items (Segments)

This section explains the items displayed in "Detailed elements" if a segment was selected in "L-Platform template configuration".

Item name	Explanation
Segment name	Enter up to 20 bytes (an 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. If a maximum number of NICs in an L-Platform template has been specified in a configuration file, that value will be the maximum. However, for segments defined in the firewall, the upper limit is the value specified in the firewall ruleset. If multiple NICs of the same server were connected to the same segment, each NIC is counted as one server.

Item name	Explanation
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 ruleset.

Information

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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.

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Explanation of Items (Server Load Balancer)

This section explains the items displayed in "Detailed elements" if a server load balancer was selected in "L-Platform template configuration".

Item name	Explanation
Server load balancer name	Enter up to 32 bytes (an ASCII character string excluding <, >, &, ", and ') for the server load balancer name.

Deployment ruleset	- When using a server load balancer using a ruleset
	
	  Displays the name of the selected ruleset.
	  Select rulesets in the [Select SLB ruleset] window.
	  The [Select SLB ruleset] window is displayed when a server load balancer is added or when [Select ruleset] is clicked to change a specified ruleset.
	
	- When using a server load balancer without using a ruleset
	
	  "Do not use" is displayed.

Description	Displays the description of the selected ruleset. This is not displayed when using a server load balancer without using a ruleset.

Explanation of Items (Server Load Balancer Parameters)

When [Parameter details] is clicked, the [Parameter Detail] window for the server load balancer is displayed.

A list of parameters defined in the ruleset is displayed in the [Parameter Detail] window.

The following describes the items in the upper part of the [Parameter Detail] window:

Note that these parameters cannot be referred to when using a server load balancer without using a ruleset.

Pane location	Tab name	Item name	Explanation
Top	-	Selected ruleset	Displays the name of the ruleset.
		Description	Displays the ruleset description.
Middle	[SLB] tab	Parameters that do not depend on the server are displayed. The following items are displayed.	
		Parameter	Displays the parameter labels.
		Description	Displays the parameter descriptions.
		Value	The value to be set for the parameter is displayed.
	[Server] tab	Server-specific parameters are displayed. The following items are displayed.	
		Server	The names of the servers are displayed where the parameters are enabled. "-" is displayed for parameters unrelated to the server.

Pane location	Tab name	Item name	Explanation
		Parameter	Displays the parameter labels.
		Description	Displays the parameter descriptions.
		Value	The value to be set for the parameter is displayed.
Bottom	-	Description of the selected parameter	The description of the parameter in the row being pointed at is displayed.

Note

- Only one server load balancer can be deployed to each segment.

- If you use a firewall using a ruleset, you must choose the ruleset which supports server load balancers, otherwise server load balancer cannot be deployed.

- Segment identifier information must be set when a server load balancer is to be deployed in a segment.
  The server load balancer cannot be deployed if the segment has segment identifier information that does not match the Segment Type (segment identifier) set in the parameter file of the ruleset of the server load balancer to be used. If this happens, check that the segment identifier information in the segment information has been set correctly.

- With automatic selection segments, segment identifier information is empty initially. Therefore, when deploying a server load balancer to an automatic selection segment, before deploying the server load balancer, set a name that matches the Segment Type (segment identifier) set in the parameter file of the ruleset of the server load balancer to be used. Check with the infra administrator if you do not know the identifier of the segment to be specified.

- If the ruleset for building the server load balancer is undefined, the ruleset is not displayed in the [Select SLB ruleset] window. If this happens, click [Cancel] to close the [Select SLB ruleset] window.

- When deploying a server load balancer, images for VDI coordination are not supported.

Explanation of Items (Images)

This section explains the items displayed in "Detailed elements" if an image was selected in "L-Platform template configuration".

Item name	Explanation
Server name	Enter up to 85 characters (excluding <, >, &, ", and ') for the server name
VDI pool	For an image for VDI coordination, specify the VDI pool that the server will belong to after deployment. Specification is only possible for images for VDI coordination.
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. Note that when the server virtualization software is OVM for x86, this is set to [Automatic] and cannot be changed during deployment.
Image type	Selects the registered L-Server template that will be selected by default. L-Server templates with different cloning images and server virtualization products are not displayed.
System Disk	Specify the disk resource used for the system disk if the server virtualization software is OVM for SPARC, or if the server virtualization software is RHEL-KVM and the image location type of the cloning image is "Raw Disk". This can be modified during deployment too. The disk resource can be automatically selected according to the size of the system disk, or the disk resource can be directly selected. To make the settings, click the [Change] button to open the [Disk resource specification] window. - When you specify a disk resource according to the size of the system disk: A disk resource with a size larger than the size of the system disk is selected automatically. Select the [Specify by the size of the disk] option and specify a storage pool. A disk resource is selected

Item name	Explanation
	from amongst those on the selected storage pool. If storage pool value is Automatic, then a disk resource is selected from amongst the available storage pools. - When you specify a disk resource directly: Directly specify the disk resource to be used. After selecting the [Specify by the resource name] option, select the disk resource from the list.
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)

This section explains the items displayed in "Detailed elements" if an image was selected in "L-Platform template configuration".

Item name	Explanation
Storage pool	Select the storage pool resource that is the data disk deployment destination. This cannot be modified in the following cases: - With an existing disk - When the storage pool of the data disk is the same as the storage pool of the system disk when the data disk has been appended to a cloning image - When the server virtualization software of the server to which the data disk is added is OVM for x86, "Automatic" is set for the storage pool and this cannot be changed during a deployment.
Data disk size	Specify the size of the disk in GB. This cannot be modified in the following cases: - With an existing disk - When the data disk has been appended to a cloning image

Operation Procedure

Follow the procedure below to perform [Configure] page operations:

1. Select the tab (Segment, Image, Disk, or Others) for the element to be added in [Additional Options].

2. Drag and drop the element to be added to "Configuration of an L-Platform template" and add it to the template information.

   The relationship between the elements to be added and the information that can be dragged and dropped is shown below:

Table 7.3 Relationship between elements to be added and information that can be dragged and dropped

Element to be added	Drag and drop information
Segment	Template
Image	Segment
Disk	Image
Server Load Balancer	Server Load Balancer (SLB)

📑 **Note**

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- You cannot extend or reduce segments if you use a firewall without using a ruleset.

- When the element to be added is an image, the only segments that can be dropped in an image created from a physical L-Server are control segments.

- Existing disk is available for the following images:

    - An image created from a physical L-Server

    - An image of an L-Server template whose server virtualization software is RHEL-KVM or OVM for SPARC

  - It is not possible to add a new disk or an existing disk to an image whose L-Server template server virtualization software is Solaris zone.

  - It is not possible to add an existing disk to an image whose L-Server template server virtualization software is OVM for x86 or Citrix XenServer.

  - It is not possible to drop an existing disk that has already been attached to another server to an image whose L-Server template server virtualization software is OVM for SPARC.

  - Disks cannot be added or deleted from cloning images that include data disks.

3. Select the element to be added and edit it.

4. To delete the element, click [Delete] in "Detailed elements".

5. To add an NIC to an image, select the image in "L-Platform template configuration" and click [Add NIC] in "Detailed elements". To delete an NIC from an image, select the NIC in "L-Platform template configuration" and click [Delete NIC] in "Detailed elements".

6. To group NICs on the physical server, select the physical server image or the NICs in "L-Platform template configuration" and click [Create NIC Group] in "Detailed elements". To ungroup NICs, select the grouped NICs in "L-Platform template configuration" and click [Delete NIC Group] in "Detailed elements".

7. Click the [Next] button.

   The [Confirm] page is displayed.

Information

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.

- Virtual or physical image information is added to the template information when an NIC is allocated.

- When the server virtualization software is OVM for SPARC, IP addresses are set only to the NICs that are connected to admin LAN when you deploy a server whose guest OS is Solaris 11. It is therefore recommended that you connect the NIC to the admin LAN.
  If a deployed server is not connected to admin LAN or tenant user or tenant administrator cannot access admin LAN, the infrastructure administrator needs to set IP addresses and default gateway to a deployed server via console of the server virtualization software.

- If the server virtualization software is OVM for SPARC or Solaris zone, deployed servers are configured to disable direct root ssh login, and so tenant users cannot log in to the deployed servers. To solve this issue you need to configure the server to enable direct root ssh login.

- It is possible to register L-Platform templates with no servers defined.
  It is also possible to register L-Platform templates with no segments defined.
  When applying for a subscription to an L-Platform using an L-Platform template with no servers defined, it is necessary to add at least one server before deployment.
  When applying for a subscription to an L-Platform using an L-Platform template with segments defined, it is necessary to add at least one segment and one server before deployment.
  When using an L-Platform template with no servers defined or an L-Platform template with no segments defined, register at least one image information that has been published. Otherwise, it is not possible to apply for a subscription to an L-Platform which uses an L-

Platform template with no servers defined or an L-Platform template with no segments defined because no images are displayed in [Additional Options] - [Server] in the reconfiguration window displayed when subscribing to the L-Platform.

7.4.4.3 Confirm Page

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

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 icon] **Note**

   When the [Template] tab list window is displayed, all the following items are reset:

   - Tenant and keyword filtering

   - Sorting

   - Pages,

   - Selected states are all reset.

Chapter 8 L-Platform

This chapter explains how to manage L-Platforms and display the event logs.

8.1 Overview of L-Platform Management

Use the [L-Platforms] tab of the ROR console to manage L-Platforms and display the event logs.

The following section explains the contents of the operation menu on the [L-Platforms] tab:

- L-Platform Subscription
  When [Subscription] is selected, the page used to subscribe to a service will be displayed.
  Refer to "8.2 Subscribe to an L-Platform" for information on the L-Platform management method.

- Management
  When [Management] is selected, a list of created L-Platforms is displayed.
  Refer to "8.3 L-Platform Management" for information on the L-Platform management method.

- Event logs
  When [Event Logs] is selected, logs of the information regarding errors that occurred while using the functions on the [L-Platforms] tab are displayed.

- Refer to "8.4 Display Event Logs" for information on the event log display method.

- Startup
  When [Startup] is selected, major functions of the [L-Platforms] tab and their overview will be displayed.

Point

The [Startup] page is displayed as the home page of the [L-Platforms] tab. 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-Platforms] tab.

Note

- If it becomes impossible to connect by the admin server stop and etc. when the [L-Platforms] tab 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.

8.2 Subscribe to an L-Platform

This section explains how to subscribe to an L-Platform

Point

- It may take several minutes for an L-Platform subscription request to be accepted according to the number and the configuration of servers that compose the L-Platform.
  After the [Subscribe] button is clicked, operations such as closing the browser, clicking the [Back] button of the browser, or reloading the current page, before the subscription request is accepted, may cause the request to be cancelled. Do not perform any other operations until the request is accepted.

- Refer to Appendix A, Section A.1, "A.1 Emails Sent when Subscribing to an L-Platform" for information on the flow and content of email messages sent to the subscriber, tenant administrator, and infrastructure administrator when subscribing to an L-Platform.

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8.2.1 Subscribe to a New L-Platform

On the [Subscription] page of the [L-Platforms] tab, 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 Infrastructure 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 the [L-Platforms] tab.
   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 usage fees will also be displayed.

P Point

Estimated charges for the L-Platform template will only be displayed when the usage fees display is set to enabled.
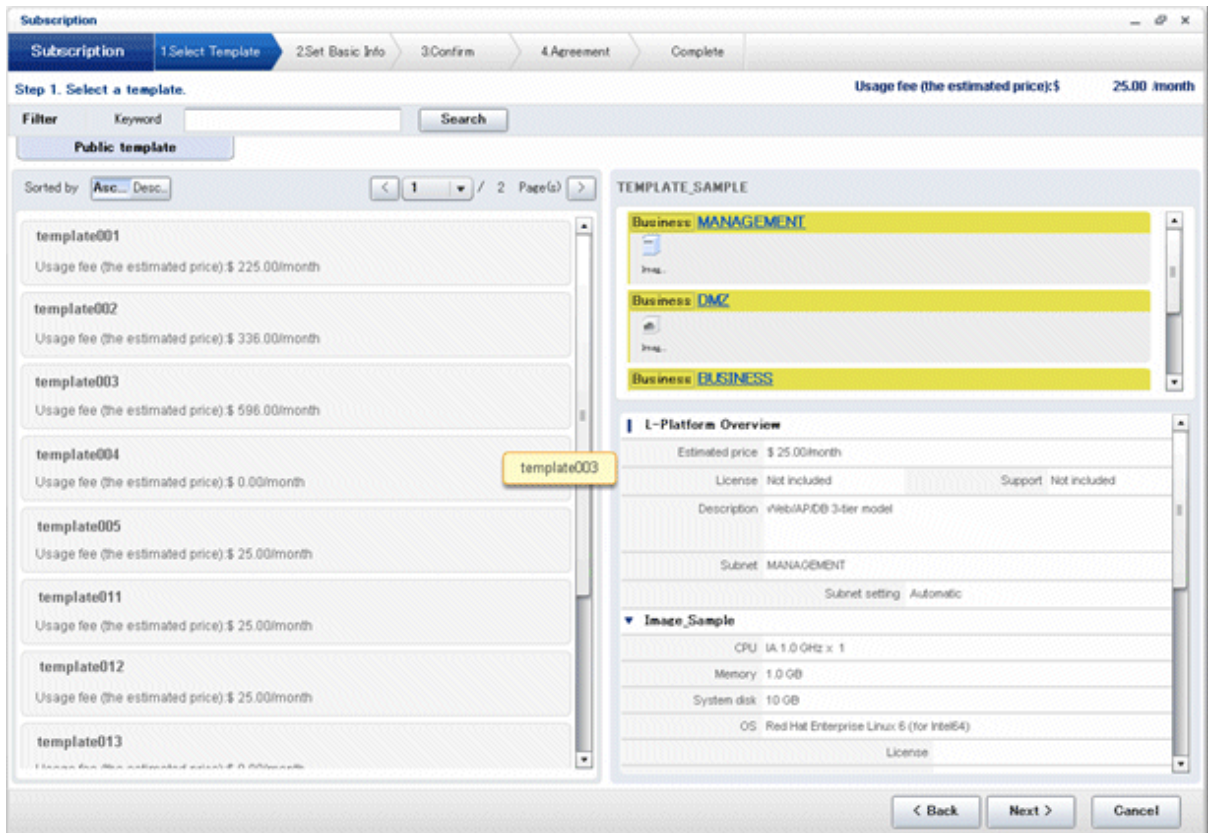
L-Platform templates are displayed by the L-Platform template name in ascending order. The sequence in the specification display can be switched by clicking [Sorted by] followed by the [Ascending order] or [Descending order] button.

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. Case is not distinguished for the strings you specify. When a keyword is specified, a search takes place based on the keywords that the Infrastructure administrator set in the specifications. The keyword search function cannot be used if the Infrastructure 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".

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 the basic information and click the [Next] button.
   The [Confirm] page will be displayed.

CSV output

When the [Save as CSV] button located at the bottom left of the window 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 default CSV file name format is shown below. This file name can be modified as necessary.

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

Save configuration

By clicking the [Save Configuration] button, the L-Platform configuration 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.

6. Check the displayed contents of the L-Platform configuration, 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.

When the application process is enabled, clicking of the [Subscribe] button on the [Agreement] page displays the [Forward screen] window. Refer to "8.5 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 judgment procedures."

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

- 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.

- When a subscribed L-Platform includes server load balancer (SLB), refer to "8.3.11 Server Load Balancer (SLB) Settings" and setup the server load balancer after deploying the L-Platform and before operating the server load balancers.

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 [L-Platforms] tab.
   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 usage fees will also be displayed.

   ### 🅿 Point
   ....

   Estimated charges for the L-Platform template will only be displayed when the usage fees display is set to enabled.
   ....
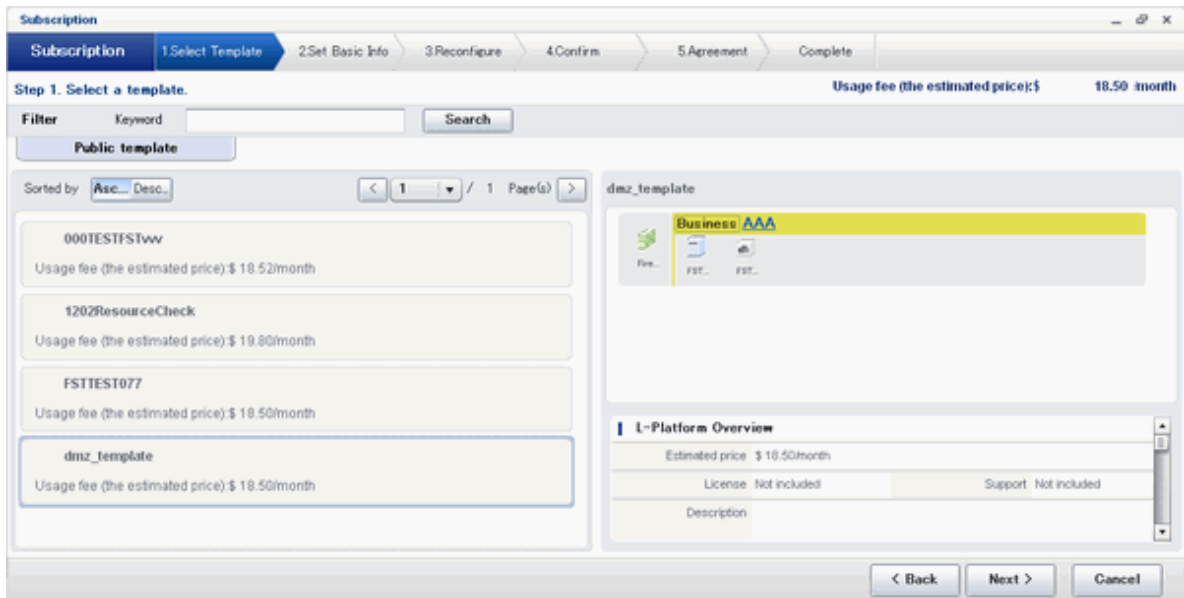
   L-Platform templates are displayed by the L-Platform template name in ascending order. The sequence in the specification display can be switched by clicking [Sorted by] followed by the [Ascending order] or [Descending order] button.

   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. Case is not distinguished for the strings you specify. When a keyword is specified, a search takes place based on the keywords that the infrastructure administrator set in the specifications. The keyword search function cannot be used if the infrastructure 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".

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

   - L-Platform Name

     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 ("-")
     ```

   - Connection destination

     When a connection destination has been specified using the L-Platform template to be used, you can specify whether to connect.
     Only the connection destinations specified using the L-Platform template are displayed as candidates.
     If you do not want to connect to a connection destination specified using the L-Platform template, clear the check box for the L-Platform to be deployed.

- Public IP address

  - Automatic selection

  Specify the number of IP addresses to use.

  - Manual selection

  Click the [Add] button, and then in the [Addition of public IP address] window displayed, add the IP address to be published.
  For [Added IP address], enter the IP address to be used by the L-Platform and click the [Add] button.
  To delete a specified IP address, select the IP address from the list and click the [Delete] button.

  Consult the infrastructure administrator regarding the IP addresses that can be used.

5. Enter the basic Information, and click the [Next] button.
   The [Reconfigure] page will be displayed.
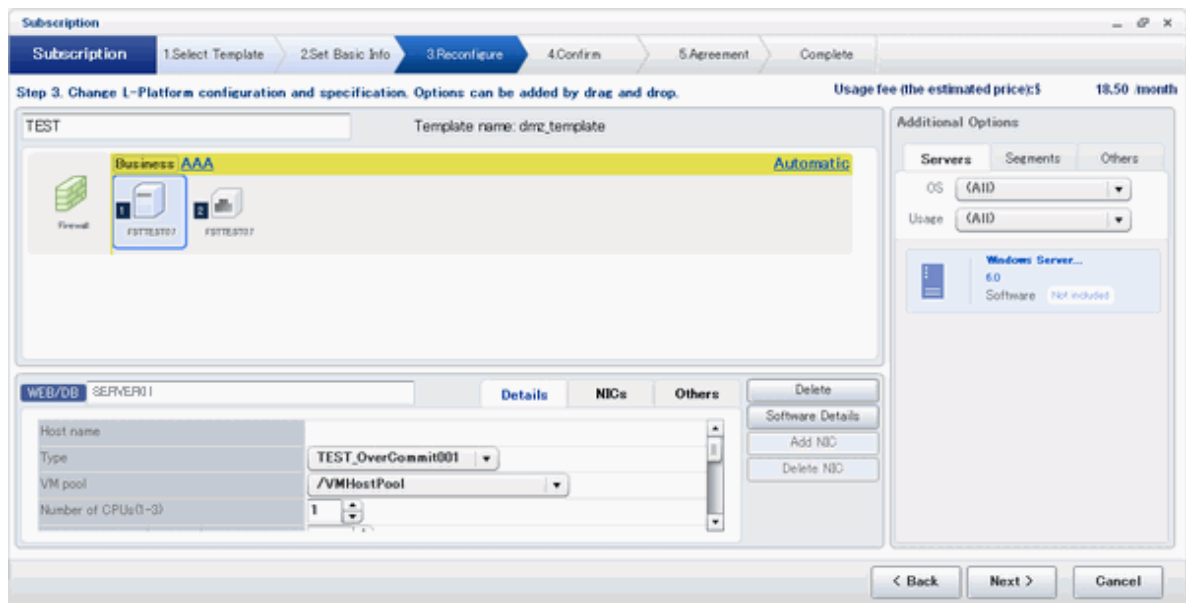
6. This will display the configuration of the L-Platform template selected on the [Reconfigure] page. Change the configuration as required.
   For the items that can be changed on the [Reconfigure] page, refer to "8.3.20 Reconfiguration Page".

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.

Point

CSV output

When the [Save as CSV] button located at the bottom left of the window 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 default CSV file name format is shown below. This file name can be modified as necessary.

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

Save configuration

By clicking the [Save Configuration] button, the L-Platform configuration 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 L-Platform, 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 "8.5 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.

P Point
・・・

- 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.

- When a subscribed L-Platform includes server load balancer (SLB), refer to "8.3.11 Server Load Balancer (SLB) Settings" and setup the server load balancer after deploying the L-Platform and before operating the server load balancers.

- If the server virtualization software is RHEL-KVM or the subscribed L-Platform includes a Windows server other than Windows Server 2008 R2, after deployment the L-Platform will be available only after the infrastructure administrator configures the IP address, default gateway, and host name. Request the infrastructure administrator to configure the server once you receive notification from the tenant user that the server has been deployed.

- If the server virtualization software is OVM for x86, the L-Platform will be available only after the infrastructure administrator configures the IP address, default gateway, and host name following deployment. Request the infrastructure administrator to configure the server once you receive notification from the tenant user that the server has been deployed.

- If the server virtualization software is Citrix XenServer, then depending on the cloning image, the L-Platform will be available only after the infrastructure administrator configures the IP address, default gateway, and host name after deployment. Request the infrastructure administrator to configure the server once you receive notification from the tenant user that the server has been deployed. Check with the infrastructure administrator whether the cloning image requires configuration (IP address, etc.) after deployment.

- When the server virtualization software is OVM for SPARC, IP addresses are set only **to the NICs that are connected to** admin LAN when you deploy a server whose guest OS is Solaris 11. It is therefore recommended that you connect the NIC to the admin LAN.
  If a deployed server is not connected to admin LAN, the infrastructure administrator needs to set IP addresses and default gateway to the server after deployment of a tenant user.

- If the server virtualization software is OVM for SPARC, the infrastructure administrator needs to configure deployed servers to enable direct root ssh login after deployment of a tenant user. When you receive notification from the tenant user that the server has been deployed, request the tenant administrator to enable direct root ssh login to the guest OS.

- If the server virtualization software is Solaris Zone and the administrator user name is "root", the infrastructure administrator needs to configure deployed servers to enable direct root ssh login after deployment of a tenant user. When you receive notification from the tenant user that the server has been deployed, request the tenant administrator to enable direct root ssh login to the guest OS. When the administrator user name is something other than "root", the above configuration is not necessary.

- For servers with Solaris Zones for the server virtualization software and Solaris 11 as the guest OS, when multiple NICs have been specified during deployment it is necessary to set the IP addresses and default gateway after the deployment is completed. Request the infrastructure administrator to do so once you receive notification from the tenant user that the server has been deployed.

- If the server virtualization software is RHEL-KVM, contact the infrastructure administrator for information on how to subscribe to servers other than Windows or Linux servers.

8.2.2 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 [L-Platforms] tab.
   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 usage 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

In the application process, the L-Platform templates waiting for 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 the [L-Platforms] tab, an error 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 REJECTION state.

Delete it from the [L-Platforms] tab after the confirmation if necessary.

📘 Point

Usage fees and quotation expiry dates for the L-Platform template will only be displayed when the usage fees display is set to enabled. Note also that the usage 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 charges for the L-Platform template, and indicates the 30th day after the L-Platform template was saved.

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

🅿 Point

CSV output

When the [Save as CSV] button located at the bottom left of the window is clicked, the [Select the destination to save] window is displayed where the L-Platform template can be saved as a CSV file.

The default CSV file name format is shown below. This file name can be modified as necessary.

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

4. Check the displayed contents of the L-Platform configuration, 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.

🅿 Point

- When the application process is enabled, clicking of the [Subscribe] button on the [Agreement] page displays the [Forward screen] window. Refer to "8.5 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.

🅿 Point

- 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.

- When a subscribed L-Platform includes server load balancer (SLB), refer to "8.3.11 Server Load Balancer (SLB) Settings" and setup the server load balancer after deploying the L-Platform and before operating the server load balancers.

- If the server virtualization software is RHEL-KVM or the subscribed L-Platform includes a Windows server other than Windows Server 2008 R2, after deployment the L-Platform will be available only after the infrastructure administrator configures the IP address, default gateway, and host name. Request the infrastructure administrator to configure the server once you receive notification from the tenant user that the server has been deployed.

- If the server virtualization software is OVM for x86, the L-Platform will be available only after the infrastructure administrator configures the IP address, default gateway, and host name following deployment. Request the tenant administrator to configure the server after deployment.

- If the server virtualization software is Citrix XenServer, then depending on the cloning image, the L-Platform will be available only after the infrastructure administrator configures the IP address, default gateway, and host name after deployment. Request the tenant administrator to configure the server after deployment. Check with the tenant administrator whether the cloning image requires configuration (IP address, etc.) after deployment.

- When the server virtualization software is OVM for SPARC, IP addresses are set only **to the NICs that are connected to** admin LAN when you deploy a server whose guest OS is Solaris 11. It is therefore recommended that you connect the NIC to the admin LAN.
  If a deployed server is not connected to admin LAN, the tenant administrator needs to set IP addresses and default gateway to the server before use. You also need to set IP addresses on guest OS to the NICs that are connected to business LAN, by confirming deployed IP addresses on the L-Platform management page.

- If the server virtualization software is OVM for SPARC, the infrastructure administrator needs to configure deployed servers to enable direct root ssh login after deployment of a tenant user. When you receive notification from the tenant user that the server has been deployed, request the tenant administrator to enable direct root ssh login to the guest OS.

- If the server virtualization software is Solaris Zone and the administrator user name is "root", the infrastructure administrator needs to configure deployed servers to enable direct root ssh login after deployment of a tenant user. When you receive notification from the tenant user that the server has been deployed, request the tenant administrator to enable direct root ssh login to the guest OS. When the administrator user name is something other than "root", the above configuration is not necessary.

- For servers with Solaris Zones for the server virtualization software and Solaris 11 as the guest OS, when multiple NICs have been specified during deployment it is necessary to set the IP addresses and default gateway after the deployment is completed. Request the infrastructure administrator to do so once you receive notification from the tenant user that the server has been deployed.

- If the server virtualization software is RHEL-KVM, contact the infrastructure administrator for information on how to subscribe to servers other than Windows or Linux servers.

8.3 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

8.3.1 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-Platforms] tab, 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.
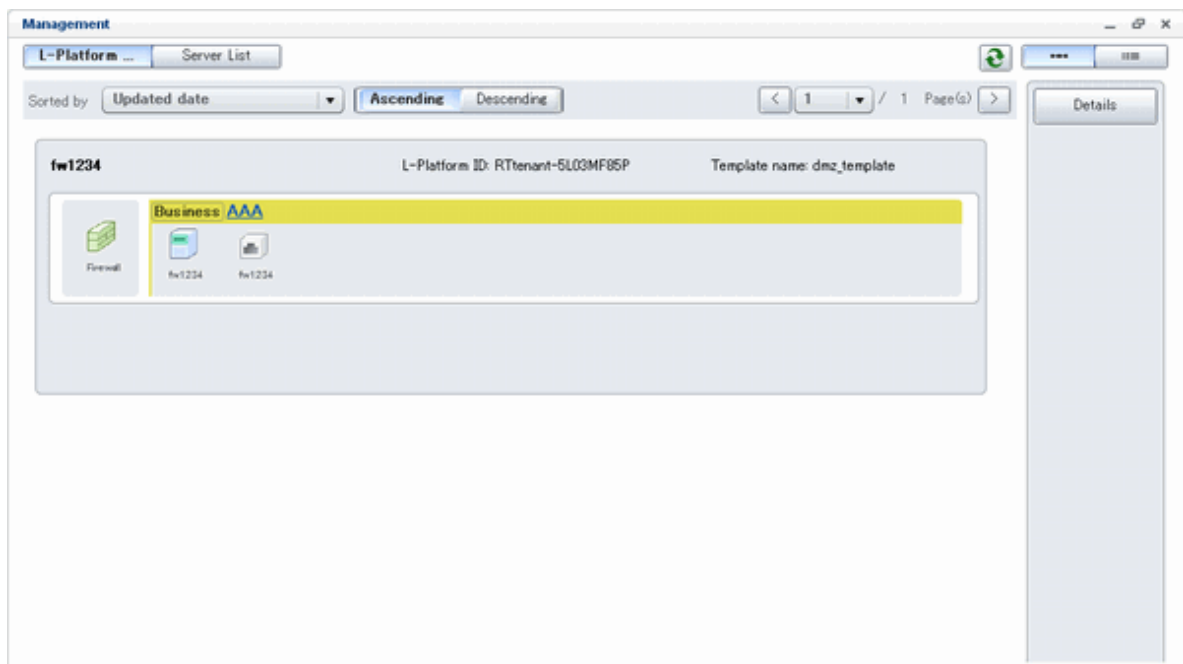
The following information can be checked on the [Management] page:

- 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 "8.3.2 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 "8.3.2 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.
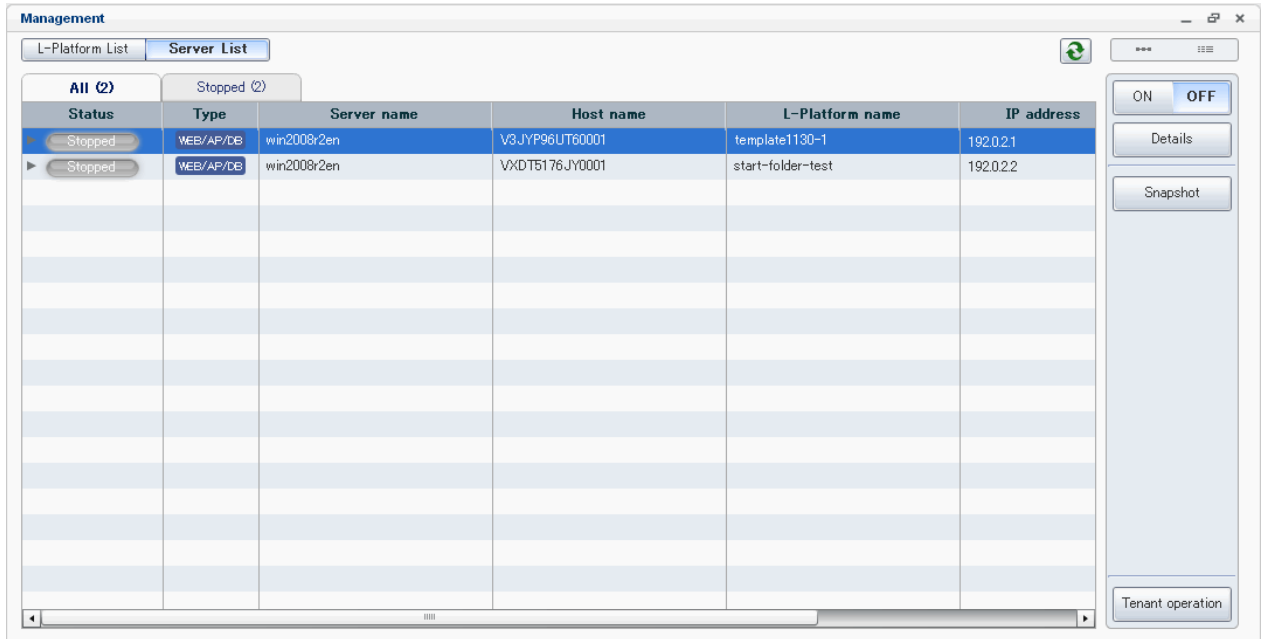
The following information can be checked on the [Server List] page.

- 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 "8.3.4 Start and Stop the Server" for information on starting the server.

- [OFF] button: Stop the server
  Refer to "8.3.4 Start and Stop the Server" for information on stopping the server.

- [Details] button: Display details on an L-Platform or a disk.
  Refer to "8.3.2 L-Platform Detailed Information Display" for information on displaying L-Platform details. Refer to "8.3.3 Display Details on a Disk" for information on displaying details on a disk.

- [Snapshot] button: Take and restore snapshots
  This button is displayed for virtual servers.
  But this button is not displayed when the target server satisfies either of the following conditions:

  - Servers whose virtualization software is Solaris Zone, OVM for x86, or OVM for SPARC.

  - Servers whose virtualization software is RHEL-KVM that satisfy either of the following conditions:

    - The image location type of the cloning image is "Raw Disk"

    - The image location type of the cloning image is "Virtual Disk", and one or more existing disks are connected

  Refer to "8.3.6 Take and Restore Snapshot " for information on taking and restoring snapshots.

- [Backup] button: Backup and restore.
  This button is displayed for physical servers.
  But this button is not displayed if the OS is Solaris.
  Refer to "8.3.7 Physical Server Backup and Restore" for information on backup and restore.

- [Tenant operation] button: operations for Tenant.
  Refer to "8.3.17 Tenant Operation" for information on tenant operation.

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.

8.3.2 L-Platform Detailed Information Display

Follow the steps below to display the details of L-Platform:
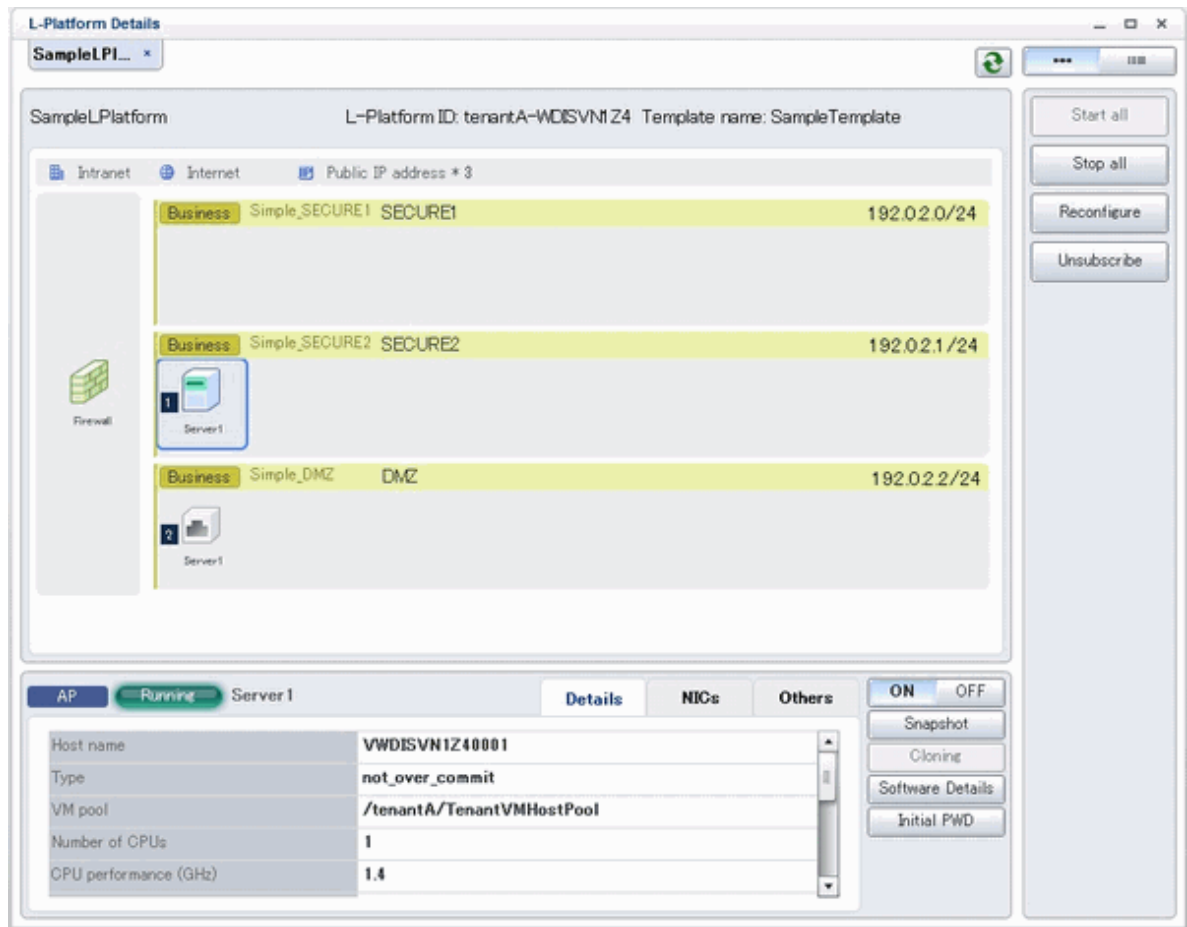
1. Display the [L-Platform Management], [L-Platform Management (list)], or the [Server List] page.
   Refer to "8.3.1 L-Platform Management Display Page" for information on how to display the page.

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 ( ) located on the top right hand side of the page.

- L-Platform configuration image

  By clicking the 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 ([IIII]) 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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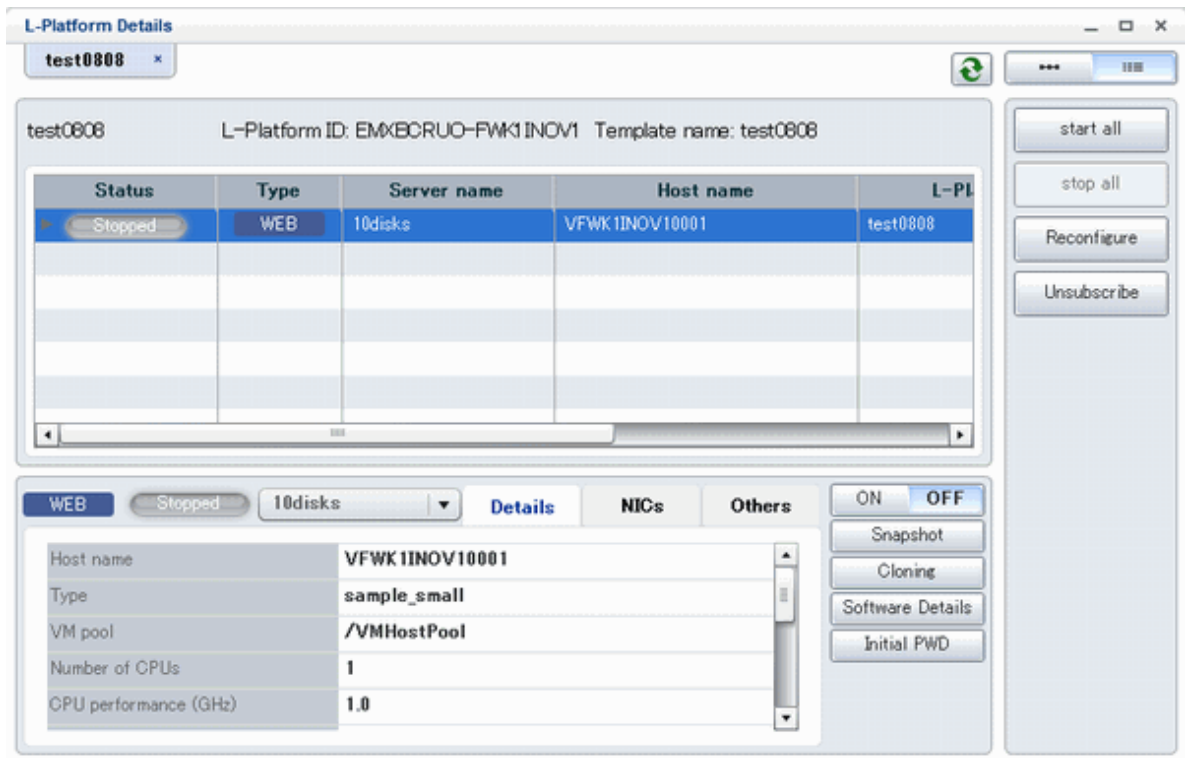
The following buttons can be used on the [L-Platform Details] page:

- [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
  Refer to "8.3.18 L-Platform Reconfiguration" for information on changing L-Platforms.

- [Unsubscribe] button: Cancels the L-Platform
  Refer to "8.3.19 Cancel an L-Platform" for information on cancelling L-Platforms.
  Canceling is not possible if the following servers exist on the target L-Platform:

  - Servers whose server virtualization software is OVM for SPARC and to which a shared disk is connected.

  - Servers that use Solaris Zones for virtualization software and are operating Solaris 10 that is not managed by BladeLogic

- [ON] button: Start the server
  Refer to "8.3.4 Start and Stop the Server" for information on starting the server.

- [OFF] button: Stop the server
  Refer to "8.3.4 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.
  But this button is not displayed when the target server satisfies either of the following conditions:

  - Servers whose virtualization software is Solaris Zone, OVM for x86, or OVM for SPARC.

  - Servers whose virtualization software is RHEL-KVM that satisfy either of the following conditions:

    - The image location type of the cloning image is "Raw Disk"

- The image location type of the cloning image is "Virtual Disk", and one or more existing disks are connected

Refer to "8.3.6 Take and Restore Snapshot" for information on taking and restoring snapshots.

- [Backup] button: Backup and restore
This button is displayed for physical servers.
But this button is not displayed if the OS is Solaris.
Refer to "8.3.7 Physical Server Backup and Restore" for information on backup and restore.

- [Setting] button: Setup firewall
This button is displayed for firewalls.
Refer to "8.3.9 Setup Firewall" for information on setup firewall.

- [Log viewing] button: References the firewall log
This button is displayed for firewalls deployed without using a ruleset.
Refer to "8.3.10 Referencing the Firewall Log" for information on referencing the firewall log.

- [Operation] button: Operate server load balancer (SLB)
This is displayed for server load balancers.
Refer to "8.3.12 Server Load Balancer (SLB) Operations" for information on operating server load balancers.

- [Operation log] button: Server load balancer (SLB) operation log
This is displayed for server load balancers.
Refer to "8.3.13 Server Load Balancer (SLB) Operation Logs" for information on server load balancer operation logs.

- [SLB settings] button: Server load balancer (SLB) settings
This is displayed for server load balancers.
Refer to "8.3.11 Server Load Balancer (SLB) Settings" for information on server load balancer settings.

- [Cloning] button: Collects a cloning image from an already deployed server.
This button is not displayed when the target server satisfies either of the following conditions.

    - Servers whose virtualization software is Solaris Zone or OVM for SPARC

    - Physical servers whose operating system is Solaris

Refer to "8.3.8 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 "*Initial password*"". Sometimes it is displayed as ".
The initial password is set after L-Platform deployment.
When all the following conditions are satisfied, "The Root role password is "*Root role password*"." is displayed.

    - The server virtualization software is Solaris Zones

    - The OS of the virtual server is Solaris 11

    - The administrator user name is a value other than that of the root account

- [Add Patch Information] button: Register the patch information
Refer to "8.3.5 Manage Patch Information" for information on registering patch information.

- [Delete Patch Information] button: Delete the patch information
Refer to "8.3.5 Manage Patch Information" for information on deleting the patch information.

Note

- 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.
```

- If a virtual server managed by OVM for SPARC is stopped using the [Stop all] or [OFF] button, the OVM for SPARC must support shutdown operations. If shutdown operations are not supported by the OVM for SPARC, the virtual server cannot be stopped.
  In this case, operate the virtual server directly or click the [Forced stop] button depending on the server status.

- If a server is imported to the L-Platform and no pool name is specified by the administrator, the "-" character is displayed for the VM pool, the server pool name, and the storage pool of the server.

- For physical servers, the number of CPUs, operating frequency, and memory size displayed are those specified by the user during the L-Platform subscription or when adding a server as part of an L-Platform reconfiguration.
  For physical servers added to the L-Platform, the values in effect during registration are displayed.
  For this reason, even if the number of CPUs, operating frequency, and memory size are changed, the displayed values will not change.

8.3.3 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 "8.3.2 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 the target disk from the menu.
   The details of the disk will be displayed on the [L-Platform Details] page.
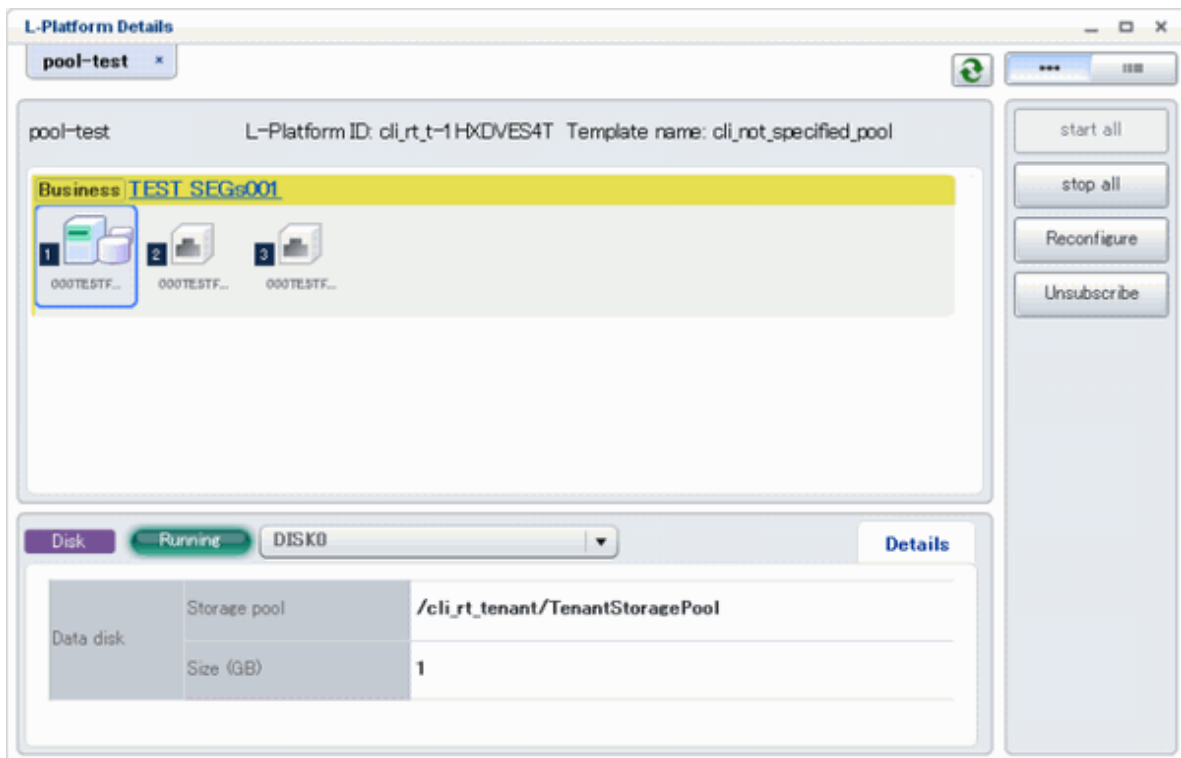
8.3.4 Start and Stop the Server

Follow the steps below to start or stop a server:

1. Display the [Server List] page.
   Refer to "8.3.1 L-Platform Management Display Page" for information on how to display the page.

Alternatively, display the [L-Platform Details] page.
Refer to "8.3.2 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.

![Note icon] **Note**

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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.

- If a virtual server managed by OVM for SPARC is to be stopped and shutdown operations are not supported by the OVM for SPARC, it cannot be stopped.
  In this case, operate the virtual server directly or click the [Forced stop] button depending on the server status.

- To stop a server for VDI coordination, log in to the guest OS, and perform a shutdown.

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8.3.5 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 "8.3.2 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.

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.

8.3.6 Take and Restore Snapshot

Using the [Snapshot] page, snapshots can be taken and restored for the virtual server.
These are supported if the server virtualization software is VMware, Hyper-V, or Citrix XenServer.
If the server virtualization software is Citrix XenServer, the corresponding virtual server must be stopped when taking a snapshot.
To take the 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

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- 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 server 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.

- NICs cannot be added to or deleted from a server that has snapshots. When adding or deleting NICs, delete all snapshots of the server beforehand.

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

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Take Snapshots

Follow the steps below to take snapshots:

1. Display the [Server List] page.
   Refer to "8.3.1 L-Platform Management Display Page" for information on how to display the page.
   Alternatively, display the [L-Platform Details] page.
   Refer to "8.3.2 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.
   When the target server is RHEL-KVM, enter the comment using single-byte alphanumeric characters and symbols (excluding "<", ">", "&", """, "'", "%", "\").
   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.

- The disk size and estimated charges when taking a snapshot will only be displayed when the estimated fees display is enabled.

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8.3.7 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 running 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 restores 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.

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Backup

Follow the steps below to backup:

1. Display the [Server List] page.
   Refer to "8.3.1 L-Platform Management Display Page" for information on how to display the page.
   Alternatively, display the [L-Platform Details] page.
   Refer to "8.3.2 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.

8.3.8 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.

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.

- [Cloning] button is not displayed when the target server satisfies either of the following conditions:

  - Servers whose virtualization software is Solaris Zone or OVM for SPARC

  - Physical servers whose operating system is Solaris

- With VMware servers, if images are collected without data disks included, the actual collected image will be an image including data disks. However, the image information registered after image collection will not include data disks, so if this image information is used to deploy a server, it is deployed only a system disk.

- Collected images are saved in the default storage location. It is not possible to specify storage for the storage location of images.
  For details of the default storage location, refer to "17.5.1 Collecting and Registering" in the "User's Guide for Infrastructure Administrators (Resource Management)".

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Perform the following steps to collect an image:

1. Display the [L-Platform Details] page
   Refer to "8.3.2 L-Platform Detailed Information Display" for information on 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.

   - Data disk: Specify whether to include the disk in the image if the server includes a data disk.
     However, this cannot be specified if the server virtualization software is RHEL-KVM.

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

8.3.9 Setup Firewall

Change the firewall settings.

The operation for setting up a firewall differs depending on whether a ruleset is used when an L-Platform that uses a firewall is deployed.

When an L-Platform that uses a firewall is deployed without the use of a ruleset

Click the [Setting] button to display the [Firewall setting] window.

This window enables you to set "DNAT setting" and "SNAPT setting" and to add, edit, and delete firewall rules. These settings operate the network device when the [Submit] button is clicked at the bottom right of the window.

When the firewall is to connect to the outside, first set the DNAT and SNAPT for public IP addresses. DNAT and SNAPT must be defined before you make Internet settings in the firewall rule settings. There is no need to set DNAT or SNAPT when there is not going to be a connection with the Internet.

The rules for accepting connection are defined in the firewall rule settings. The rule " FROM and TO:not specified, ID:59900, Source, Source port, Destination, Destination port and Protocol:not specified, Action:Drop and Log:On" is the regular definition, so if no rules are defined, the firewall blocks all connections. When there are multiple firewall rules, the rules are applied in ascending order according ID value, so make the settings with this prioritization in mind.

The following describes the settings in detail:

- DNAT setting

   You can set DNAT at the top left of the [Firewall setting] window.
   The list shows IP addresses to be published. These are the IP addresses used by the L-Platform. From the list, select an IP address to be published and click the [Set] button. In the [DNAT setting] window that is displayed, specify the target. You can clear the setting at this point by selecting [It does not set it] or by selecting the IP address to be published in the [Firewall setting] window and clicking the [Clear] button.

- SNAPT setting

   You can set SNAPT at the top right of the [Firewall setting] window.
   The drop-down menu to the left of the list stores the IP addresses to be published. These are the IP addresses used with the L-Platform. Click the [Add target] button. In the [Add SNAPT targets] window that is displayed, specify the target server for the IP address to be published that you selected in the drop-down menu. You can delete this setting by selecting the target in the [Firewall setting] window and clicking the [Clear] button.

- Firewall rules

   You can set firewall rules at the bottom of the [Firewall setting] window.
   Click the [Add] button to start the [Add Firewall rule] wizard, and add firewall rules.

- [Add Firewall rule] window

    - [Select direction] page

    Specify the direction of the firewall rules. The drop-down menu lists the segment types in the segments on the L-Platform and the connection destinations of the L-Platform. Specify the direction of the firewall rules and click [Next] to display [Rule setting] page.

    - [Rule setting] page

    Set the details of the rule.

    The table below explains the items.

Item	Explanation
ID	ID of the rule The rules are applied in ascending order according ID value. Specify a two-digit number. You cannot specify the same number for firewall rules that have the same direction within a single L-Platform. The smallest value of the numbers that can be specified by default will be entered.
Source	Specify the source. Enter a value or select one from the drop-down menu, depending on the direction of the firewall rules. When a textbox is valid, it is possible to specify in ranges (for example, 192.0.2.1-192.0.2.5) or to specify the network mask (for example, 192.0.2.0/24), as well as being able to specify them individually.
Source port	The source port number for all rules will always be [any].
Destination	Specify the destination. Enter a value or select one from the drop-down menu,, depending on the direction of the firewall rules. When a textbox is valid, it is possible to specify in ranges (for example, 192.0.2.1-192.0.2.5) or to specify the network mask (for example, 192.0.2.0/24), as well as being able to specify them individually.
Destination port	Specify the destination port number. Enter a value or select one from the drop-down menu. When directly entering values and multiples are specified, it is possible to specify in ranges (for example, 12000-13000), as well as being able to specify them individually.
Protocol	Specify a protocol. Select one from the drop-down menu.
Action	Specify the method for processing connections that satisfy the rule conditions. Select one from the drop-down menu.
Log	Specify whether to collect a log of connections that satisfy the rule conditions. Select one from the drop-down menu.

    After specifying the items, click the [Next] button to display the [Confirmation] page.

    - [Confirmation] page

    Confirm the rule settings. The [OK] button adds the rule, but the settings are not sent to the network device until the [Submit] button is clicked in the [Firewall setting] window.

- [Firewall rule edit] window

Select a rule from the list of firewall rules at the bottom of the [Firewall setting] window, and then click the [Edit] button. You can then edit the firewall rule. However, you cannot change the direction of the firewall rules during the editing process.

- Firewall rule delete

Select a rule from the list of firewall rules at the bottom of the [Firewall setting] window and click the [Delete] button to delete the firewall rule.

Note

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If the number of Firewall rule is zero, the [Submit] button of the [Firewall setting] window is unavailable.

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When an L-Platform that uses a firewall is deployed with the use of a ruleset

The firewall ruleset 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 "8.3.2 L-Platform Detailed Information Display" for information on the display method.

2. Select the firewall, and then click the [Setting] button.

3. [Firewall] page is displayed.

   - Selected ruleset: Displays the ruleset names.

   - Description: Displays the ruleset descriptions.

   - Segment/Server: The names of the segments or servers where the parameters are enabled are displayed. "-" is displayed for parameters are unrelated to the segment or server.

   - Parameter: Displays the parameter names.

   - Description: Displays an explanation of the parameter

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

   - Description of the selected parameter: The description of the parameter in the row being pointed at is displayed.

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 ruleset parameters in the firewall settings.
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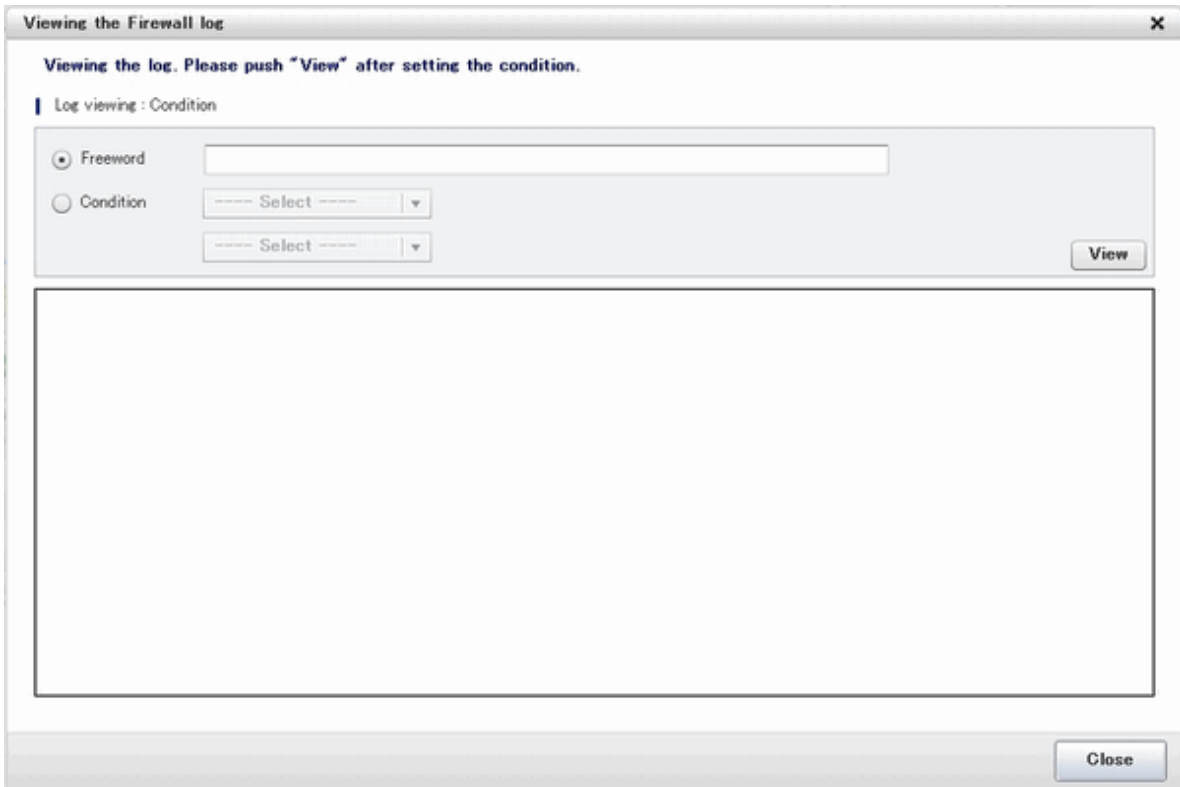
8.3.10 Referencing the Firewall Log

You can reference the firewall log by using the [Viewing the Firewall log] page. It can be used only when you have not used a ruleset when deploying an L-Platform that uses a firewall.

Perform the following steps to reference the firewall log:

1. Display the [L-Platform Details] page.

   Refer to "8.3.2 L-Platform Detailed Information Display" for information on how to display this page.

2. Select a firewall and click the [Log viewing] button.

3. The [Viewing the Firewall log] page is displayed.

The [View] button displays up to 1,000 firewall logs, starting with the most recent one.

You can filter the logs to be displayed by specifying log reference conditions.

The specifiable log reference conditions are [Freeword] and [Condition]. Specify either value and then click [View].

The following explains the procedures for specifying [Freeword] and [Condition].

- [Freeword]: Only logs corresponding to the string that you directly entered will be referenced.

   Select the [Freeword] option button, and then enter a string in the textbox.
   Specify up to 40 characters. Allowed characters are: A-Z, a-Z, 0-9, symbols (= , . : - / ( ) [ ]) and space (ASCII code: 0x20).

- [Condition]: The items specified for the firewall rules are used as display conditions to filter the contents of the logs to be displayed.

Select the [Condition] option button, and then select the condition you want to specify from the drop-down menu. When you select a condition specification from the drop-down menu, a textbox or another drop-down menu is displayed next to it - you must specify an option by that as well.
You can select up to two condition specifications.

The table below describes the items you can specify in the condition specification.

Condition specification item	Description
ID	Enter the five-digit number representing the ID of the firewall rule to be used as the log filtering condition.
Source Address	Enter the IPv4 address representing the source IP address of the firewall rule to be used as the log filtering condition.
Source Port	Enter a number containing 1 to 5 digits and representing the source port number of the firewall rule to be used as the log filtering condition.
Destination Address	Enter the IPv4 address representing the destination IP address of the firewall rule to be used as the log filtering condition.
Destination Port	Enter a number containing 1 to 5 digits and representing the destination port number of the firewall rule to be used as the log filtering condition.
Protocol	Select the protocol of the firewall rule to be used as the log filtering condition. Select from [TCP], [UDP], [TCP-UDP], and [ICMP].
Action	Specify the firewall rule action to be used as the log filtering condition. Select from [Accept] and [Drop].
Direction	Specify [FROM] and [TO] indicating the direction of the firewall rule to be used as the log filtering condition. Select from [Internet], [Intranet, DMZ], [SECURE1], and [SECURE2] as the [FROM] and [TO] points.

8.3.11 Server Load Balancer (SLB) Settings

This section describes the settings for the server load balancer (SLB).

The operation differs depending on whether a ruleset is used when an L-Platform that uses an SLB is deployed.

8.3.11.1 When an L-Platform that Uses a Server Load Balancer (SLB) Is Deployed Without Using a Ruleset

When an L-Platform that uses a server load balancer (SLB) that does not use a ruleset has been deployed, use the [SLB Rule Management] window to change the settings of the server load balancer.

[SLB Rule Management] Window

Click the [Rules] button to display the [SLB Rule Management] window.

This window can be used to view, add, edit, and delete rule settings for SLBs.
These settings are reflected on the network device when the [Execute] button is clicked at the bottom right of the window.

- Adding SLB Rules

Click the [Add] button at the bottom right of the [SLB Rule Management] window to display the [SLB Rule Add] window where you can add SLB rules.
On this window, configure details of the SLB rule.
The table below explains the items.

Classification	Item	Explanation
Common	Rule ID	ID of the rule. Specify a two-digit number. Specifying the same number for multiple SLB rules within a single SLB is not allowed. The smallest value of the numbers that can be specified by default will be entered.
	Protocol	Select one of the following protocols. - HTTP - HTTPS - HTTP+HTTPS - TCP - UDP
	Port	Specify the port number. Input format differs depending on the protocol used.
	LB Method	Select one of the following load balancing methods. - Round Robin - Smallest connection unit
	Uniqueness Assurance	Select one of the following uniqueness assurance methods. - Connection unit - IP address unit Note that when the [Protocol] is "HTTP+HTTPS", the value cannot be changed from "IP address unit".
	Service Monitoring Method	Select one of the following service monitoring methods. - ping - TCP Note that when the [Protocol] is "UDP", the value cannot be changed from "ping".

Details	Max connections	- When the protocol is "HTTP", "TCP", or "UDP"
		  Specify the maximum number of connections within the range from 1 - 58000.
		  The default value is 58000.
		
		- When the protocol is "HTTPS" or "HTTP+HTTPS"
		  Specify the maximum number of connections within the range from 1 - 10000.
		  The default value is 10000.

	Retain Uniqueness Assurance Info	Specify retain uniqueness assurance info within the range of 1 - 604800 seconds. The default value is 90 seconds. This value cannot be specified when [Uniqueness Assurance] is configured for each connection.
	Service Monitoring Interval	Specify the interval of service monitoring within the range of 10 - 99999 seconds. The default value is 60 seconds.
	Service Monitoring Timeout	Specify the timeout of service monitoring within the range of 1 - 99 seconds. The default value is 10 seconds.
	Service Monitoring Retry	Specify the number of retries for service monitoring within the range of 0 - 10. The default value is 3.

Classification	Item	Explanation
	Server Restoration Action	Select one of the following server restoration actions. - Automatic backup - Manual backup
Certificate	Registration No.	The registration number of the certificate. The registration number of the certificate specified on the [Certificate Selection] window which opens when the [Select] button is clicked is displayed.
	Expiration Date	The expiration date of the certificate. The expiration date of the certificate specified on the [Certificate Selection] window which opens when the [Select] button is clicked is displayed.
Error Page	Undergoing Maintenance	Use this item to configure the error page displayed when the error occurred due to maintenance mode. From the drop-down menu, select "Default" or "Customize". For the settings for customizing pages, refer to "I.3.3 Error Page Response Files" in the "Design Guide CE".
	Server Stopped	Use this item to configure the error page displayed when the error occurred because the server has been stopped. From the drop-down menu, select "Default" or "Customize". For the settings for customizing pages, refer to "I.3.3 Error Page Response Files" in the "Design Guide CE".
	Access Limited	Use this item to configure the error page displayed when the error occurred due to access limitations. From the drop-down menu, select "Default" or "Customize". For the settings for customizing pages, refer to "I.3.3 Error Page Response Files" in the "Design Guide CE".
Distribution Targets	Server Name NIC NO. IP Address	The information of distribution target servers. This field displays the information of the server specified on the window which opens when the [Add] button is clicked.
	Port	This field displays the information of the port specified on the window which opens when the [Add] button is clicked.

- [Add Distribution Targets] Window

  The following items can be configured:
  Clicking the [OK] button reflects the settings to the [Distribution Targets] section of the [SLB Rule Add] window.

Item	Description
Distribution Targets	Select distribution targets from the servers on the same segment as the SLB.
Port	Specify the port number within the range of 1 - 65535.

- Deletion of Distribution Target Servers

  Select a target server from the list of Distribution Targets and then click the [Delete] button at the right bottom of the window to delete that server.

- Editing SLB Rules

Select an SLB rule from the SLB rule list and then click the [Edit] button at the right bottom of the [SLB Rule Management] window to display the [SLB Rule Edit] window where you can edit the SLB rule.

- **Deletion of SLB Rules**

Select an SLB rule from the SLB rule list and then click the [Delete] button at the right bottom of the [SLB Rule Management] window to delete the SLB rule.

8.3.11.2 When an L-Platform that Uses a Server Load Balancer (SLB) Is Deployed Using a Ruleset

When an L-Platform that uses a server load balancer (SLB) that uses a ruleset has been deployed, the parameter values of the ruleset of the server load balancer can be changed.

Server load balancer settings are changed as follows:

1. Display the [L-Platform Details] page.

   Refer to "8.3.2 L-Platform Detailed Information Display" for information on the display method.

2. After selecting a server load balancer (SLB), click [SLB settings].

3. [SLB settings] page is displayed.

   - Selected ruleset: Displays the ruleset names.

   - Description: Displays the ruleset descriptions.

   - [SLB] tab: Parameters that are unrelated to the server are displayed. The following items are displayed:

     - Parameter: Displays the parameter labels.

     - Description: Displays the parameter descriptions.

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

     - Description of the selected parameter: The description of the parameter in the row being pointed at is displayed.

If the parameter row type is the IP address, the [Select] button will be displayed when the corresponding row is selected - click [Select] to display the [Parameter Setting] window.
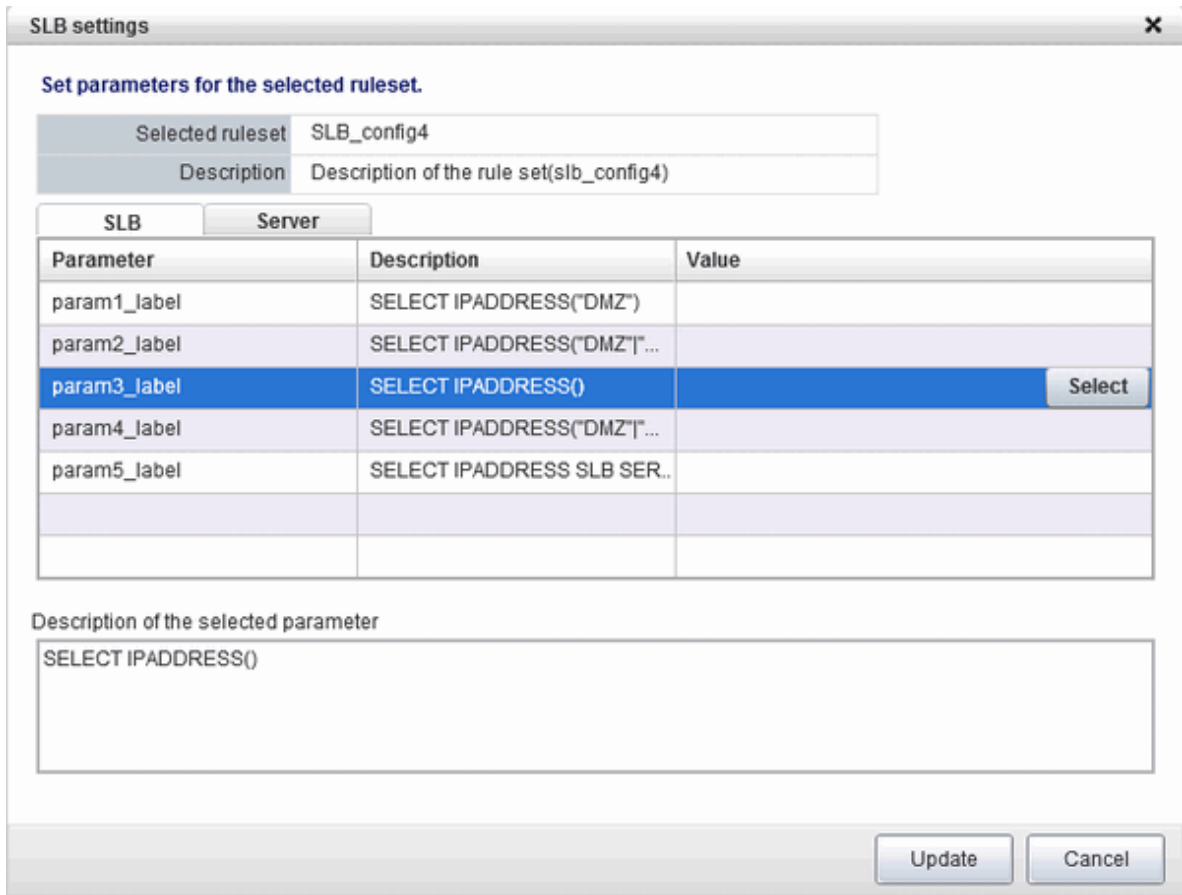
[Parameter Setting] window

This section explains the [Parameter Setting] window.

When a parameter with a configured IP address is selected, or when Included is selected

[Included] is specified in the initial state, as shown below, and the list displays the servers (NICs) that will not be load-balanced.
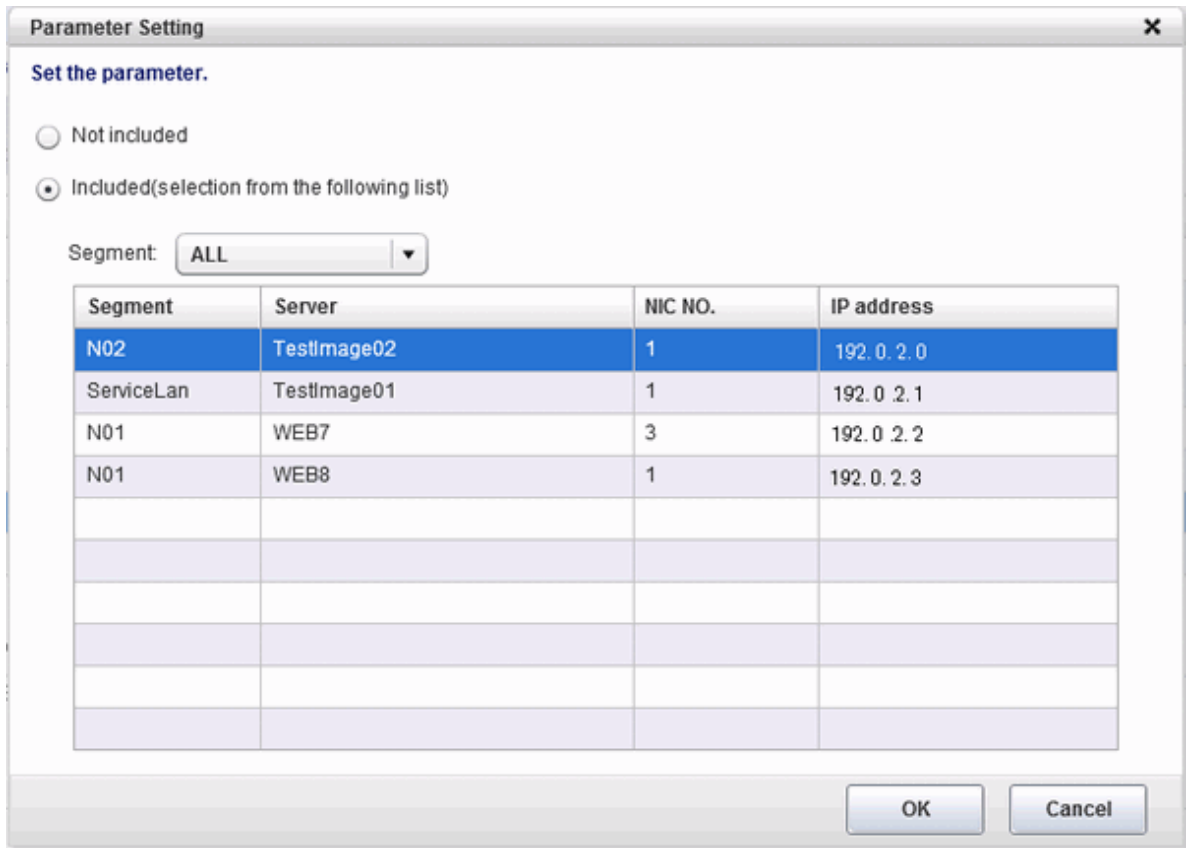
Select a row and click [OK] to select a server for distribution.

Select a segment to display only the server connected to it - if [All] is selected, all servers on the L-Platform will be displayed.

Select [Not included] to disable the segment and the list, as shown in "When a parameter with no configured IP address is selected, or when [Not included] is selected" (display only).

When changing from [Not included] to [Included], the default value of the segment selection is the segment connected to the SLB.

When a parameter with no configured IP address is selected, or when [Not included] is selected

[Not included] is specified in the initial state, as shown below, and the list displays the servers (NICs) that will not be load-balanced. Note that this window only displays the default value - it does not enable a selection to be made.
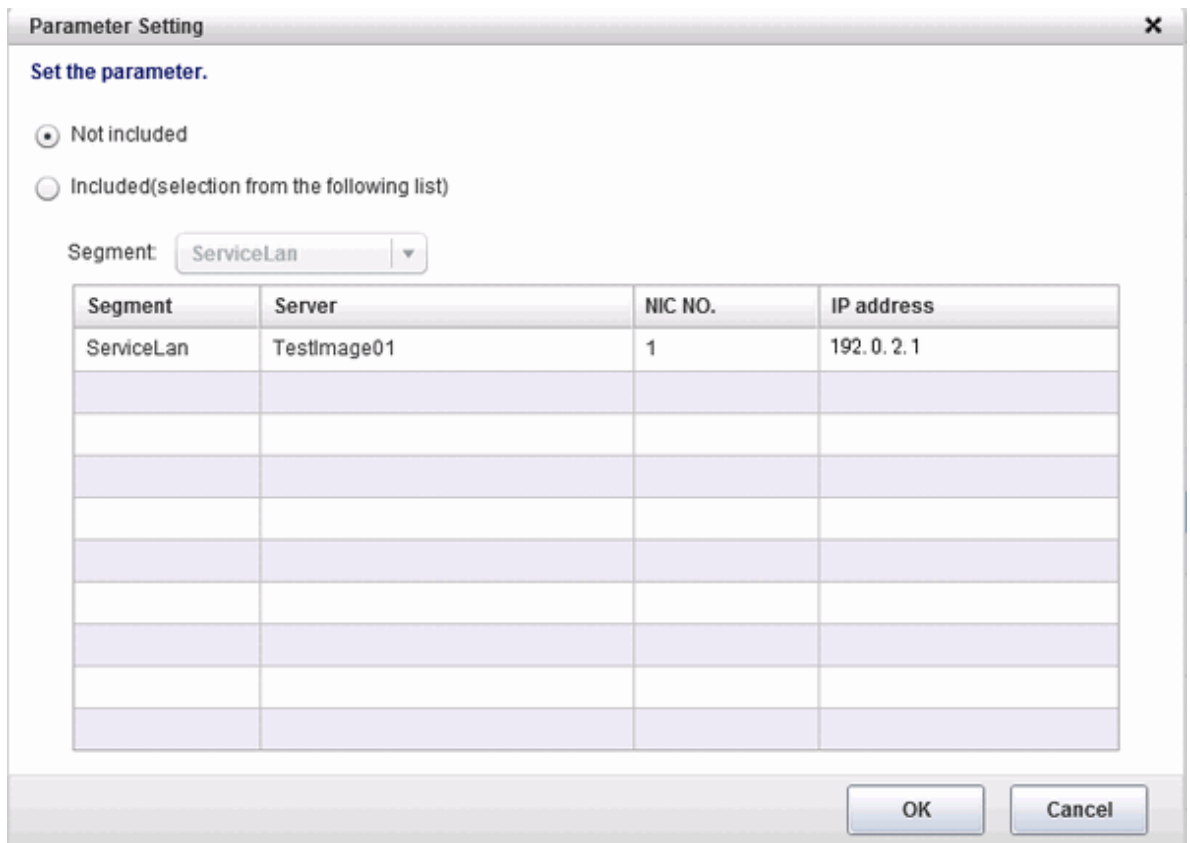
The default value of the segment selection is the segment connected to the SLB. Note that this window only displays the default value - it does not enable a selection to be made.

Refer to "When a parameter with a configured IP address is selected, or when Included is selected" to change the selection from [Not included] to [Included] .

- [Server] tab: Parameters that are related to the server are displayed. The following items are displayed:

    - Server: The names of the servers where the parameters are enabled are displayed. "-" is displayed for parameters unrelated to the server.

    - Parameter: Displays the parameter labels.

    - Description: Displays the parameter descriptions.

    - Setting value: Enter the value to be set for the parameter.

- Parameter descriptions: The description of the parameter in the row being pointed at is displayed.

4. When [Update] button is clicked, a confirmation message is displayed.
   Click [Yes] to start the server load balancer settings.

Point

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- Server load balancer settings cannot be changed in L-Platform subscriptions or when modifying the L-Platform configuration.

- Specify the server load balancer settings after deploying the L-Platform and before operating the server load balancer.

- Specify the IP address advised by the infrastructure administrator for the virtual IP address used when setting the server load balancer.
  Also check with the infrastructure administrator if you do not know any of the other values to be specified.

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Note

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The parameters and operations available depend on the device and rulesets.

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8.3.12 Server Load Balancer (SLB) Operations

This section describes server load balancer operations.

Operations on server load balancers, such as including a server in an L-Platform as a target of load balancing, or removing it as a target, are performed by specifying rulesets and parameters prepared for operations.

This function can only be used when you have used a ruleset when deploying an L-Platform that uses an SLB.

Operate the server load balancer as follows:

1. Display the [L-Platform Details] page.

   Refer to "8.3.2 L-Platform Detailed Information Display" for information on the display method.

2. After selecting a server load balancer (SLB), click [Operation]

   [Select a ruleset] page in [Operation] window is displayed.

3. Select the ruleset used in the operation in the [Select a ruleset] page.
   The rulesets for operating the target server load balancer are displayed in the [Select a ruleset] page. In the ruleset description section in the lower part of the window, the description of the ruleset in the row being pointed at is displayed.
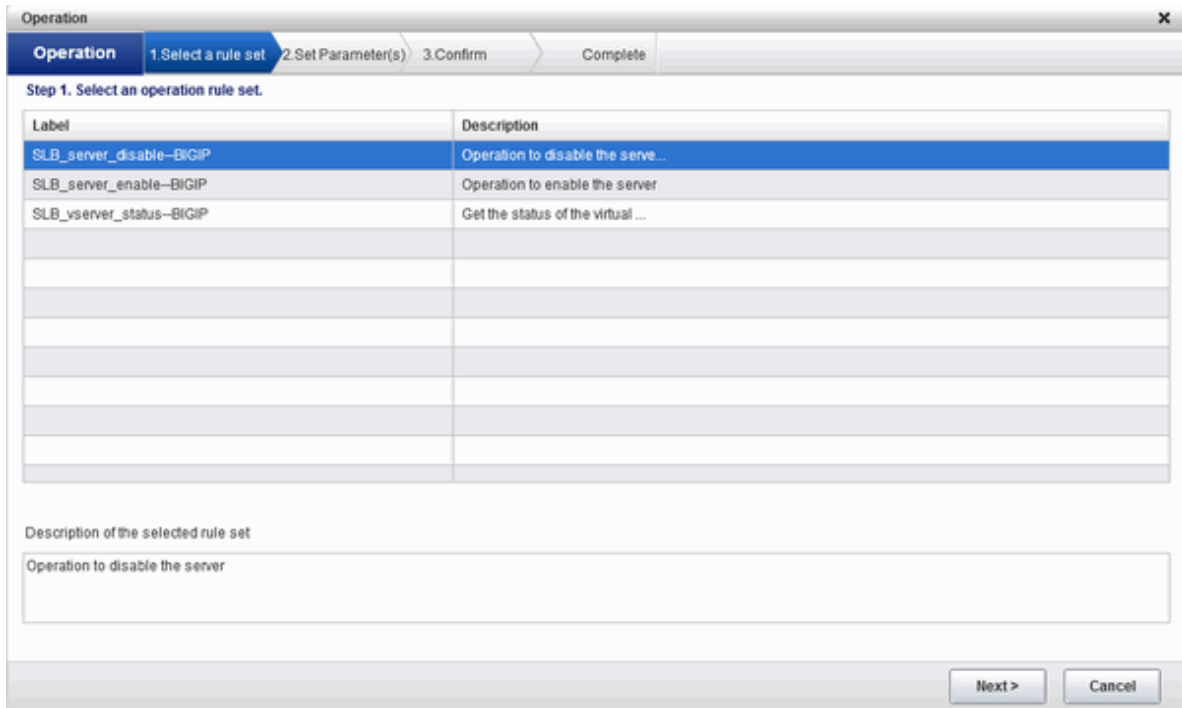
4. Select the ruleset to be used and click the [Next] button.
   The [Set Parameter(s)] page is displayed.
   Specify the parameters for operation corresponding to the ruleset in the [Set Parameter(s)] page. No information for parameters is displayed if there are no parameters.

   - Selected ruleset: The name of the ruleset selected in the [Select a ruleset] page is displayed.

   - Description: Displays a description of the selected ruleset.

   - Parameters

     - Parameter: The labels of the parameters for operation are displayed.

     - Description: Displays the parameter descriptions.

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

- Description of the selected parameter: The description of the parameter in the row being pointed at is displayed.
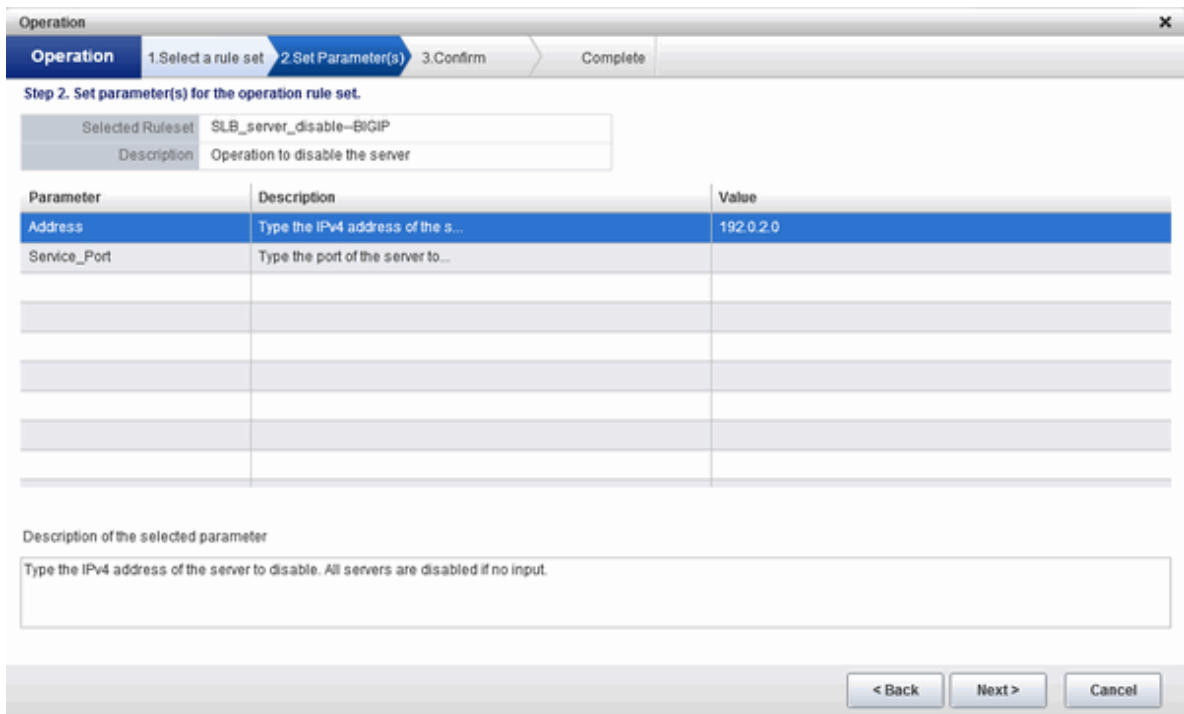
If the parameter row type is the IP address, [Select] will be displayed when the corresponding row is selected.
Click [Select] to display the [Parameter Setting] window.
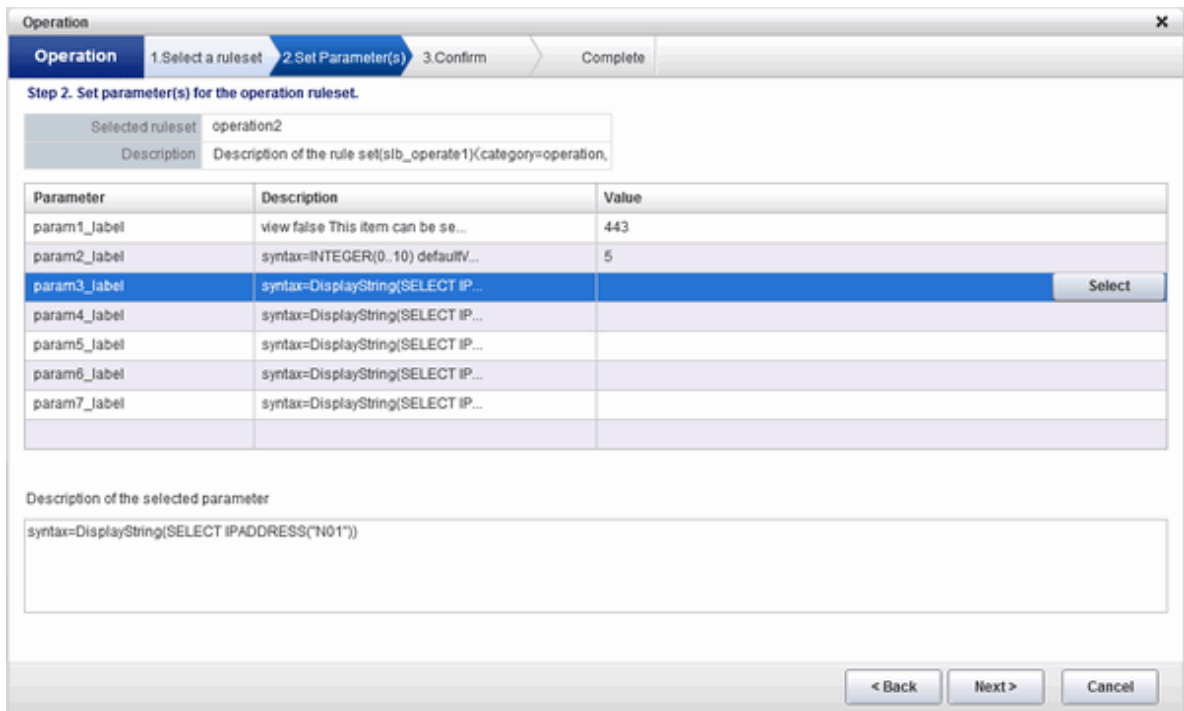
Refer to "[Parameter Setting] window" for information on information on this window.

5. Once the parameter settings are complete, click the [Next] button.
   The [Confirm] page will be displayed.
   The values of the changed items are displayed in red. The value before the change is displayed as "changed from *the old value*".

In the parameter description section in the lower part of the window, the description of the parameter in the row being pointed at is displayed.

6. Confirm the values of the parameters displayed and click [Execute] button.

   The [Complete] page is displayed.

7. To confirm the results of the operation, click [Open Operation log], or if you want to check the log later, click [Close] button.

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Also check with the infrastructure administrator if you do not understand the rulesets used when operating server load balancers, or do not know the values to be specified in the ruleset parameters.
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📒 Note
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- Refer to "8.3.11 Server Load Balancer (SLB) Settings" and setup the server load balance after the L-Platform is deployed. Operation will fail if you try to operate the L-Platform without setting the server load balancer.

- [Operation] cannot be performed on a server load balancer when a server load balancer operation is executing.

- Confirm the results of server load balancer operations in the 8.3.13 Server Load Balancer (SLB) Operation Logs. If you do not check the operation logs after executing server load balancer operations, the results of previous operations will no longer be available when you next execute an operation.

- The parameters and operations available depend on the device and rulesets.

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8.3.13 Server Load Balancer (SLB) Operation Logs

This section describes server load balancer operation logs.

The results of server load balancer operations can be checked by displaying the server load balancer operation logs.

This function can only be used when you have used a ruleset when deploying an L-Platform that uses an SLB.

Display the operation logs for the server load balancer as follows:

1. Display the [L-Platform Details] page.

   Refer to "8.3.2 L-Platform Detailed Information Display" for information on the display method.

2. After selecting a server load balancer (SLB), click [Operation log] button.

   The [Operation log] page is displayed.

   This will be empty if there are no operation logs.

   The message "Obtaining the operation log" is displayed when an operation is not yet complete.

   The [Reload] button is enabled when a new operation is performed after displaying the operation log. Click [Reload] button to display the latest operation log.

3. When you have finished checking the results of the operation, click [Close] to close the [Operation log] page.

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Check with the infrastructure administrator if you do not understand the content of the operation logs.
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8.3.14 Load Balancing Status of SLBs

Click the [Distribution Status] button to display the [Distribution Status] window.

Use this window to view the load balancing status of the SLBs.

This function can only be used when you have not used a ruleset when deploying an L-Platform that uses a server load balancer.

8.3.15 Access Status of the Server Load Balancers (SLBs)

Click the [Access Status] button to display the [Access Status] window.

This window can be used to obtain and clear the access statuses (error statuses) of server load balancers.

This function can only be used when you have not used a ruleset when deploying an L-Platform that uses a server load balancer.

Note
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The access statuses (error statuses) displayed on the [Access Status] window are only those of rules with the protocols "HTTP", HTTPS" and "HTTP+HTTPS".
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8.3.16 Certificate Management of SLBs

Click the [Certificates] button to display the [Certificates] window.

Use this window to view a list of certificates already registered with SLBs.

This function can only be used when you have not used a ruleset when deploying an L-Platform that uses a server load balancer.

8.3.17 Tenant Operation

Follow the steps below to do tenant operation.

1. Display the [Server List] page.

   Refer to "8.3.1 L-Platform Management Display Page" for information on how to display the page.

2. Click the [Tenant operation] button.

   [Tenant operation] button 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.

 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

- When stopping servers in a batch, the tenant has a virtual server managed by OVM for SPARC, and the OVM for SPARC does not support shut down operations.

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8.3.18 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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- [Reconfigure] page allows the configuration of the L-Platform to be modified. However, this may only be used when modifications to the configuration of the L-Platform template have been allowed by the infrastructure administrator.

- When reconfiguring an already deployed server, the items that can be reconfigured differ depending on the type and power status of the target server.

  [Virtual server]

  - The server is not running

    Items other than the following can be changed:

    - Storage pool

    - VM pool

    - Storage pool of the system disk

    - Storage pool of the deployed data disk

  - The server is running

    The following items can be changed:

    - Change the L-Platform name

    - Change the server name

    - Change the disk name

    - Add a server

    - Add a disk

    - Change the boot priority

    - Change the segment name

    - IP address

  Along with these, there are items that can be modified depending on the type of server virtualization software. Details are shown below. However, refer to "NIC Add and Delete" for information on adding and deleting NICs.

Item name	Change type	Server virtualization software						
		VMware	Hyper-V	RHEL-KVM	Solaris Zones	Citrix XenServer	OVM for X86	OVM for SPARC
Number of CPUs	Add	Y	N	N	Y	N	N	Y
	Reduce	N	N	N	Y	N	N	Y
CPU Performance	Add	Y	Y	Y	Y	N	Y	-
	Reduce	Y	Y	Y	Y	N	Y	-
CPU Reserved	Add	Y	Y	-	-	-	-	-
	Reduce	Y	Y	-	-	-	-	-
[VMware] CPU Shares [Hyper-V] [Citrix Xen] CPU Weight	Add	Y	Y	-	-	N	-	-
	Reduce	Y	Y	-	-	N	-	-
Memory Size	Add	Y	N	O	Y	N	N	Y
	Reduce	N	N	O	Y	N	N	Y
[VMware] [Citrix Xen] Memory Reserved [Hyper-V] Memory RAM	Add	Y	N	-	-	N	-	-
	Reduce	Y	N	-	-	N	-	-
[VMware] Memory Shares [Hyper-V] Memory Weight	Add	Y	Y	-	-	-	-	-
	Reduce	Y	Y	-	-	-	-	-
Server Type	Modify	Y	Y	Y	Y	Y	Y	Y
Data disk size	Extend	Y	N	-	-	-	-	-
Host Name	Modify	Y	O	O	O	O	O	O

Y: Can be changed when the server is running

O: Depending on the system configuration, cannot be changed during server startup.

N: Cannot be changed when the server is running

- : No item or cannot be specified

[Physical server]

Regardless of the power status, only the following items can be changed.

- Change the L-Platform name

- Change the server name

- Change the disk name

- Add a server

- Add a disk

- Change the server type

- Change the boot priority

- Change the segment name

- Change the host name

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

- Note the following points for Solaris Zones management servers:

    - It may not be possible to get server CPU performance, the number of CPUs, and memory size. "-" is displayed if this is the case.

    - When the OS of the virtual server is Solaris 10, attaching and detaching of disks is not possible.

    - When the virtual server OS is Solaris 11, disks already deployed cannot be deleted.

    - The following operations are not possible:

        - Changes to NIC configuration

        - Disk size changes

    - If the resource pool where the server is operating is not being managed by this product, it is not possible to change the number of CPUs, CPU performance, memory size, server name, or boot priority when changing configuration after deployment.

    - If the resource pool where the server is operating is not being managed by this product, redundancy and automatic server release will not be changed even if the server type is changed.

    - The number of CPUs and CPU performance may be different to the values allocated when the subscription was made. In this case, the number of CPUs and the CPU performance are adjusted so that the number of CPUs times the CPU performance becomes the same value.

    - With Solaris 10 not managed by BladeLogic, reconfiguration of servers is not possible.

- If Server Type is changed, the following items are changed at the same time.

    [Virtual server]

    - Number of CPUs

    - CPU Performance

    - CPU Reserved

    - CPU Shares/ CPU Weight

    - Memory Size

    - Memory Reserved/Memory RAM

    - Memory Shares/ Memory Weight

    - Heartbeat

    - Redundancy

    - Automatic server release

    When changing only Redundancy, Heartbeat, or Automatic server release, set the CPU and memory items back to their previous values after changing Server Type.

    [Physical server]

    - Heartbeat

    - Redundancy

    - Automatic server release

- Server load balancers (SLB) cannot be added or deleted by changing the L-Platform configuration.

- If the number of NICs is increased, IP addresses will not be automatically set on the guest OS. After increasing the number of NICs, log into the guest OS and manually set the IP address displayed in the [L-Platforms] tab.
  After setting the IP address, check that the added NIC can communicate properly with other devices.
  If two or more NICs are being added, it is recommended to add one by one.

If two or more NICs have been added at the same time, correctly set the IP address of each added NIC by setting the IP address and checking the communication for one NIC at a time.

- If a NIC being deleted has been configured on the guest OS, the deletion on the L-Platform tab does not delete the configuration from the guest OS.
Delete the configuration of the NIC from the guest OS beforehand.

- When the NIC used to connect to the guest OS is deleted, it will no longer be possible to connect to the guest OS. When deleting the NIC used to connect to the guest OS, first add an NIC to take over the connection to the guest OS and confirm the connection, then delete the NIC.

- NICs cannot be added to or deleted from a server that has snapshots. When adding or deleting NICs, delete all snapshots of the server beforehand.

- The CPU performance, the CPU reserved, the CPU shares/CPU weight, number of CPUs, the memory size, memory reserved/memory RAM, and the memory shares/memory weight cannot be changed for servers with the VM pool name set to "-".

- If the server's VM pool name set is deleted, changed or moved, then CPU performance, number of CPUs and memory size cannot be changed.

- The capacity cannot be expanded for disks whose storage pool is deleted, renamed, or moved.

- Depending on the guest OS type, disks with expanded capacities may not be recognized or used by the OS. Refer to server virtualization software manuals and technical information to ensure that the expanded disk can be used.
A separate operation is required to make the expanded disk recognizable on the guest OS. Refer to manuals and technical information for each OS for information on the required operations.

- When an IP address is changed, it is not automatically configured as the IP address on the guest OS. After changing an IP address, log in to the guest OS and manually configure the changed IP address.

- When a host name is changed, it is not automatically configured as the host name on the guest OS. After changing a host name, log in to the guest OS and manually configure the changed host name.

- The IP addresses of NICs that are the distribution targets of server load balancers (SLB) cannot be changed.

- When addition of a server and changing of a server name or host name are performed at the same time, or multiple server names or host names are changed at the same time, system settings may cause names to overlap making change impossible.
This applies in cases like the following.

  - When a name used for a server or host before the change is specified for the server name of a server being added

  - When the server names or host names of multiple servers have been switched

If names overlap, perform the configuration changes in several steps.

- When using the host name for the L-Server name, the host names of servers using server virtualization software other than VMware and the host names of virtual servers cannot be changed when they are running.

- For servers using server virtualization software other than VMware or Hyper-V, disk capacities cannot be extended.

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 "8.3.2 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.

Usage fees corresponding to the system reconfiguration will be displayed in the top-right of the window.

🅿 Point

Estimated charges for the L-Platform will only be displayed when the usage fees display is set to enabled.
The displayed usage fees will be calculated according to current prices, and not according to prices at the time of deployment.

 Note

The pool cannot be changed for system disks and extended disks that have already been deployed. If a cloning image associated with the image information includes a data disk, changes to the number of disks cannot be made until deployment is complete.

----

4. When the L-Platform is modified, click the [Next] button.
   The [Confirm] page will be displayed.

   The difference between the old L-Platform and the new L-Platform 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.

 Point

. . . .

[CSV output]

When the [Save as CSV] button located at the bottom left of the window is clicked, the [Select the destination to save] window is displayed where the L-Platform template can be saved as a CSV file.
The default CSV file name format is shown below. This file name can be modified as necessary.

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

[Save specification]

Click the [Save Configuration] button to save the L-Platform configuration, 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.

. . . .

5. Check the displayed contents of the L-Platform configuration, 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.

 Point

. . . .

When the application process is enabled, clicking of the [Reconfigure] button on the [Agreement] page displays the [Forward screen] window. Refer to "8.5 Select Forward Destination of Application Process" for details.

. . . .

The [Complete] page will be displayed when an application for modification of an L-Platform 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 takes 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."

- When an L-Platform is changed, an L-Platform reconfiguration completion notification email is sent to the subscriber.
  If an L-Platform 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.
  Refer to "A.2 Emails Sent when Reconfiguring an L-Platform" for information on the flow and content of email messages sent to the subscriber, tenant administrator, and infrastructure administrator when reconfiguring an L-Platform.

- If the server virtualization software is RHEL-KVM or the subscribed L-Platform includes a Windows server other than Windows Server 2008 R2, after deployment the L-Platform will be available only after the infrastructure administrator configures the IP address, default gateway, and host name. Request the infrastructure administrator to configure the server once you receive notification from the tenant user that the server has been deployed.

- If the server virtualization software is OVM for x86, the L-Platform will be available only after the infrastructure administrator configures the IP address, default gateway, and host name following deployment. Request the infrastructure administrator to configure the server once you receive notification from the tenant user that the server has been deployed.

- If the server virtualization software is Citrix XenServer, then depending on the cloning image, the L-Platform will be available only after the infrastructure administrator configures the IP address, default gateway, and host name after deployment. Request the infrastructure administrator to configure the server once you receive notification from the tenant user that the server has been deployed. Check with the infrastructure administrator whether the cloning image requires configuration (IP address, etc.) after deployment.

- When the server virtualization software is OVM for SPARC, IP addresses are set only **to the NICs that are connected to** admin LAN when you deploy a server whose guest OS is Solaris 11. It is therefore recommended that you connect the NIC to the admin LAN.
  If a deployed server is not connected to admin LAN, after a tenant user's notice of L-Platform deployment the infrastructure administrator needs to set IP addresses and default gateway to the server before use.

- When using Solaris Zones as server virtualization software, an IP address is only configured for the first NIC when deploying a server which uses Solaris 11 for the guest OS. Therefore, when using multiple NICs, use the [L-Platforms] tab to check the IP addresses allocated to the second and later NICs after completing deployment of the relevant server, and directly configure the settings on the guest OS.

- If the server virtualization software is OVM for SPARC or Solaris zone, after a tenant user's notice of L-Platform deployment the infrastructure administrator needs to configure deployed servers to enable direct root ssh login.
  When specifying an administrator user name other than "root" when deploying a server using Solaris Zones as server virtualization software, it is not necessary to make a request to the infrastructure administrator as connections using ssh are possible in the initial state.

- Note the following points if the server virtualization software is OVM for SPARC:

  - If an increase or decrease of the number of NICs is required after deployment, contact the infrastructure administrator.

  - With servers not managed by BladeLogic, it is not possible to change the number of CPUs, the size of the memory, and boot priority when you reconfigure after deployment. It is also not possible to delete servers and disks.

- If the server virtualization software is RHEL-KVM, contact the infrastructure administrator for information on how to subscribe to servers other than Windows or Linux servers.

8.3.19 Cancel an L-Platform

Follow the steps below to cancel an L-Platform:

1. Display the [L-Platform Details] page.
   Refer to "8.3.2 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 "8.3.4 Start and Stop the Server" for 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

When the application process is enabled, clicking of the [Unsubscribe] button on the [Unsubscribe] page displays the [Forward screen] window. Refer to "8.5 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 undeploy after approval and/or judgment procedures."

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.

P 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.
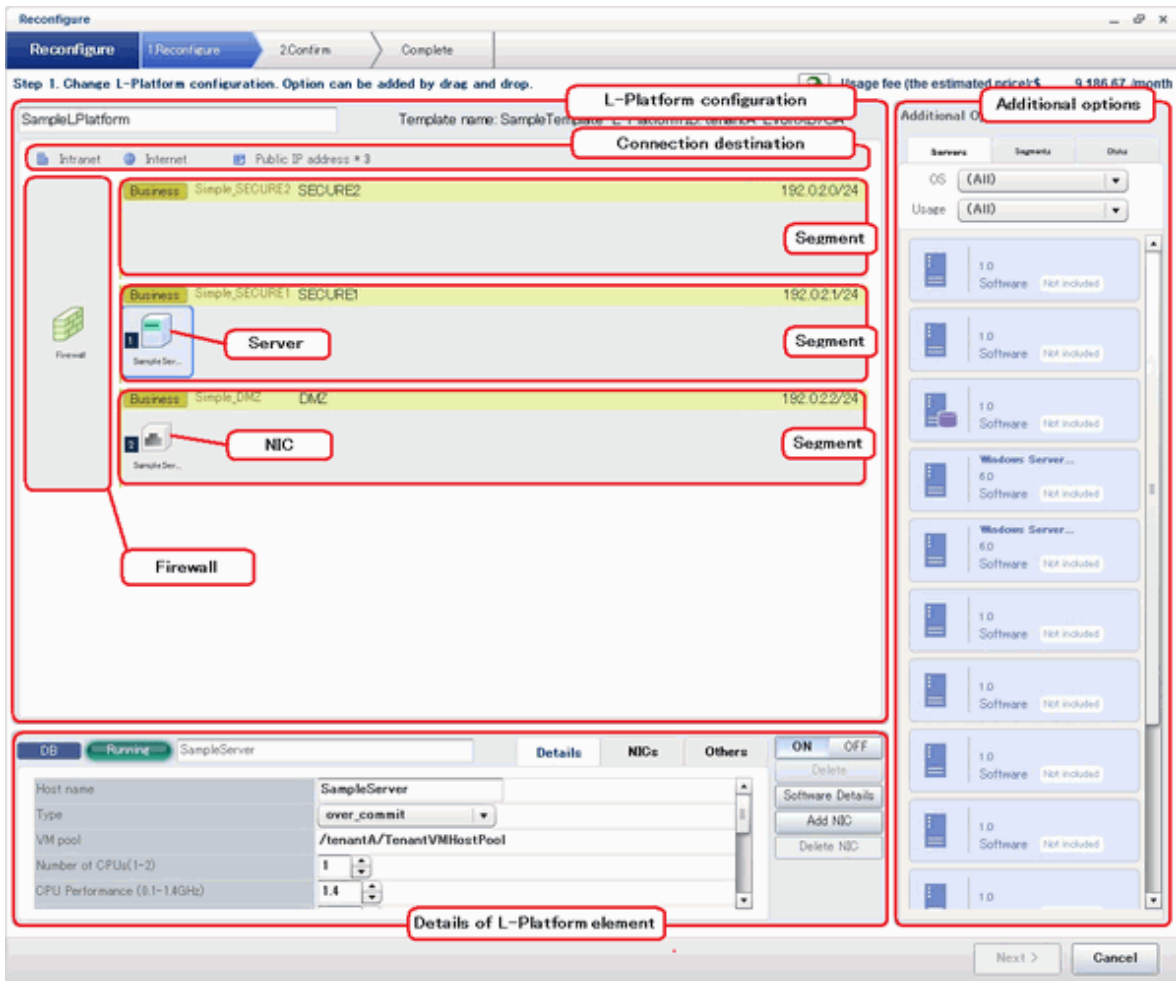Refer to "A.3 Emails Sent when Canceling an L-Platform" for information on the flow and content of email messages sent to the subscriber, tenant administrator, and infrastructure administrator when canceling an L-Platform.

8.3.20 Reconfiguration Page

The following configuration can be defined on the [Reconfigure] page.

- Connection destination: Represents a connection destination external to the L-Platform, and the IP addresses to be published.

- 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:

Pane name	Description
L-Platform configuration	Displays the [L-Platform configuration]. The displayed elements are connection destinations, firewalls, segments, server load balancers, virtual servers, physical servers, and disks. Selected elements are displayed in the [Details of L-Platform element] pane.
Additional Options	Displays a list of elements (virtual server, physical server, segment, and disk) that can be added to the [L-Platform configuration]. The listed elements can be added to the [L-Platform configuration] by dragging and dropping them to the [L-Platform configuration] pane. To add a disk to the virtual server or physical server, drag and drop it there from the list displayed in the [Others] tab.
Details of L-Platform element	Displays details about the elements selected in the [L-Platform configuration] pane and allows their content 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 [L-Platform configuration]. 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.

Icons displayed in the [L-Platform configuration] area are as follows.

Icon	Explanation	Icon	Explanation
	Connect to an intranet		Connect to the Internet
	Number of IP addresses to be published		Virtual server without data disks
	Virtual server with a single data disk		Virtual server with multiple data disks
	Physical server without data disks		Physical server with a single data disk
	Physical server with multiple data disks		NIC of a Virtual server
	NIC of a Physical server		Grouped NICs
	Firewall		Server Load Balancer(SLB)

Icons displayed in the [L-Platform configuration] area to indicate server statuses are shown below.
These are example icons for a virtual server without disks. There are corresponding icons also for a physical server and for a server with no data disk, a single data disk, and multiple data disks.

Icon	Explanation	Icon	Explanation
	Stopped		Running
	Starting, stopping, being deployed, or in a failover		Failed to start or stop

The icons to indicate NICs or servers that are targets for server load balancer (SLB) distribution when the SLB displayed on the [L-Platform configuration] pane is selected are as shown below.
The following examples show a virtual server NIC and a virtual server with a single data disk. There are similar icons for various other NICs and servers.

Icon	Explanation	Icon	Explanation
	Virtual server NIC for SLB distribution		Virtual server, with a single data disk, for SLB distribution

Icons displayed in [Additional Options] area are as follows.

Icon	Explanation	Icon	Explanation
	Virtual image information without data disks		Physical image information without data disks
	Virtual image information with data disks		Management segment
	Business segment		Management segment with admin LAN allocated

Icon	Explanation	Icon	Explanation
	Disconnected disk		Connected disk

📖 **Information**

....

Hover the mouse pointer over the icons displayed in [Additional Options] to check details about the image information, such as the name, OS, segment name, disk name, label, and comments.

....

8.3.20.1 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.
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.

⚠️ **Note**

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If the server includes disks not managed by Resource Orchestrator, disks cannot be added or deleted.

....

8.3.20.2 Connection destination

This item is displayed when using a firewall without using a ruleset.
The connection destination cannot be selected on the [Reconfigure] page when applying for an L-Platform subscription.
When you select a connection destination, you can set up connection with a destination external to the L-Platform.

- Intranet

    This option is displayed only when you specify an intranet as the connection destination in the L-Platform template used for deployment. Select this option to connect to an intranet.

- Internet

    This option is displayed only when you specify the Internet as the connection destination in the L-Platform template used for deployment. Select this option to connect to the Internet.

    - Public IP address

        This option is displayed when [Internet] is displayed.

        - Automatic selection

            Specify the number of IP addresses to use.

        - Manual selection

            If you have specified [Internet] as the connection destination, you can specify the IP address to be published.
            Click the [Add] button. In the [Addition of public IP address] window that is displayed, add the IP address to be published.
            For Added IP address, enter the IP address to be used by the L-Platform and click the [Add] button.
            To delete a specified IP address, select the IP address from the list and click the [Delete] button.

            Consult the infrastructure administrator regarding the IP addresses that can be used.

8.3.20.3 Firewall

When you select a firewall, you can check its settings.

You cannot delete a firewall from an L-Platform.

The [Details of L-Platform element] that is displayed when you select a firewall differs depending on whether you set up the firewall to use the ruleset.

- Firewall that does not use the ruleset

  You can select a firewall only when reconfiguring after deployment of the L-Platform.

  - [Public IP address] tab

    This tab displays the IP address to be published that was assigned to the L-Platform. If DNAT or SNAPT is set as the IP address to be published, a check mark indicating that DNAT or SNAPT is being set into the corresponding IP address line is displayed.

  - [DNAT] tab

    The DNAT setting is displayed. The server name and IP address of the server are displayed for an IP address to be published.

  - [SNAPT] tab

    The SNAPT setting is displayed. The server name and IP address of the server are displayed for an IP address to be published.

- Firewall that uses the ruleset

  - [Firewall] tab

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

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

Note

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 "8.3.9 Setup Firewall" for details.
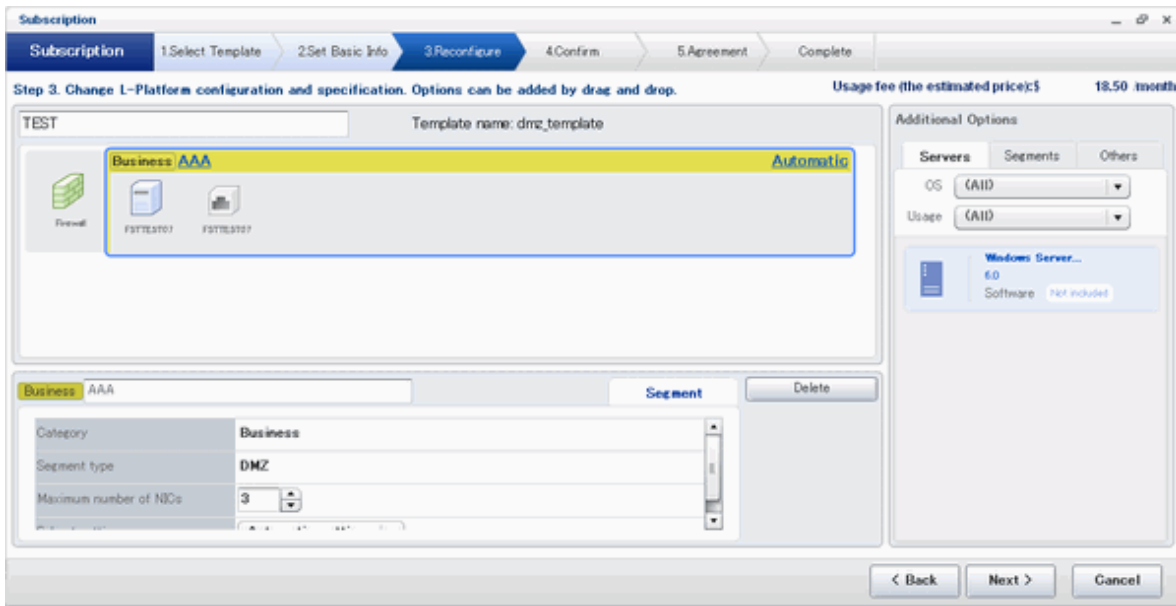
8.3.20.4 Edit a Segment

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 when an automatically selected segment is added. 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 segment extension.
Maximum number of NICs	Specify the maximum number of servers that can be deployed in a segment.
Subnet setting	Specify whether to configure subnet manually or automatically. - Automatic: Configure automatically from available network resources. - Manual: Select the target network resource from the available values.
Subnet addresses	If the subnet setting is set to Manual, select an item from the list of subnet addresses or network resources. The setting item (whether to select from subnet addresses or network resources) depends on system settings.

[Others] tab of [Additional Options]

Part	Description
Segment	Extend a segment.

🛈 Note

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Segment extension and reduction

- You cannot extend or reduce segments if you use a firewall without using a ruleset.

- 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 using an L-Platform template with no segments defined, attach at least one segment.
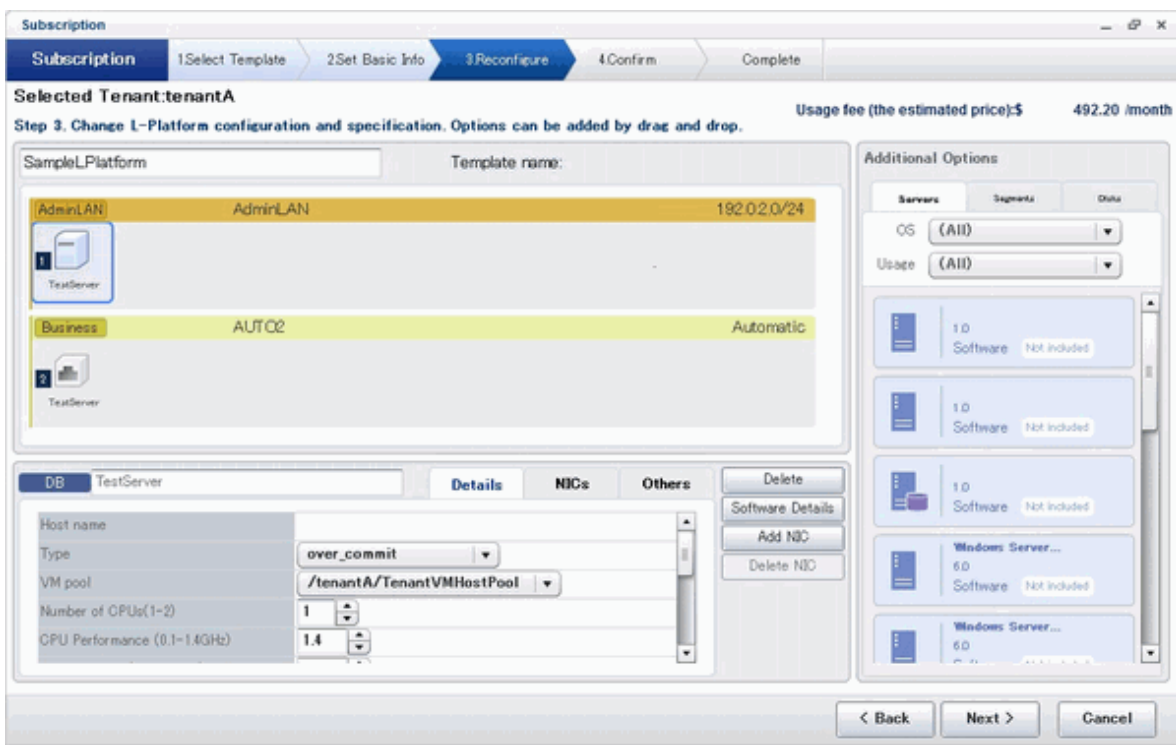
- When a segment is deleted, the connected servers and NICs are also deleted. To delete a segment and NICs but not the servers, delete the NICs first and then delete the segment.

- A segment where there is a server load balancer cannot be deleted.

- The number of segments under firewall control cannot be changed.

- Reduction is not possible while a server is operating.

- In estimated charges, the unit price for NICs deployed in segments where [Subnet Settings] is "Auto-configure" is treated as being 0 Japanese Yen.

8.3.20.5 Edit a Virtual Server

Selecting a virtual server enables editing of that virtual server.

[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.
	For a virtual server added using [Additional Options], "usage + (the number of servers + 1)" is automatically set.
	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. When the OS of the managed server is Windows, specification using up to 15 of the characters below is recommended. For other OSs, specification using up to 63 characters is recommended. The value specified for this item cannot consist of only numbers. Hyphens cannot be used for the first character.
	
	    `Alphanumeric characters, underscores ("_") and hyphens ("-")`

Part		Description
		A pre-existing name cannot be specified.
Type		From the drop-down menu, select the type (specifications) of the registered server. "---- Select ----" is displayed if the type specified before reconfiguration does not exist. The CPU, memory size, and System Disk will be set according to the type of the server selected. The settings for the following L-Server features are also made: - Heartbeat - Redundancy - Automatic server release
VM pool		From the drop-down menu, select the resource name of the VM pool that is the server deployment destination. "---- Select ----" is displayed if the type specified before reconfiguration does not exist. Contact the infrastructure 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. This cannot be specified if the server virtualization software is OVM for SPARC.
	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. When using Resource Orchestrator and server virtualization software, if the recognized physical CPU performance values are different, specify a value less than the smaller of the two. This is not displayed and cannot be specified if the server virtualization software is RHEL-KVM.
	[VMware] Shares [Hyper-V] [Citrix Xen] Weight	Specify the relative allotment ratio for determining the allotment of memory size when multiple virtual machines are competing for memory resources. [VMware] Specify an integer up to 1,000,000. [Hyper-V] 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) [Citrix Xen] Specify an integer up to 65,535.

Part		Description
		This is not displayed and cannot be specified if the server 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.
		[OVM for x86 3.x] The minimum value is 0.3.
		[KVM] The maximum value is 256.
		A value outside the range cannot be set.
	[VMware] [Citrix Xen] 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.
		[Citrix Xen] The minimum value is 0.2.
		Any value outside the allowable range cannot be specified. This is not displayed and cannot be specified if the server 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.
		[VMware] Specify an integer up to 1,000,000.
		[Hyper-V] 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 server virtualization software is RHEL-KVM.
System Disk	Storage pool	From the drop-down menu, select the storage pool to be used. "---- Select ----" is displayed if the type specified before reconfiguration does not exist.
		If the server virtualization software is OVM for x86, only [Automatic] can be selected.
		If the server virtualization software is OVM for SPARC, or if the server virtualization software is RHEL-KVM and the image location type of the cloning image specified for the image information is "Raw Disk", then the value set in the [Disk resource specification] window will be displayed. To change the settings, click the [Change] button to open the [Disk resource specification] window.
	Size	Specify the disk capacity of the virtual server in GB.

		- When reconfiguring during subscription
		  The minimum allowed value is the system disk size of the image information.
		  The maximum allowed value is the lesser of the maximum system disk capacity of the image information or the maximum disk capacity of the storage pool.
		  If the server virtualization software is OVM for SPARC, or if the server virtualization software is RHEL-KVM and the image location type of the cloning image specified for

Part		Description
		the image information is "Raw Disk", then the value set in the [Disk resource specification] window will be displayed. To change the settings, click the [Change] button to open the [Disk resource specification] window.
		- When reconfiguring after deployment The minimum allowed value is the current disk capacity. The maximum allowed value is the lesser of the maximum system disk capacity of the image information or the maximum disk capacity of the storage pool. The value can be changed only if the server virtualization software is VMware or Hyper-V.
	Disk resource specification	Specify this item if the server virtualization software is OVM for SPARC, or if the server virtualization software is RHEL-KVM and the image location type of the cloning image specified for the image information is "Raw Disk". The disk resource can be automatically selected according to the size of the system disk, or the disk resource can be directly selected. To make the settings, click the [Change] button to open the [Disk resource specification] window.
		- When you specify a disk resource according to the size of the system disk: A disk resource with a size larger than the size of the system disk is selected automatically. Select the **[Specify by the size of the disk] option button**, then specify a storage pool and a disk size. A disk resource is selected from amongst those on the selected storage pool. If the storage pool value is Automatic, then a disk resource is selected from amongst the available storage pools.
		- If specifying a disk resource directly: Directly specify the disk resource to be used. After selecting the [**Specify by the resource name**] option button, select the disk resource from the list.
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 orders.
		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

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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.

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Note

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

- When the 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.

- Depending on the guest OS type, system disks which capacity is expanded may not be recognized or used by the OS. Refer to server virtualization software manuals and technical information to ensure that the expanded disk can be used.

A separate operation is required to make the expanded disk recognizable on the guest OS. Refer to manuals and technical information for each OS for information on the required operations.

- If [Automatic] is selected for the system disk storage pool, estimated charges will be calculated based on a system disk unit price of 0 Japanese Yen.
  Note that estimated charges may differ to the actual charges because usage charges are calculated according to the unit price of the storage pool that creates the system disk after subscription or reconfiguration is complete.

- System disk capacity cannot be expanded in the following cases:

  - When snapshots exist on the server

  - When disks not managed by ROR, such as RDM (Raw Device Mapping), are connected to the server

[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.
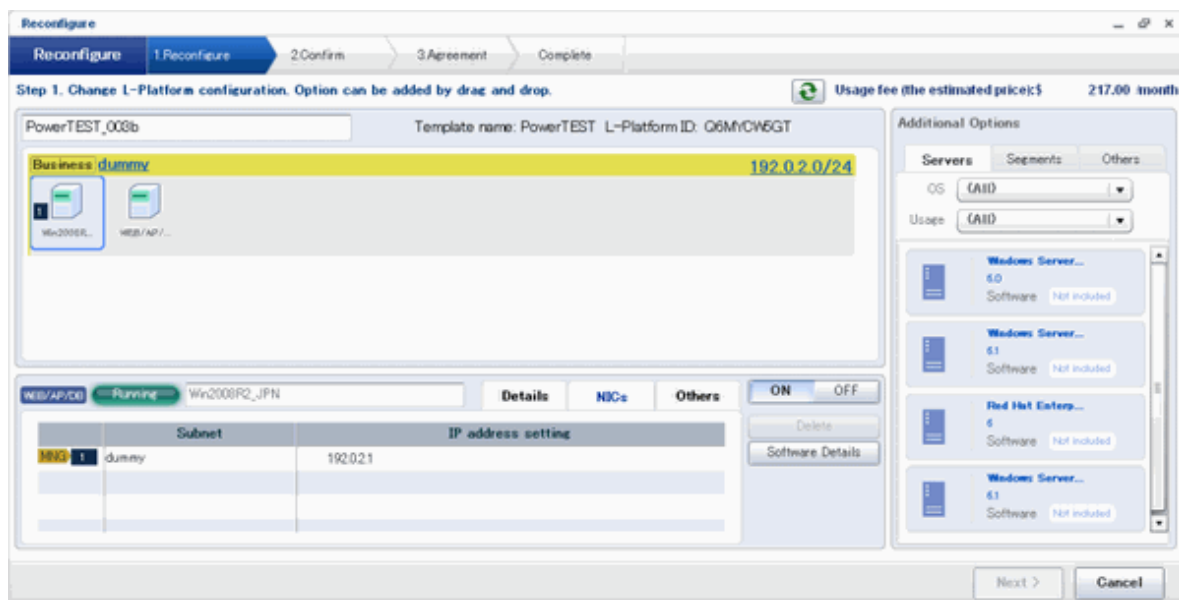

There are two ways of specifying an IP address as follows:

- 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.
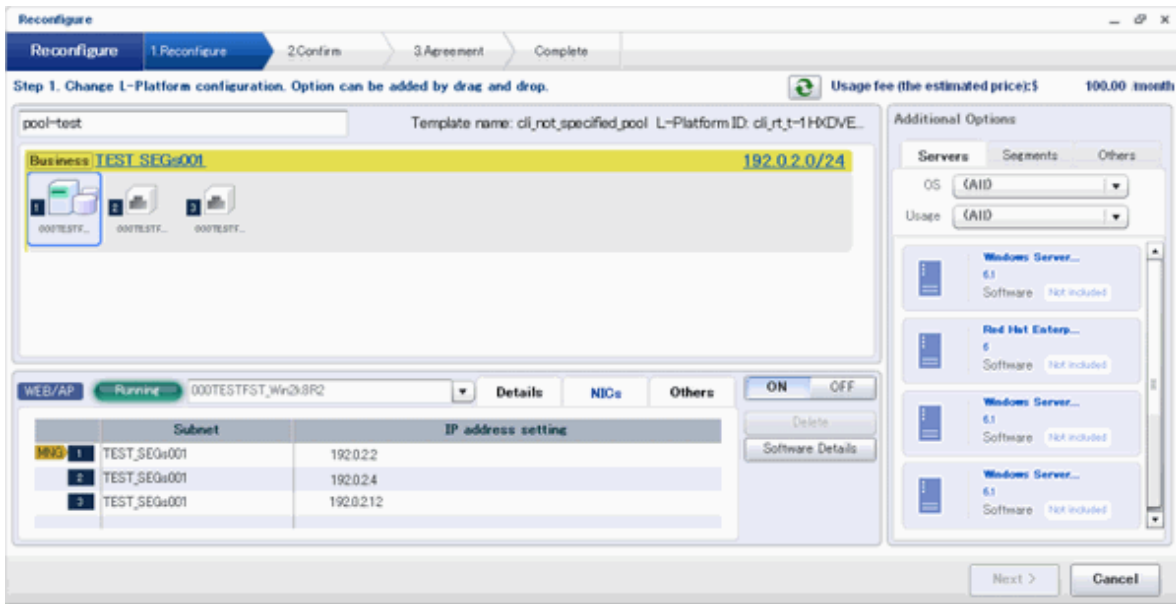
Each NIC is represented by one server. When a server is selected, the same server in each segment is selected.

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 [Additional Options] and dropped on a segment, as many servers as the number of NICs specified for the segment in the image information are displayed.

[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.

When a virtual server has image information for VDI coordination, it is possible to check the VDI user name, the name of the VDI pool the virtual server will belong to after deployment, and the connection information of the VDI admin server.

If the server virtualization software of the virtual server is Solaris Zones and the OS of the virtual server is Solaris 11, the administrator user name can be checked.

P **Point**

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When an infrastructure administrator permits setting of VDI user names, the VDI user can be specified when applying to use an L-Platform. Specify the VDI user name in the following format.

```
NetBIOS domain name\user name
```
. . . .

G **Note**

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The following message may be displayed when VDI definitions are incorrect. When the following message is displayed even when the specified VDI user is correct, consult with the infrastructure administrator.

```
One or more specified VDI user name is not valid. Please check VDI user names.
```

Or

```
The NetBIOS Domain of one or more VDI users is not valid. Please check the NetBIOS Domain.
```
. . . .

NIC Add and Delete

This section explains NIC add and delete.

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**

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- Whether it is possible to add NICs to or delete NICs from the servers that have been deployed differs depending on the type of the server virtualization software and power status of the server. Details are shown below:

Operation	Server status	VMware	Hyper-V	RHEL-KVM	Solaris Zones	Citrix XenServer	OVM for X86	OVM for SPARC
Add	Stop	Y	Y	Y	N	N	N	N
	Operation	Y	N	N	N	N	N	N
Delete	Stop	Y	Y	Y	N	N	N	N
	Operation	Y	N	N	N	N	N	N

  Y: Can add or delete

  N: Cannot add or delete

- A maximum of eight NICs can be added with Solaris Zones management servers.

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

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

- If the server virtualization software is OVM for SPARC, request the infrastructure administrator to add a NIC to or delete a NIC from a deployed server.

. . . .
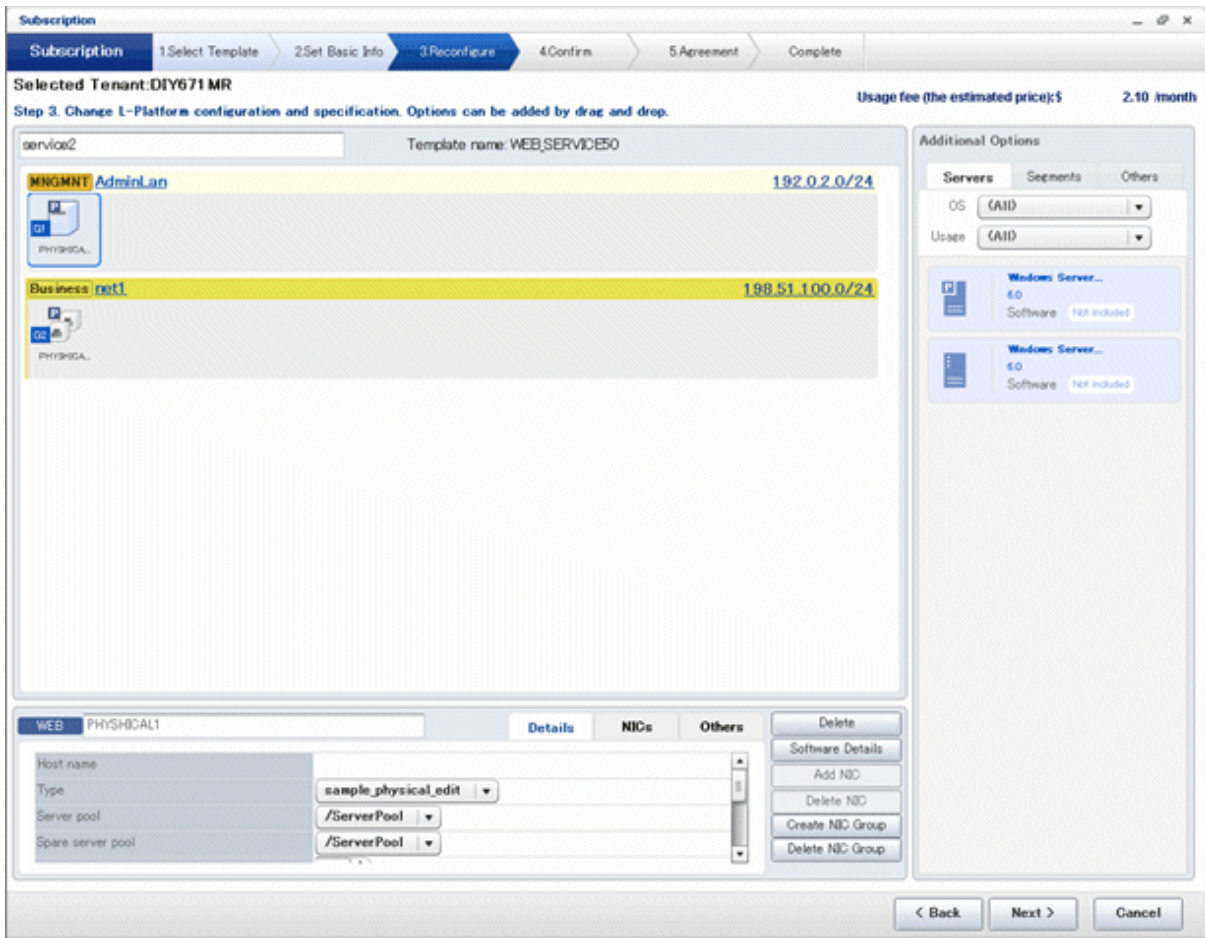
8.3.20.6 Editing a Physical Server

Selecting a physical server enables editing of that physical server.

For a deployed physical server, only the server name, the server type, and the boot priority can be changed.

[Details] tab

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.
	For a virtual server added using [Additional Options], "usage + (the number of servers + 1)" is automatically set.
	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. When the OS of the managed server is Windows, specification using up to 15 of the characters below is recommended. For other OSs, specification using up to 63 characters is recommended. 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. "---- Select ----" is displayed if the type specified before reconfiguration does not exist. The CPU, memory size, and System Disk are set according to the selected server type. The settings for the following L-Server features are also made: - Heartbeat - Redundancy - Automatic server release

| Part		Description
Server pool		From the drop-down menu, select the resource name of the server pool that is the server deployment destination. "---- Select ----" is displayed if the type specified before reconfiguration does not exist. Contact the infrastructure 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. "---- Select ----" is displayed if the type specified before reconfiguration does not exist. Contact the infrastructure 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. Range: 1-99. If the maximum number of CPUs is configured in the image information, the upper limit is set to that value. Any value outside the allowable range cannot be specified.
	performance	Specify the CPU performance of the physical server in GHz units. Range: 0.1-99999.9. If the maximum CPU performance is configured in the image information, the upper limit is set to that value. Any value outside the allowable range cannot be specified.
Memory	Size	Specify the memory size of the physical server in GB units. Range: 0.1-99999.9. If the maximum memory size is configured in the image information, the upper limit is set to that value. Any value outside the allowable range cannot be specified.
System Disk	Storage pool	From the drop-down menu, select the storage pool to be used. "---- Select ----" is displayed if the type specified before reconfiguration does not exist.
	Size	Specify the disk capacity of the physical server in GB. **When reconfiguring during subscription** The minimum allowed value is the system disk size of image information. The maximum allowed value is the lesser of the maximum system disk capacity of image information or the maximum disk capacity of storage pool. **When reconfiguring after deployment** The size cannot be changed.
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.

Note

The server pool physical server with details closest to the specified CPU and memory information is allocated.
If you are deploying a physical server, the estimated and actual charges are calculated based on the values entered for CPU performance and memory size in this step.

[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.
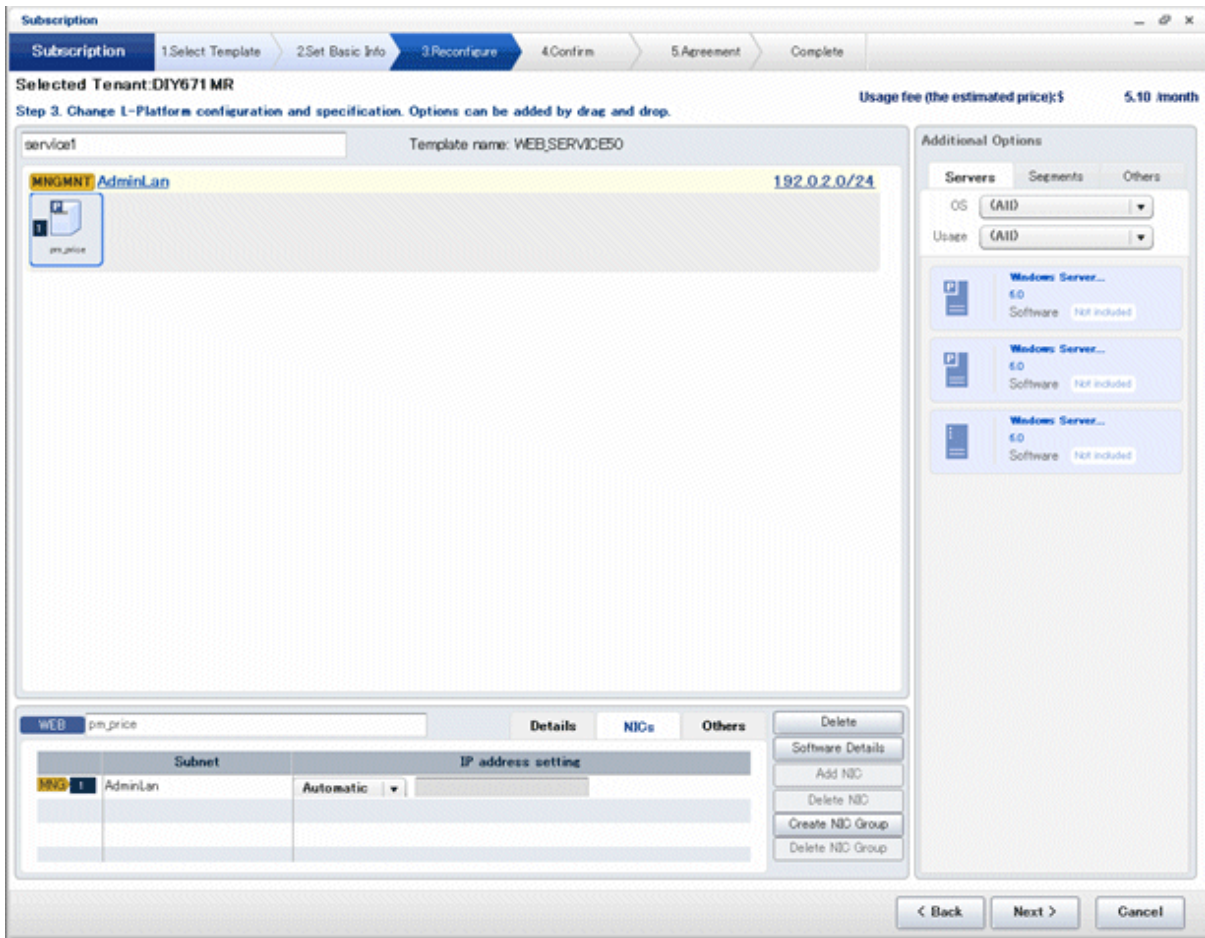

The following two methods are available for specifying an IP address:

  - 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.
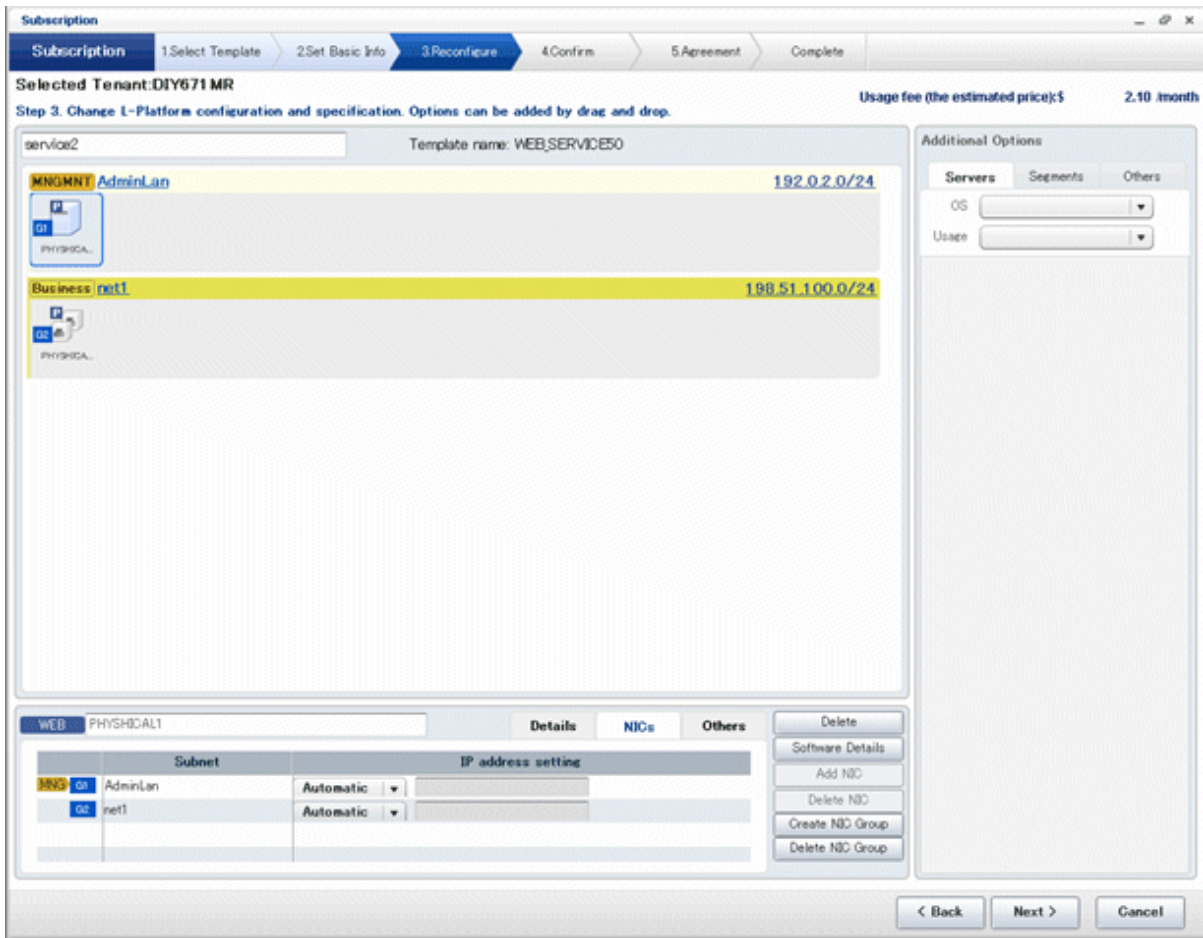
NIC1 is represented by one physical server. When a server is selected, the selected state occurs for all the same servers. A numeric icon is displayed to the bottom left of selected servers. It indicates the NIC number.

Dark-colored servers indicate management NICs, and light-colored servers indicate business NICs.

If a segment is dragged and dropped from [Additional Options], the number of servers displayed matches the number of NICs specified in the image information of the segment.

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The NIC setting will be an untagged VLAN.

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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.

NIC Add and Delete

This section explains NIC add and delete.

Addition and deletion of NICs for physical servers is possible only when applying for L-Platform subscriptions and when adding (new) servers during L-Platform reconfiguration.

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

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

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

- When add or delete 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.

NIC Grouping

This function is available with physical servers only.

This section explains NIC grouping.

- Making a group

  Select multiple checkboxes, and then click the [Create NIC Group] button. However, Multidata input NIC cannot be grouped. Groups can include control NIC.

- Cancelling a grouping

  Select multiple checkboxes, and then click the [Delete NIC Group] button.
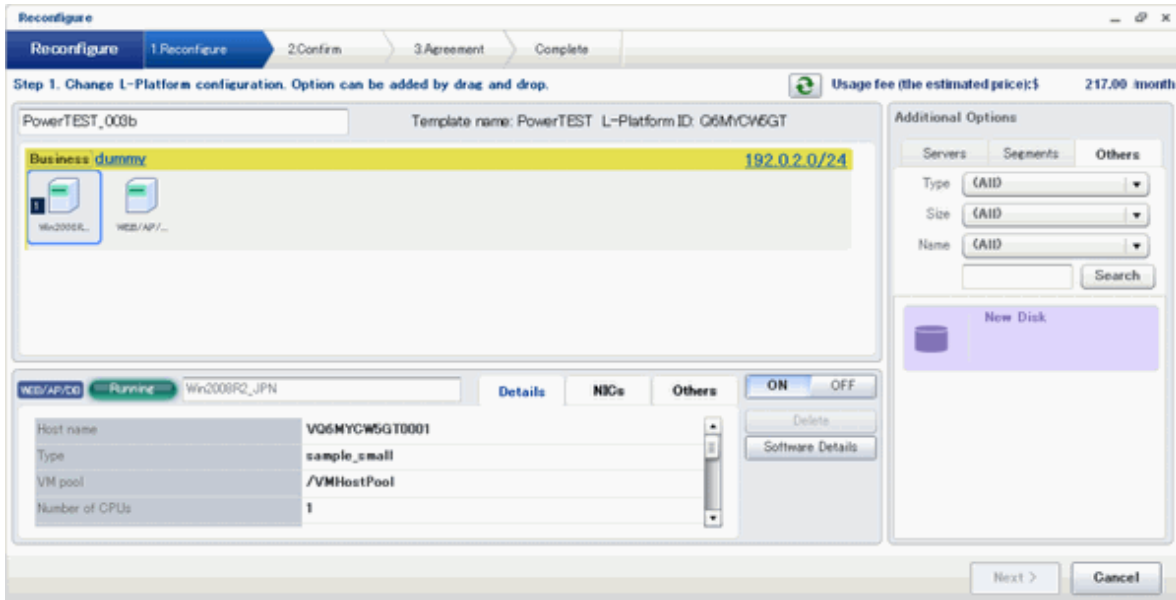
Note

- 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.

- In estimated charges, grouped NICs are handled as if each NIC in the group exists.

8.3.20.7 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.

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	Sets the name of a disk name in the L-Platform template. For a disk added using [Additional Options], "DISK + (the number of disks + 1)" is automatically set. 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. - When reconfiguring during subscription Either the maximum disk size of a storage pool or the maximum data disk size of image information, whichever is the smaller, can be specified. - When reconfiguring (a previously undeployed disk) after deployment Either the maximum disk size of the storage pool or the maximum data disk size of the image information, whichever is the smaller, can be specified. - When reconfiguring (a deployed disk) after deployment The minimum allowed value is the current data disk capacity. The maximum allowed value is the lesser of the maximum disk capacity of storage pool or the maximum data disk capacity of image information. The value can be changed only if the server virtualization software is VMware or Hyper-V.

8.3.20.8 Edit a disk (for a physical server)

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.

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	Sets the name of a disk name in the L-Platform template. For a disk added using [Additional Options], "DISK + (the number of disks + 1)" is automatically set. 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.

8.3.20.9 Server load balancer

Selecting a server load balancer enables confirmation of the settings of the server load balancer.

- For SLBs not using rulesets

  The IP addresses and distribution targets set for server load balancers can be checked.

- [IP Address] tab

  The virtual and public IP addresses set for an SLB are displayed.

- [Distribution] tab

  The target servers, their statuses, and the distribution status are displayed for each SLB rule configured on an SLB.
  It is possible to enable and disable load balancing by selecting the checkbox of the target server, and then clicking the [Detach] button or the [Attach] button.

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  When disabling load balancing, it is possible to specify the amount of time until it is disabled.

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- For server load balancers not using rulesets

  The rulesets and parameters set in the server load balancer can be checked.

  - [SLB] tab

Part	Description
Deployment ruleset	The names of the ruleset set in the server load balancer are displayed. The ruleset names cannot be modified.
Description	Descriptions of the ruleset for deploying server load balancer are displayed.

    Click the [Parameter details] button to confirm the values of the parameters set in rulesets.
    If a server load balancer is defined in an L-Platform template, the default rulesets and parameter values are those specified in the L-Platform template.

  - [Parameter details] page

    A list of parameters defined in the ruleset is displayed in the [Parameter details] page.
    Click the [Parameter details] button to display the [Parameter details] page.

Part	Description
Selected ruleset	The names of the ruleset for deploying server load balancer are displayed.
Description	Descriptions of the ruleset for deploying server load balancer are displayed.

    - [SLB] tab

      Parameters that are unrelated to the server are displayed:

Part	Description
Parameter	Displays the parameter labels.
Description	Displays the parameter descriptions.
Value	The value to be set for the parameter is displayed.
Description of the selected parameter	The description of the parameter in the row being pointed at is displayed.

    - [Server] tab

      Parameters that are related to the server are displayed:

Part	Description
Server	The names of the servers where the parameters are enabled are displayed. "-" is displayed for parameters unrelated to the server.
Parameter	Displays the parameter labels.

Description	Displays the parameter descriptions.
Value	The value to be set for the parameter is displayed.
Description of the selected parameter	The description of the parameter in the row being pointed at is displayed.

8.4 Display Event Logs

Event logs of the errors that occurred while using the functions of the [L-Platforms] tab 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-Platforms] tab.
   A list of event logs will be displayed.

The [Event log] page displays up to 100 events and each event is displayed until the same date of the next month from the date it occurred. If the same date does not exist in the next month, the event is displayed until the last date of the next month.

Refer to "Chapter 19 Messages Starting with VSYS" in "Messages" for information on the messages displayed in the event log.

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Right-click on the [Event Log] page to display the [Copy the event log] menu. Select this menu to save a converted string to the clipboard in CSV file format, according to the following conditions:

- Enclose each "date and time", "log type", and "log message" of the event log in double quotation marks.

- Separate each "date and time", "log type", and "log message" using commas.

- Double quotation marks in messages must be prefixed by a double quotation mark.

🗒 Example
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Before changing: 2013/03/04 14:12 Warning : VSYSxxxx:"Error message" is converted.

After changing: "2013/03/04 14:12","Warning","VSYSxxxx:""Error message"" is converted."
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8.5 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

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The application process is set by the infrastructure 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. The [Forward screen] window is displayed when an L-Platform usage application is made, an L-Platform configuration is modified, or an L-Platform is released.

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 forward destination will not be displayed.
Reason for application	Specify the reason for application using 100 or less characters.

2. Specify the item and click [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

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

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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 9 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 infrastructure 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 infrastructure 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 9 Request" for information on how to check the status of application process.

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8.6 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 the [L-Platforms] tab. 3. Check IP address of the target server from the list displayed.
User ID	[Windows] Administrator

Item	Value
	[Linux] root [Solaris] root - When using Solaris Zones as the server virtualization software and the OS of the target server is Solaris 11, log in using the administrator user name.
Password	The initial password can be confirmed using the following procedures: 1. Select [Service List] on the [Management] page of the [L-Platforms] tab. 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. When using Solaris Zones as the server virtualization software, and the OS of the target server is Solaris 11 and the management user name is something other than that of the root account, both the initial password and the Root role password are displayed.

🈸 **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.

- If the server virtualization software is Solaris Zone and the administrator user name is "root", the infrastructure administrator needs to configure deployed servers to enable direct root ssh login after deployment of a tenant user. When you receive notification from the tenant user that the server has been deployed, request the tenant administrator to enable direct root ssh login to the guest OS. When the administrator user name is something other than "root", the above configuration is not necessary.

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8.7 Server Load Balancer (SLB) Operation Procedure

This section describes the procedure for using an L-Platform template that includes a server load balancer (SLB).

1. Check the following two points before releasing or subscribing to a template that includes a server load balancer. Check with the infrastructure administrator if there are points that need to be clarified.

    - Preparations to set the server load balancer are complete

      SLB settings are required to use the server load balancer. Check the following:

        a. You understand the meaning of the parameters set when configuring the server load balancer

        b. You know the values such as the virtual IP address that need to be set in (a)

    - Proper preparations have been made for server load balancer operations

      Server load balancer operations are performed by configuring rulesets and the parameters in the rulesets. Check the following:

        a. You understand the rulesets for the operation of the server load balancer

        b. You understand the meaning of the parameters set in (a)

        c. You know the values that need to be set in (b)

2. Provide the tenant user with the information obtained in 1 and provide appropriate instruction in the deployment and operation of an L-Platform that includes a server load balancer.

3. Release the L-Platform template that includes the server load balancer to the tenant so that subscription to an L-Platform that includes a server load balancer can be performed. This is a job for the tenant administrator when they are releasing an L-Platform template.

4. Refer to "Server Load Balancer (SLB) Settings" and setup the server load balancer after the L-Platform is deployed

5. Refer to "L-Platform Reconfiguration" and perform the procedures described to change the configuration of an L-Platform.

6. If necessary, use the information obtained in 1 to perform "Server Load Balancer (SLB) Operations". After executing the operation, check the "Server Load Balancer (SLB) Operation Logs"

7. Refer to "Cancel an L-Platform" and perform the procedures described to cancel an L-Platform when it becomes unnecessary.

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It is possible for the infrastructure administrator to check whether a server load balancer is included during approval of the L-Platform subscription when the application process is valid and when an approved process is set.

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Chapter 9 Request

This chapter explains how to operate the application list.

🔔 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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9.1 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 [Requests] 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	
	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	

Item	Description
	- _ (*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 ' ApproverOnly' and 'JudgeOnly'

  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				

9.2 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

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Refer to "Appendix A Emails Sent during L-Platform Operations" for information on the email sent when an application is canceled.
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Perform the following steps to cancel an application process:

1. From the ROR console, select [Requests] 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.

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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 infrastructure administrator of the process instance name in which the error occurred, together with the details of the error, and request the infrastructure administrator to investigate the error and deal with it accordingly.

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, take one of the following actions:

- Click the [Cancel] button, and then select the [Details] tab.

- Select the [Status] tab on the [Details] tab.

- When canceling applications and [Failed] is displayed as the result in the [Result Summary] window, contact the tenant administrator with the process instance name that failed and the error details and have them investigate the error and take action as necessary.
Details about the errors are displayed by clicking [Details] in the comments in the [Result Summary] window.

9.3 Approving an Application

An approver approves application processes.
The approver is the Tenant Administrator specified as the forwarding destination at the time of application.

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- 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.

- Refer to "Appendix A Emails Sent during L-Platform Operations" for information on the email sent when an application process is approved.

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 [Requests] tab.

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 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.

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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.

Usage fees checks

Estimated price for the L-Platform will only be displayed when accounting display settings have been enabled by a system administrator.

Note that usage fees shows the prices at the following points and will not be recalculated even if there are changes in prices of configuration elements after this. Please be aware of this issue:

- 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

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Note
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- 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.

- When approving applications and [Failed] is displayed as the result in the [Result Summary] window, contact the tenant administrator with the process instance name that failed and the error details and have them investigate the error and take action as necessary.
  Details about the errors are displayed by clicking [Details] in the comments in the [Result Summary] window.

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Chapter 10 Tenant

This chapter explains how to manage tenants.

10.1 Overview of Tenant Management

The information of users belonging to the same tenant as the logged in user can be managed using the [Tenants] tab 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 Tenant Administrator cannot perform the following operations for their own account on the User List window:

    - User modification

    - User deletion

    - User password change

  The Tenant Administrator can change user information and the password for their own account on the Modify Account window under the "Account".

- When using Single Sign-On authentication, 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:

- Select the [Tenants] tab on the ROR console.

10.2 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 [Tenants] 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 (*1) - 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. (*2) This button is not displayed if tenant_user (tenant user) or a role created from a copy of tenant_user does not exist.
[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.

Item	Explanation
[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: One of the following role names is displayed. Tenant_admin (tenant administrator), tenant_operator (tenant operator), tenant_monitor (tenant monitor), tenant_user (tenant user), or a role name created from a copy of one of these.

*2: 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.

10.3 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 following window is an example for internal authentication.

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 internal authentication, or when using the directory service provided with ServerView Operations Manager using Single Sign-On authentication] Specify the user ID. Specify a character string of 1 to 32 characters consisting of single-byte lower-case alphabetics and numerics, hyphens (-), underscores (_), and periods (.), and starting with lower case alphabet or numbers. This specification is mandatory. [When using Active Directory for the directory service] Specify the user ID. Specify a character string of 1 to 20 characters consisting of single-byte lower-case alphabetics and numerics, hyphens (-), underscores (_), and

Item	Explanation
	periods (.), and starting with lower case alphabet or numbers. 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	Select the role for the user you are creating. Select tenant_user (tenant user) or a role created from a copy of tenant_user. Tenant_user is not displayed when the tenant_user role has been deleted.
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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Note

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If the following message is output, contact the infrastructure administrator: The user name is output to xxxxx.

```
System error: Contact the system administrator. (Error code=ctsec20401:65809:User (xxxxx) has not
been registered.)
```

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10.4 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.
Role	Select the role of the user. Select tenant_user (tenant user) or a role created from a copy of tenant_user. Tenant_user is not displayed when the tenant_user role has been deleted.

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.

10.5 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 the role of the user. Select tenant_admin (tenant administrator), tenant_operator (tenant operator), tenant_monitor (tenant monitor), tenant_user (tenant user), or a role created from a copy of one of these. Tenant_admin, tenant_operator, tenant_monitor, or tenant_user is not displayed when the corresponding role has been deleted.
Personal Information	

Item		Explanation
	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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10.6 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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10.7 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 11 Accounting

This chapter explains how to manipulate usage charge.
Past information about usage charge can be displayed.

11.1 Usage Charge Window

To display the usage charge list by L-Platforms belonging to a tenant, perform the following:

1. Specify the search conditions.

	Item	Description
Search filter	Browse specification	Use the following procedure to select the relevant [L-Platform ID]: 1. Click the Browse button to display the [Select L-Platform IDs] window. 2. A list of L-Platforms belonging to the tenant is displayed when the relevant tenant is selected from the Tenant menu. Tenants that have been deleted are displayed in parentheses and grayed out when the [Include deleted tenants] checkbox is selected. 3. Select the relevant L-Platform.
	String specification	Specify part of the L-Platform ID or L-Platform name. Use the asterisk as a wild card for searches. Example: lplatform*
Time period		Specify the period for which data is to be searched. The period between the previous month and the current month is selected by default.

The L-Platforms displayed in the [Select L-Platform IDs] window and in the search results are those deployed up until the previous day.

2. Click [Search] and a list of usage charge will be displayed in the lower part of the window.
Click [Clear] to clear the specified search conditions and restore the default display.

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If the time period for the search includes more than one month, a separate list is displayed for each month.
L-Platforms inside parentheses and grayed out in the list of usage charge are ones that have already been returned.

[Usage Charge] shows the charges up until the previous day.

Up to 120 items can be displayed in the search results.

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File download

To download the displayed content as a file, perform the following:

1. Click the [Download] button and a window is displayed to select the file format to download.

2. Select either [CSV] or [XML] and click [OK].

3. The [Usage Charge] window is displayed again after the file output destination is specified.

11.2 Usage Charge Detail

Displays the details of the monthly usage charge for the selected L-Platform.

Operations in the [Usage Charge] window

To display detailed information for usage charge from the [Usage Charge] window, perform the following:

1. Select the [L-Platforms] tab in the [Usage Charge] window and search for the relevant L-Platform.

2. Click the relevant [L-Platform ID] to display the [Usage Charge Detail] window.

Usage Charge Detail information

The following items are displayed in the detailed information in the [Usage Charge Detail] window:

Item		Description
Tenant Information	Tenant name	Displays the tenant name.
	Tenant display name	Displays the tenant display name at the date and time of closing.
	Deleted date	If the tenant has been deleted, the date deleted is displayed.
L-Platform Information	L-Platform ID	Displays the selected L-Platform ID.
	L-Platform name	Displays the selected L-Platform name.
	Unsubscribed date	If the selected L-Platform has already been canceled, the cancellation date is displayed.
Usage Charge Detail	Time period	Displays the year and month of the usage charge search target for the selected L-Platform.
	Total charge	Displays the monthly usage charge totals for the selected L-Platform.
	Product	Displays the product type. Whether using a virtual server or a physical server, the name is displayed enclosed in parentheses. For disk size, following information is displayed enclosed in parentheses according to the kind of disk type. - System disk: system disk (fixed string) - Data disk: disk name For NICs, the total of breakdown amounts for each server is displayed in compact view. When the view is expanded, a detailed breakdown is displayed. For snapshots, the total of breakdown amounts for each virtual server is displayed in compact view. When the view is expanded, a detailed breakdown is displayed for each snapshot ID. If there is a change in configuration or in unit price for the product, the usage charge information for the same product is displayed over multiple lines.
	Resource	Displays the names of the resources used.

	Configuration	Displays configuration information.
		The configuration information displayed for each product is as follows:
		
		- Template: None
		
		- Virtual server: None
		
		- Physical server: None
		
		- CPU: Number of CPUs, CPU performance (GHz)
		
		- Memory capacity: Capacity (GB)
		
		- Disk capacity: Capacity (GB)
		
		- NIC: Number of NICs
		
		- Snapshot
		
		  - Compact view: None
		
		  - Expanded view: Capacity (GB)

	Unit price	Displays the unit price for the product.
	Usage point	Displays the total amount of monthly usage time for the product.
	Subtotal charge	Displays the monthly usage charge for each product.

Note

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The usage charges for NICs are displayed only when enabled by the system administrator.

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File download

To download the displayed content as a file, perform the following:

1. Click the [Download] button and a window is displayed to select the file format to download.

2. Select either [CSV] or [XML] and click [OK].

3. The [Usage Charge Detail] window is displayed again after the file output destination is specified.

Chapter 12 Account

This chapter explains account operations.

12.1 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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When using Single Sign-On, 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.

12.2 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.
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.

12.3 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.

Item	Explanation
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.

Appendix A Emails Sent during L-Platform Operations

This appendix describes the flow and content of emails sent during L-Platform operations.

A.1   Emails Sent when Subscribing to an L-Platform

This section explains the flow and content of emails sent when subscribing to an L-Platform.

The following diagram shows the flow of emails sent when a subscription is made to use an L-Platform - the example shows the use of VMware as the virtualization software.

Figure A.1 Flow of emails sent when subscribing to an L-Platform
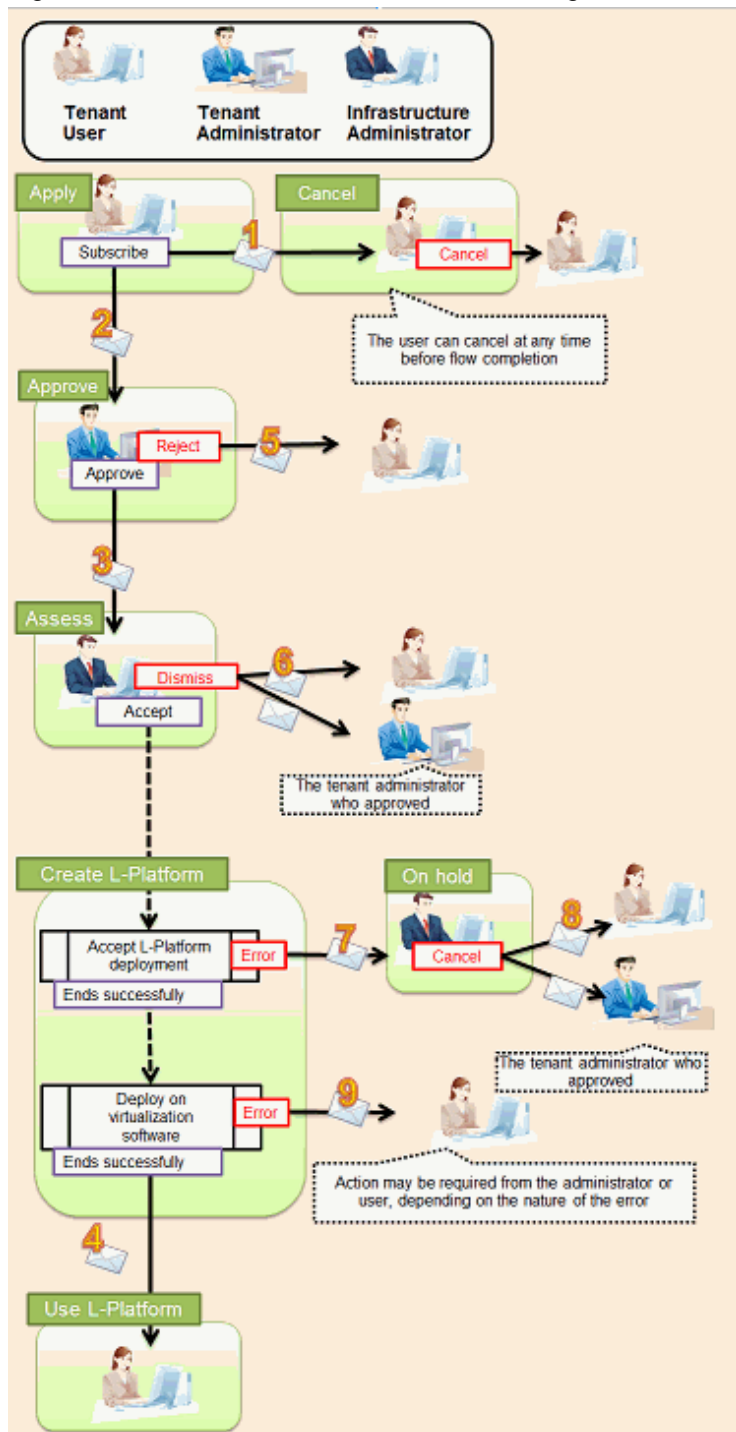
Below is the description of the content of emails sent and the action to take - the numbers refer to the email numbers in the diagram above.

1. Notification of application acceptance

   This email is sent to the subscriber when the application to subscribe to the L-Platform is made.

Item	Description
Recipient	Subscriber
Timing	Sent when application to subscribe is made
Purpose	Notifies acceptance of subscription application
Email content	Process instance name, subscriber name, application type (L-Platform subscription), L-Platform name, reason for application, forward destination. Note that the forward destination is sent when configured to approve subscription applications.
Action	None After this notification is received, the subscription can be canceled.

2. Notification of approval request

   This email is sent to the approver (tenant administrator) when the application to subscribe to the L-Platform is made.

Item	Description
Recipient	Approver (tenant administrator)
Timing	Sent when application is made Sent when configured to approve subscriptions at the time the application is made
Purpose	Request for approval of subscription
Email content	Process instance name, subscriber name, application type (L-Platform subscription), L-Platform name, reason for application, forward destination, approval URL
Action	Select [Request] using the approval URL in the email or the ROR console, and approve or reject the subscription.

3. Notification of assessment request

   This email is sent to the assessor (infrastructure administrator) when the application to subscribe to the L-Platform is made.

Item	Description
Recipient	Assessor (infrastructure administrator)
Timing	Sent when application is made or when approval is given Sent when configured to assess applications at the time they are submitted
Purpose	Request for assessment of subscription
Email content	Process instance name, subscriber name, application type (L-Platform subscription), L-Platform name, reason for application, approver name, approval comment, assessment URL Note that the approver name and approval comments are sent when configured to approve applications at the time they are submitted
Action	Select [Request] using the approval URL in the email or the ROR console, and accept or dismiss the subscription.

4. Notification of completed creation

   This email is sent to the subscriber when creation of the L-Platform is complete.

Item	Description
Recipient	Subscriber
Timing	Sent when L-Platform creation is complete

Item	Description
Purpose	Notifies that creation of L-Platform is complete
Email content	L-Platform name, L-Platform ID, server name, IP address, default password
Action	None

5. Notification of application rejection

This email is sent to the subscriber when a request for approval is rejected.

Item	Description
Recipient	Subscriber
Timing	Sent when the request for approval of the subscription is rejected
Purpose	Notifies of rejection of subscription
Email content	Process instance name, subscriber name, application type (L-Platform subscription), L-Platform name, reason for application, forward destination, approver name, approval comment
Action	None

6. Notification of application dismissal

This email is sent to the subscriber when an assessment is dismissed.

Item	Description
Recipient	Subscriber and approver (tenant administrator)
Timing	Sent when the subscription assessment is dismissed
Purpose	Notifies dismissal of subscription assessment
Email content	Process instance name, subscriber name, application type (L-Platform subscription), L-Platform name, reason for application, forward destination, approver name, approval comment, assessor name, assessor comment

Note that the approver name and approval comments are sent when configured to approve applications at the time they are submitted |
| Action | None |

7. Notification of application reservation

This email is sent to the infrastructure administrator when an error occurs during accepting L-Platform deployment.

Item	Description
Recipient	Infrastructure administrator
Timing	Sent when an error occurs during accepting L-Platform deployment
Purpose	Error notification
Email content	Process instance name, subscriber name, application type (L-Platform subscription), L-Platform name, reason for application, reservation URL
Action	Select [Request] using the reservation URL in the email or the ROR console. Check the details of the error and cancel.

8. Notification of application cancellation

This email is sent to the subscriber and approver (tenant administrator) if the subscription is canceled at Step 7.

Item	Description
Recipient	Subscriber and approver (tenant administrator)
Timing	Sent when canceled due to the subscription being reserved

Item	Description
Purpose	Notifies cancellation of the subscription
Email content	Process instance name, subscriber name, application type (L-Platform subscription), L-Platform name, reason for application, cancellation comment
Action	Subscribe again if required.

9. Error notification

   This email is sent to the subscriber if an error occurs with deployment on virtualization software.

Item	Description
Recipient	Subscriber
Timing	Sent when an error occurs with deployment on virtualization software
Purpose	Notifies of errors
Email content	L-Platform name, L-Platform ID
Action	Request the infrastructure administrator to investigate.

The following example illustrates an actual email that is sent.

This is the content of the actual notification that is sent when an application is accepted. Other emails are also sent in the same format.

📨 Example

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```
Subject: [Important announcement] Notification of application acceptance

Dear Mr. Fujitsu,

The following application was accepted:

---------------------------------------------------------------------
[Content of application ]

Process instance name: L-Platform subscription (Task 1)
Subscriber name: Taro Fujitsu
Application type: L-Platform subscription
L-Platform name: L-Platform-20130701-01
Reason for application: For new system development
Forward destination: All administrators

Please refer to the above-mentioned process instance name from the application list of ROR console.
---------------------------------------------------------------------

This E-mail is for information only.
Even if you send reply to this E-mail, you will not receive any reply.
```

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A.2 Emails Sent when Reconfiguring an L-Platform

This section explains the flow and content of email messages sent when reconfiguring an L-Platform.

The following diagram shows the flow of emails sent when reconfiguring an L-Platform - the example shows the use of VMware as the virtualization software.

Figure A.2 Flow of emails sent when reconfiguring an L-Platform
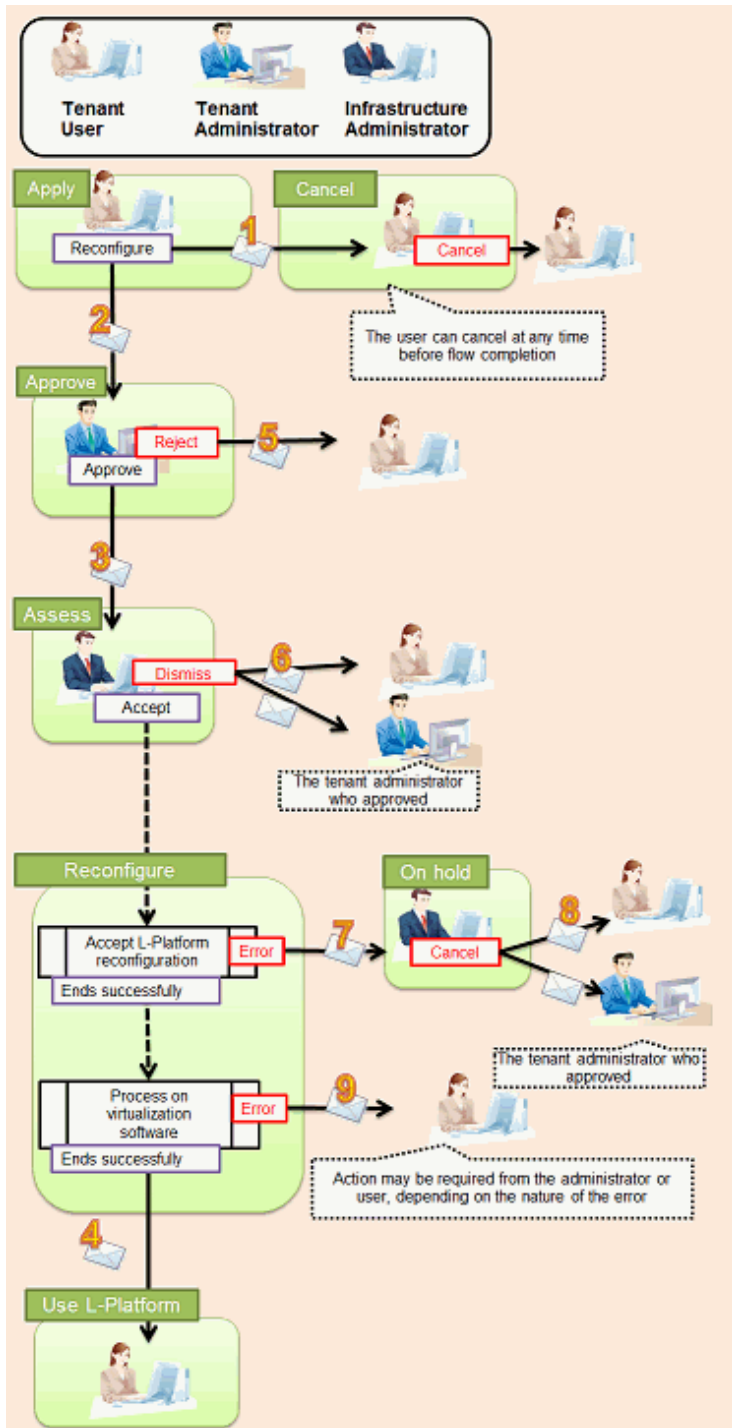
Below is the description of the content of emails sent and the action to take - the numbers refer to the email numbers in the reconfiguration flow diagram.

1. Notification of application acceptance

   This email is sent to the subscriber when applying to reconfigure an L-Platform.

Item	Description
Recipient	Subscriber
Timing	Sent when application to reconfigure is made
Purpose	Notification of reconfiguration application acceptance

Item	Description
Email content	Process instance name, subscriber name, application type (L-Platform reconfiguration), L-Platform name, reason for application, forward destination Note that the forward destination is sent when configured to approve reconfiguration applications.
Action	None After this notification is received, the reconfiguration can be canceled

2. Notification of approval request

This email is sent to the approver (tenant administrator) when the application to reconfigure the L-Platform is made.

Item	Description
Recipient	Approver (tenant administrator)
Timing	Sent when reconfiguration application is made Sent when configured to approve reconfiguration applications
Purpose	Request for approval of reconfiguration
Email content	Process instance name, subscriber name, application type (L-Platform reconfiguration), L-Platform name, reason for application, forward destination, approval URL
Action	Select [Request] using the approval URL in the email or the ROR console, and approve or reject the reconfiguration.

3. Notification of assessment request

This email is sent to the assessor (infrastructure administrator) when the application to reconfigure the L-Platform is made.

Item	Description
Recipient	Assessor (infrastructure administrator)
Timing	Sent when reconfiguration application is made Sent when configured to assess reconfiguration at the time the application is made
Purpose	Request for assessment of reconfiguration
Email content	Process instance name, subscriber name, application type (L-Platform reconfiguration), L-Platform name, reason for application, approver name, approval comment, assessment URL Note that the approver name and approval comments are sent when configured to approve reconfiguration applications
Action	Select [Request] using the assessment URL in the email or the ROR console, and accept or dismiss the reconfiguration.

4. Notification of completed reconfiguration

This email is sent to the subscriber when reconfiguration of the L-Platform is complete.

Item	Description
Recipient	Subscriber
Timing	Sent when reconfiguration of the L-Platform is complete
Purpose	Notifies that reconfiguration of the L-Platform is complete
Email content	L-Platform name, L-Platform ID
Action	None

5. Notification of application rejection

This email is sent to the subscriber when a request for approval is rejected.

Item	Description
Recipient	Subscriber
Timing	Sent when the request for approval of the reconfiguration is rejected
Purpose	Notification of reconfiguration application rejection
Email content	Process instance name, subscriber name, application type (L-Platform reconfiguration), L-Platform name, reason for application, forward destination, approver name, approval comment
Action	None

6. Notification of application dismissal

This email is sent to the subscriber when an assessment is dismissed.

Item	Description
Recipient	Subscriber and approver (tenant administrator)
Timing	Sent when the reconfiguration assessment is dismissed
Purpose	Notifies dismissal of reconfiguration application
Email content	Process instance name, subscriber name, application type (L-Platform reconfiguration), L-Platform name, reason for application, forward destination, approver name, approval comment, assessor name, assessor comment Note that the approver name and approval comments are sent when configured to approve reconfiguration applications
Action	None

7. Notification of application reservation

This email is sent to the infrastructure administrator when an error occurs during accepting L-Platform update.

Item	Description
Recipient	Infrastructure administrator
Timing	Sent when an error occurs during accepting L-Platform update
Purpose	Error notification
Email content	Process instance name, subscriber name, application type (L-Platform reconfiguration), L-Platform name, reason for application, reservation URL.
Action	Select [Request] using the reservation URL in the email or the ROR console. Check the details of the error and cancel the application.

8. Notification of application cancellation

This email is sent to the subscriber and approver (tenant administrator) if the reconfiguration application is canceled at Step 7.

Item	Description
Recipient	Subscriber and approver (tenant administrator)
Timing	Sent when canceled due to the reconfiguration being reserved
Purpose	Notifies cancellation of the reconfiguration
Email content	Process instance name, subscriber name, application type (L-Platform reconfiguration), L-Platform name, reason for application, cancellation comment
Action	Reconfigure again if required.

9. Error notification

This email is sent to the subscriber if an error occurs with processing on virtualization software.
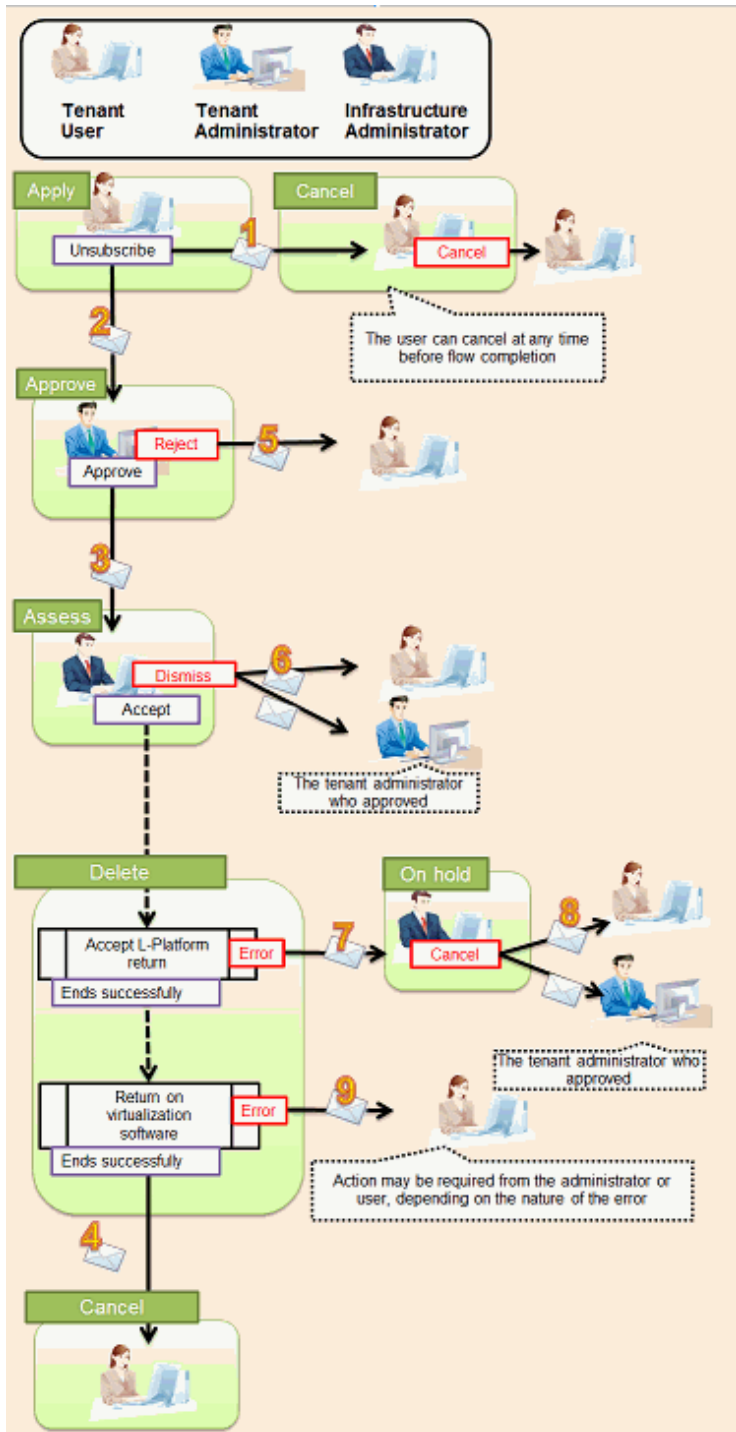
Item	Description
Recipient	Subscriber
Timing	Sent when an error occurs with processing on virtualization software
Purpose	Notifies of errors
Email content	L-Platform name, L-Platform ID
Action	Request the infrastructure administrator to investigate.

A.3 Emails Sent when Canceling an L-Platform

This section describes the flow and content of email messages sent when canceling an L-Platform.

The following diagram shows the flow of emails sent when canceling an L-Platform - the example shows the use of VMware as the virtualization software.

Figure A.3 Flow of emails sent when canceling an L-Platform

Below is the description of the content of emails sent and the action to take - the numbers refer to the email numbers in the diagram above.

1. Notification of application acceptance

   This email is sent to the subscriber when applying to cancel an L-Platform.

Item	Description
Recipient	Subscriber
Timing	Sent when canceling
Purpose	Notification of cancellation application acceptance

Item	Description
Email content	Process instance name, subscriber name, application type (L-Platform cancellation), L-Platform name, reason for application, forward destination Note that the forward destination is sent when configured to approve cancellation applications.
Action	None After this notification is received, the cancellation can be canceled

2. Notification of approval request

This email is sent to the approver (tenant administrator) when the application to cancel the L-Platform is made.

Item	Description
Recipient	Approver (tenant administrator)
Timing	Sent when cancellation application is made Sent when configured to approve cancellation at the time the cancellation application is made
Purpose	Request for approval of cancellation
Email content	Process instance name, subscriber name, application type (L-Platform cancellation), L-Platform name, reason for application, forward destination, approval URL
Action	Select Request using the approval URL in the email or the ROR console, and approve or reject the cancellation.

3. Notification of assessment request

This email is sent to the assessor (infrastructure administrator) when the application to cancel the L-Platform is made.

Item	Description
Recipient	Assessor (infrastructure administrator)
Timing	Sent when cancellation application is made Sent when configured to assess cancellation at the time the application is made
Purpose	Request for approval of cancellation
Email content	Process instance name, subscriber name, application type (L-Platform cancellation), L-Platform name, reason for application, forward destination, approval URL Note that the approver name and approval comments are sent when configured to approve cancellation applications.
Action	Select [Request] using the approval URL in the email or the ROR console, and approve or reject the cancellation.

4. Notification of completed cancellation

This email is sent to the subscriber when cancellation of the L-Platform is complete.

Item	Description
Recipient	Subscriber
Timing	Sent when L-Platform cancellation is complete
Purpose	Notifies that cancellation of L-Platform is complete
Email content	L-Platform name, L-Platform ID
Action	None

5. Notification of application rejection

This email is sent to the subscriber when a request for approval is rejected.

Item	Description
Recipient	Subscriber
Timing	Sent when the request for approval of the cancellation is rejected
Purpose	Notifies of rejection of cancellation
Email content	Process instance name, subscriber name, application type (L-Platform cancellation), L-Platform name, reason for application, forward destination, approver name, approval comment
Action	None

6. Notification of application dismissal

This email is sent to the subscriber when an assessment is dismissed.

Item	Description
Recipient	Subscriber and approver (tenant administrator)
Timing	Sent when the cancellation assessment is dismissed
Purpose	Notifies dismissal of cancellation assessment
Email content	Process instance name, subscriber name, application type (L-Platform cancellation), L-Platform name, reason for application, forward destination, approver name, approval comment, assessor name, assessor comment
	Note that the approver name and approval comments are sent when configured to approve cancellation applications.
Action	None

7. Notification of application reservation

This email is sent to the infrastructure administrator when an error occurs during accepting L-Platform return.

Item	Description
Recipient	Infrastructure administrator
Timing	Sent when an error occurs during accepting L-Platform return
Purpose	Error notification
Email content	Process instance name, subscriber name, application type (L-Platform cancel), L-Platform name, reason for application, reservation URL.
Action	Select [Request] using the reservation URL in the email or the ROR console. Check the details of the error and cancel the application.

8. Notification of application cancellation

This email is sent to the subscriber and approver (tenant administrator) if the cancellation application is canceled at Step 7.

Item	Description
Recipient	Subscriber and approver (tenant administrator)
Timing	Sent when canceled due to the cancellation application being reserved
Purpose	Notifies cancellation of the cancellation application
Email content	Process instance name, subscriber name, application type (L-Platform cancel), L-Platform name, reason for application, cancellation comment
Action	Apply the cancellation again if required.

9. Error notification

This email is sent to the subscriber if an error occurs while returning an L-Platform on virtualization software.

Item	Description
Recipient	Subscriber
Timing	Sent when an error occurs while returning an L-Platform on virtualization software
Purpose	Notifies of errors
Email content	L-Platform name, L-Platform ID
Action	Request the infrastructure administrator to investigate.