FUJITSU

ServerView Resource Orchestrator
Cloud Edition V3.1.0

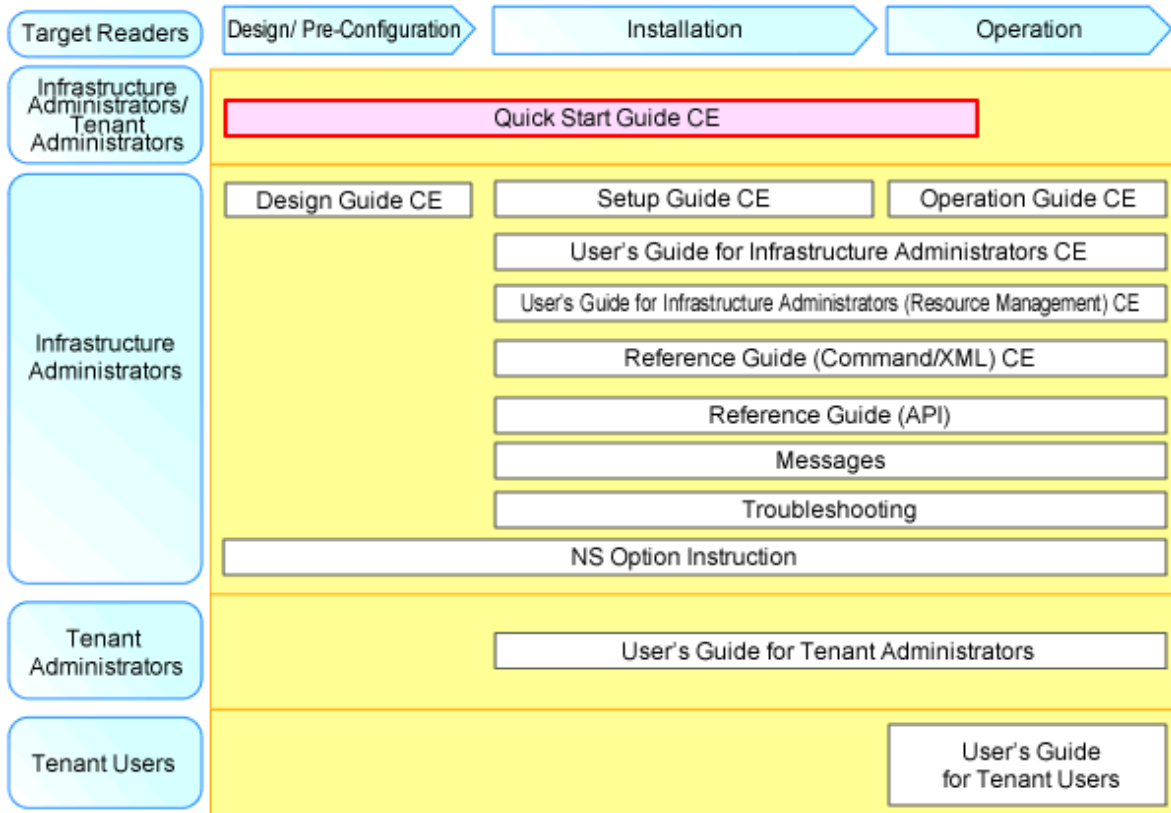# Quick Start Guide

Windows/Linux

Preface

QSGDocument road map

The following manuals are provided with Resource Orchestrator. Refer to "Chapter 1 Documentation Road Map".

Target Readers	Design/ Pre-Configuration	Installation	Operation
Infrastructure Administrators/ Tenant Administrators	**Quick Start Guide CE**		
Infrastructure Administrators	Design Guide CE	Setup Guide CE	Operation Guide CE
		User's Guide for Infrastructure Administrators CE	
		User's Guide for Infrastructure Administrators (Resource Management) CE	
		Reference Guide (Command/XML) CE	
		Reference Guide (API)	
		Messages	
		Troubleshooting	
	NS Option Instruction		
Tenant Administrators		User's Guide for Tenant Administrators	
Tenant Users			User's Guide for Tenant Users

Purpose

This manual provides an outline of ServerView Resource Orchestrator (hereinafter Resource Orchestrator) and the setup flow.

Target Readers

This manual is written for people who will install and administer systems using Resource Orchestrator.

Organization

This manual is composed as follows:

Chapter 1 Documentation Road Map

Explains the document road map

Chapter 2 Functionality Overview

Explains the overview of Resource Orchestrator.

Chapter 3 Flow of Setup for Resource Orchestrator

Explains the overall flow of setup operations when using Resource Orchestrator

Chapter 4 Flow of Setup for System Administrators

explains flow of setup for system administrators.

explains flow of setup for infrastructure administrators.

explains flow of setup for tenant administrators.

Notational Conventions

The notation in this manual conforms to the following conventions.

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

[Windows]	Sections related to Windows (When not using Hyper-V)
[Linux]	Sections related to Linux
[Solaris]	Sections related to Solaris or Solaris containers
[VMware]	Sections related to VMware
[Hyper-V]	Sections related to Hyper-V
[Xen]	Sections related to RHEL5-Xen
[KVM]	Sections related to RHEL-KVM
[Solaris Containers]	Sections related to Solaris containers
[Oracle VM]	Sections related to Oracle VM
[Physical Servers]	Sections related to physical servers
[VM host]	Sections related to Windows Server 2008 with VMware or Hyper-V enabled

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

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

- Window names, dialog names, menu names, and tab names are shown enclosed by brackets ([ ]).

- Button names are shown enclosed by angle brackets (< >) or square 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 "#".

- The URLs in this manual were correct when the manual was written.

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.

Abbreviations

The following abbreviations are used in this manual:

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

Abbreviation	Products
	Red Hat(R) Enterprise Linux(R) 6.2 (for x86) Red Hat(R) Enterprise Linux(R) 6.2 (for Intel64) SUSE(R) Linux Enterprise Server 11 for x86 SUSE(R) Linux Enterprise Server 11 for EM64T
Red Hat Enterprise Linux	Red Hat(R) Enterprise Linux(R) 5 (for x86) Red Hat(R) Enterprise Linux(R) 5 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.1 (for x86) Red Hat(R) Enterprise Linux(R) 5.1 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.2 (for x86) Red Hat(R) Enterprise Linux(R) 5.2 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.3 (for x86) Red Hat(R) Enterprise Linux(R) 5.3 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.4 (for x86) Red Hat(R) Enterprise Linux(R) 5.4 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.5 (for x86) Red Hat(R) Enterprise Linux(R) 5.5 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.6 (for x86) Red Hat(R) Enterprise Linux(R) 5.6 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.7 (for x86) Red Hat(R) Enterprise Linux(R) 5.7 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.2 (for x86) Red Hat(R) Enterprise Linux(R) 6.2 (for Intel64)
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) 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 Enterprise Linux 6	Red Hat(R) Enterprise Linux(R) 6.2 (for x86) Red Hat(R) Enterprise Linux(R) 6.2 (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) 6.2 (for x86) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.2 (for Intel64) Virtual Machine Function
DOS	Microsoft(R) MS-DOS(R) operating system, DR DOS(R)
SUSE Linux Enterprise Server	SUSE(R) Linux Enterprise Server 11 for x86 SUSE(R) Linux Enterprise Server 11 for EM64T
Oracle VM	Oracle VM Server for x86
ESC	ETERNUS SF Storage Cruiser
GLS	PRIMECLUSTER GLS
Navisphere	EMC Navisphere Manager

Abbreviation	Products
Solutions Enabler	EMC Solutions Enabler
MSFC	Microsoft Failover Cluster
SCVMM	System Center Virtual Machine Manager 2008 R2 System Center 2012 Virtual Machine Manager
VMware	VMware vSphere(R) 4 VMware vSphere(R) 4.1 VMware vSphere(R) 5
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 Tools	VMware(R) Tools
VMware vSphere 4.0	VMware vSphere(R) 4.0
VMware vSphere 4.1	VMware vSphere(R) 4.1
VMware vSphere 5	VMware vSphere(R) 5
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 vDS	VMware(R) vNetwork Distributed Switch
VMware Storage VMotion	VMware(R) Storage VMotion
VIOM	ServerView Virtual-IO Manager
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	ServerView Resource Orchestrator
ROR VE	ServerView Resource Orchestrator Virtual Edition
ROR CE	ServerView Resource Orchestrator Cloud Edition
Resource Coordinator	Systemwalker Resource Coordinator Systemwalker Resource Coordinator Virtual server Edition

Export Administration Regulation Declaration

Documents produced by FUJITSU may contain technology controlled under the Foreign Exchange and Foreign Trade Control Law of Japan. Documents which contain such technology should not be exported from Japan or transferred to non-residents of Japan without first obtaining authorization from the Ministry of Economy, Trade and Industry of Japan in accordance with the above law.

Trademark Information

- EMC, EMC², CLARiiON, Symmetrix, and Navisphere are trademarks or registered trademarks of EMC Corporation.

- HP is a registered trademark of Hewlett-Packard Company.

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

- Microsoft, Windows, MS, MS-DOS, Windows XP, Windows Server, Windows Vista, Windows 7, Excel, Active Directory, and Internet Explorer are either registered trademarks or trademarks of Microsoft Corporation in the United States and other countries.

- NetApp is a registered trademark of Network Appliance, Inc. in the US and other countries. Data ONTAP, Network Appliance, and Snapshot are trademarks of Network Appliance, Inc. in the US and other countries.

- Oracle and Java are registered trademarks of Oracle and/or its affiliates in the United States and other countries.

- Oracle is a registered trademark of Oracle Corporation and/or its affiliates.

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

- SUSE is a registered trademark of SUSE LINUX AG, a Novell business.

- VMware, the VMware "boxes" logo and design, Virtual SMP, and VMotion are registered trademarks or trademarks of VMware, Inc. in the United States and/or other jurisdictions.

- ServerView and Systemwalker are registered trademarks of FUJITSU LIMITED.

- All other brand and product names are trademarks or registered trademarks of their respective owners.

Notices

- The contents of this manual shall not be reproduced without express written permission from FUJITSU LIMITED.

- The contents of this manual are subject to change without notice.

Month/Year Issued, Edition	Manual Code
November 2011, First Edition	J2X1-7622-01ENZ0(00)
February 2012, 1.1	J2X1-7622-01ENZ0(01)
July 2012, 2	J2X1-7671-02ENZ0(00)

Contents

Chapter 1 Documentation Road Map

This chapter explains Documentation Road Map.

Documentation Road Map of Cloud Edition is as follows.

Figure 1.1 Documentation Road Map of Resource Orchestrator [Cloud Edition]
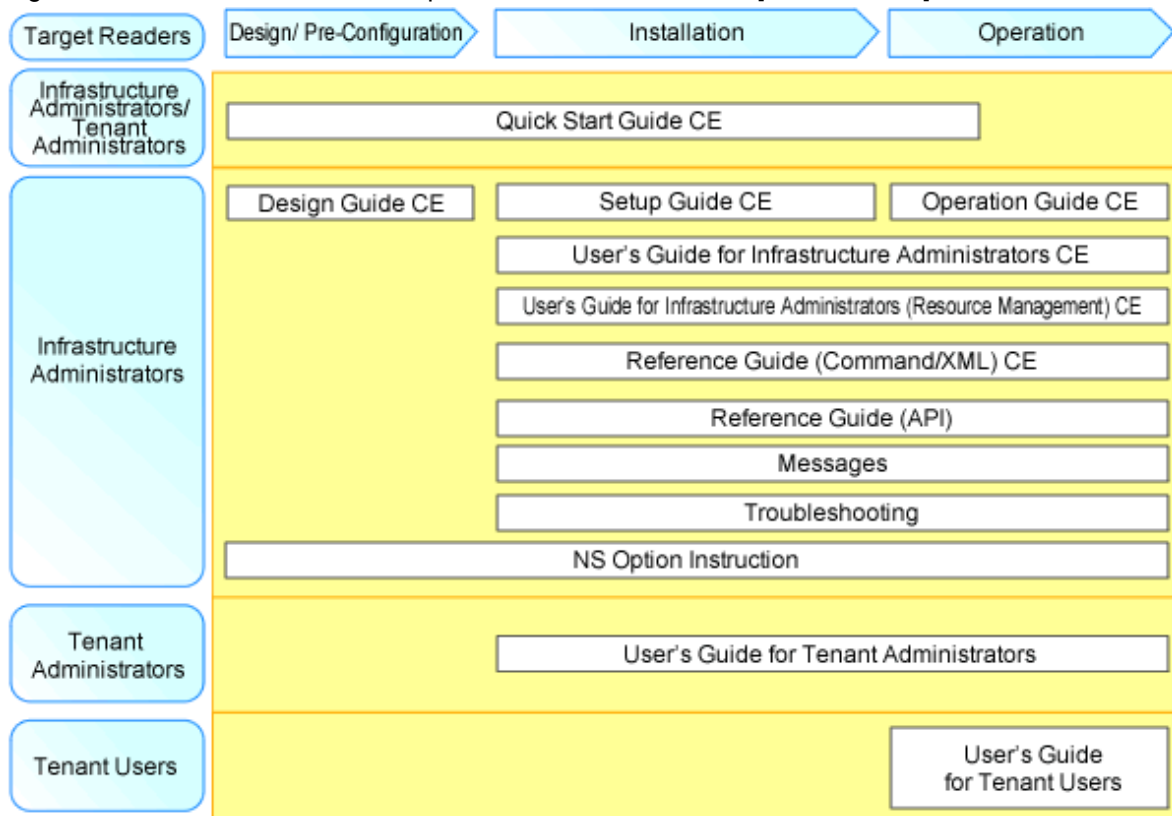
The following manuals are provided with Resource Orchestrator. Please refer to them when necessary:

Table 1.1 Manual Name, Abbreviated Form, Purpose [Cloud Edition]

Manual Name	Abbreviated Form	Purpose
ServerView Resource Orchestrator Cloud Edition V3.1.0 Quick Start Guide	Quick Start Guide CE	**Please read this first.** Read this when you want information about the purposes and uses of basic functions, and how to flow of setup.
ServerView Resource Orchestrator Cloud Edition V3.1.0 Design Guide	Design Guide CE	read when you want to know the design necessary for the introduction of the purpose of use of a basic function, the use scene, and the product and the advance preparation.
ServerView Resource Orchestrator Cloud Edition V3.1.0 Setup Guide	Setup Guide CE	Read this when you want information about how to install and setup systems.
ServerView Resource Orchestrator Cloud Edition V3.1.0 Operation Guide	Operation Guide CE	Read this when you want information about how to operate systems that you have configured.
ServerView Resource Orchestrator Cloud Edition V3.1.0 User's Guide for Infrastructure Administrators (Resource Management)	User's Guide for Infrastructure Administrators (Resource Management) CE	Read this when you want information about how to operate the GUI (resource management) used by infrastructure administrators and dual-role administrators.

Manual Name	Abbreviated Form	Purpose
ServerView Resource Orchestrator Cloud Edition V3.1.0 User's Guide for Infrastructure Administrators	User's Guide for Infrastructure Administrators CE	Read this when you want information about how to operate the GUI (for operations other than resource management) used by infrastructure administrators and dual-role administrators.
ServerView Resource Orchestrator Cloud Edition V3.1.0 User's Guide for Tenant Administrators	User's Guide for Tenant Administrators CE	Read this when you want information about how to operate the GUI used by tenant administrators.
ServerView Resource Orchestrator Cloud Edition V3.1.0 User's Guide for Tenant Users	User's Guide for Tenant Users CE	Read this when you want information about how to operate the GUI used by tenant users.
ServerView Resource Orchestrator Cloud Edition V3.1.0 Reference Guide (Command/XML)	Reference Guide (Command/XML) CE	Read this when you want information about commands used by infrastructure administrators and dual-role administrators to manage resources, messages output by the system, and how to perform troubleshooting.
ServerView Resource Orchestrator Cloud Edition V3.1.0 Reference Guide (API)	Reference Guide (API) CE	Read this when you want information about the commands used by infrastructure administrators and dual-role administrators for operations other than resource management.
ServerView Resource Orchestrator Cloud Edition V3.1.0 Messages	Messages CE	Read this when you want detailed information about the corrective actions for displayed messages.
ServerView Resource Orchestrator Cloud Edition V3.1.0 Troubleshooting	Troubleshooting CE	Read this when you want detailed information about troubleshooting
ServerView Resource Orchestrator Cloud Edition V3.1.0 NS Option Instruction	NS Option Instruction	read when you want information about how to setup NS Option.

In some cases this manual may ask you to refer to the following Virtual Edition manuals.

Please refer to them when necessary:

Table 1.2 Manual Name, Abbreviated Form, Purpose [Virtual Edition]

Manual Name	Abbreviated Form	Purpose
ServerView Resource Orchestrator Virtual Edition V3.1.0 Design Guide	Design Guide VE	Please read this first. Read this when you want information about the purposes and uses of basic functions, and how to Design Resource Orchestrator.
ServerView Resource Orchestrator Virtual Edition V3.1.0 Setup Guide	Setup Guide VE	Read this when you want information about how to install Resource Orchestrator.
ServerView Resource Orchestrator Virtual Edition V3.0.0 Operation Guide	Operation Guide VE	Read this when you want information about how to operate systems that you have configured.
ServerView Resource Orchestrator Virtual Edition V3.0.0 User's Guide	User's Guide VE	Read this when you want information about how to operate the GUI.
ServerView Resource Orchestrator Virtual Edition V3.1.0 Reference Guide (Command)	Reference Guide VE	Read this when you want information about how to use commands.

Chapter 2 Functionality Overview

This chapter provides an overview of Resource Orchestrator.

ServerView Resource Orchestrator (hereafter refered to as "this product") is a software which provides an effective ICT resource management and operation on private cloud enviroment.
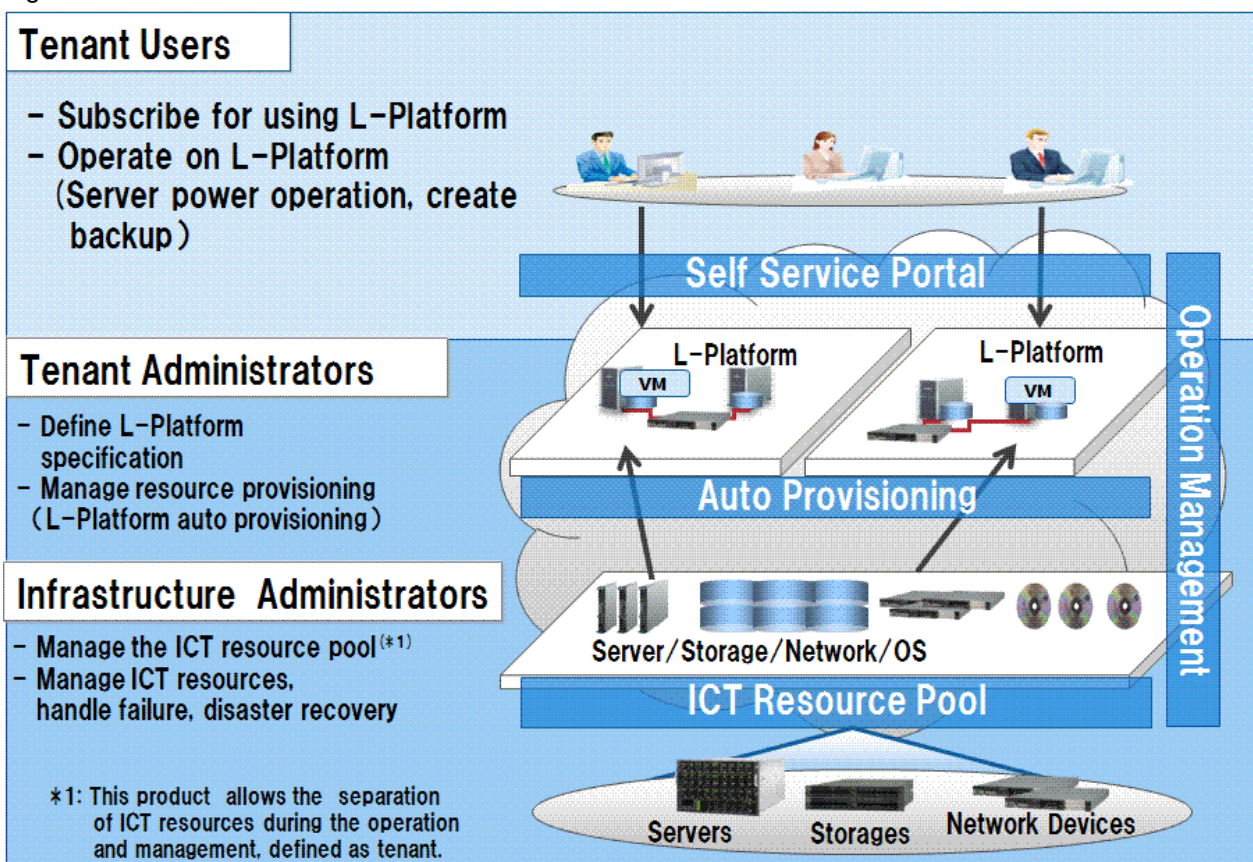
This chapter explains about this product's main features, users role, functionalities available for users, overview of the GUI display (ROR console).

2.1 The Product Main Features

This product mainly provides the following functionality.

In this product, the following functions are chiefly offered.

Figure 2.1 Product main features

- Effective ICT resource management using resource pool

    Resource pool is a set of similar type resources such as physical servers, VM hosts, storages, network devices, OS images.

    Effective resource management is realized by registering resources to the resource pool, allocate it from the pool when necessary, and release them back to the pool after their usage. Moreover, several resource pools can be created, depends on the customer's operation requirement (hardware type, security, asset management unit).

- System configuration and operation become easy using L-Server

    L-Server is a resource defined using the logical specifications (number of CPUs, amount of memory, disk capacity, number of NICs, etc.) of the servers, and storage and network devices connected to those servers.

    Allocating a resource automatically from the resource pool based on the L-Server specification makes it easier to construct and optimize server configuration.

During the operation, cloud users only need to know about L-Server specification. Users don't need to worry about the underlying infrastructure, hence management cost can be reduced, moreover, the physical and virtual server administration can be integrated.

- Multiple servers configuration becomes easy using L-Platform

L-Platform is a resource used for the consolidated operation and management of systems such as multiple-layer systems (Web/AP/DB) comprised of multiple L-Servers, storage, and network devices.

Using L-Platform makes it possible to configure and maintain multiple servers, storages or network devices easily.

Additionally, using L-Platform template makes it even easier to configure an L-Platform, at the same time, system operation becomes more simple with the consolidated specification.

- Self-service portal provides easy operation and approval process

Cloud users can apply for an L-Platform, modify the configuration and operate the system through the self-service portal (ROR console).

The approval process during the application or modification are automated.

- Resource isolation among the tenants

Tenant is a unit for the division and segregation of management and operation of resources based on organizations or operations. Resources of one tenant in L-Platform can be separated isolated from other tenant.

Resources pool which is only available for a specific tenant is called 'local pool'.

Resources pool shared among multiple tenants is called 'global pool'.

- Resource pool management with dashboard

This product provides dashboard display (ROR console) which can be used for monitoring the resource pool utilization status, displaying the performance and configuration of L-Server, anticipating the resource pool demand beforehand, and simulating VM guest reallocation.

- Usage metering capability

This product also provides the foundation for charging the tenants based on their L-Platform usage.

## 2.2 Resource Orchestrator User Roles and the Functions Available to Each User

This section explains the Resource Orchestrator user roles and the functions available to each user.

Resource Orchestrator User Roles

The Resource Orchestrator user roles and the functions available to each user are as follow:

Refer to "5.1 Restricting Access Using Roles" in the "Design Guide CE".

Figure 2.2 Resource Orchestrator User Roles and the Functions Available to Each User
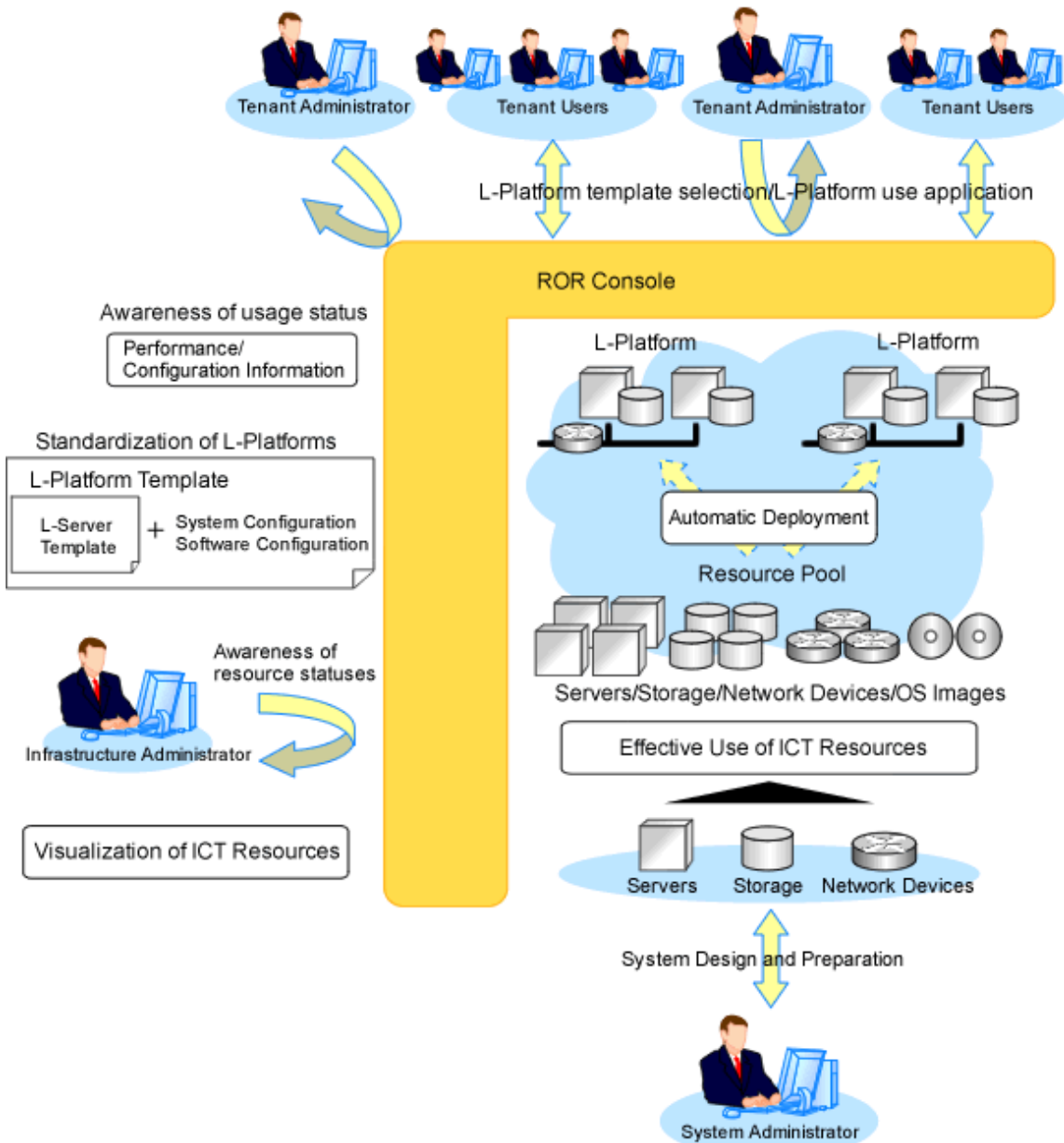
Infrastructure Administrators

Resource Orchestrator provides a Logical Server (hereinafter L-Server) function which defines logical specifications (number of CPUs, memory capacity, disk capacity, number of NICs, etc.) for ICT resources within a private cloud (servers, storage, and networks). Using Resource Orchestrator, infrastructure administrators collectively manage ICT resources in resource pools, while monitoring the load and performing addition, replacement, and maintenance of ICT resources when necessary.

System Operation Administrators

System operation administrators manage the operation of the entire system.
Administrator privileges for the operating system are required. Normally the roles of the infrastructure administrator and system operation administrator are performed concurrently.

Tenant Administrators

Tenant administrators prepare a pre-defined L-Platform environment template (L-Platform template) according to tenant user needs, and release it to tenant users.
In accordance with the application process, tenant administrators may also receive and review applications from tenant users.

Tenant administrators can check the usage status and monitor the operational statuses of tenant users.

Tenant Users

Tenant users can apply to use L-Platforms, and use L-Platforms configured according to their application.
When the authorization of the tenant administration department manager is required for an application, tenant users must request authorization from the manager in accordance with the application process.

Dual-role administrators

The administrators with both infrastructure administrator's and tenant administrator's role.

The functions available to the majority of Resource Orchestrator users

The functions available to the majority of Resource Orchestrator users are as follow:

Table 2.1 Available Functions

Main Function	Description	Target Users
Standardize L-Platforms (L-Platform templates)	Creates and publishes multiple logical configuration templates (L-Platform templates) for servers, storage, and networks.	Infrastructure Administrators or Tenant Administrators
Use L-Platforms	L-Platforms that meet one's needs can be used, as necessary.	Tenant Users
Viewing usage charges	L-Platform usage can be monitored as usage charge information. Usage charges are calculated based on the amount of L-Platform usage or charge information. The calculated usage charges can be viewed.	Infrastructure Administrators or Tenant Administrators
Safe use of ICT resources by tenants in multiple departments	ICT resources can be shared by multiple departments while maintaining security.	Tenant Administrators
Effective use of ICT resources	ICT resources can be managed as a collection of resources (resource pool). They can be used effectively, according to changes in usage.	Infrastructure Administrators
Visualization of ICT resources	The status of ICT resource usage can be easily checked from the dashboard (Pool Condition). The availability of resource pools can be monitored on the dashboard. Also, it can display L-Server and L-Platform performance data configuration information, demand forecasting for resource pools and perform simulations of VM guest reallocations.	Infrastructure Administrators or Tenant Administrators

2.3 Function list provided by ROR Console

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

  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.

- Windows intended for infrastructure administrators

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

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

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

- Home

  The window displayed immediately after login to the ROR Console. A function list and notifications are displayed.

Figure 2.3 Home
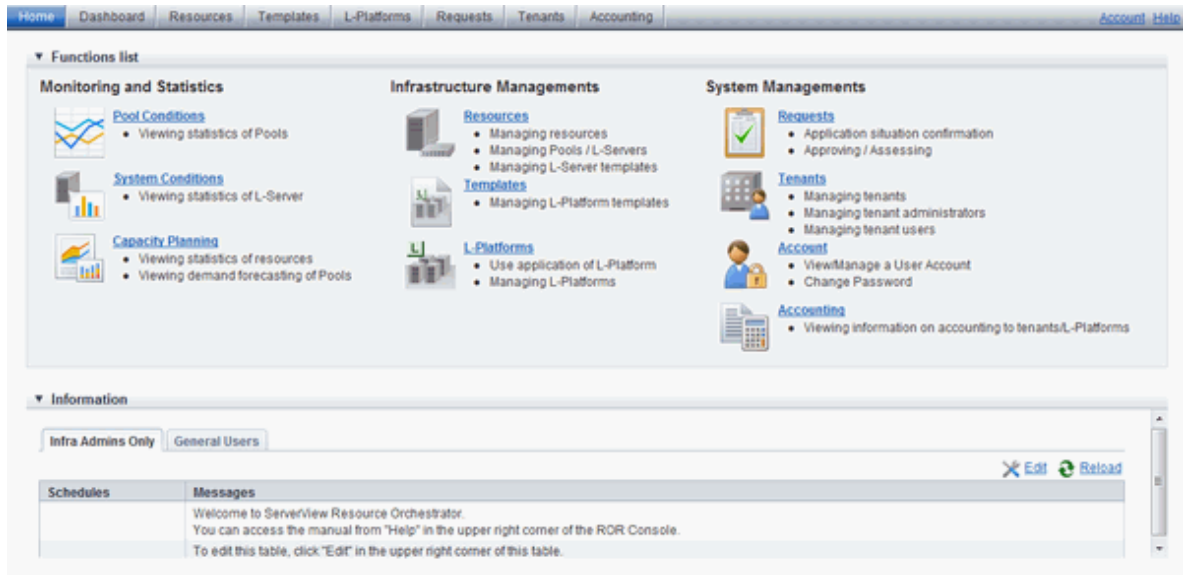
- Dashboard (Pool Condition)

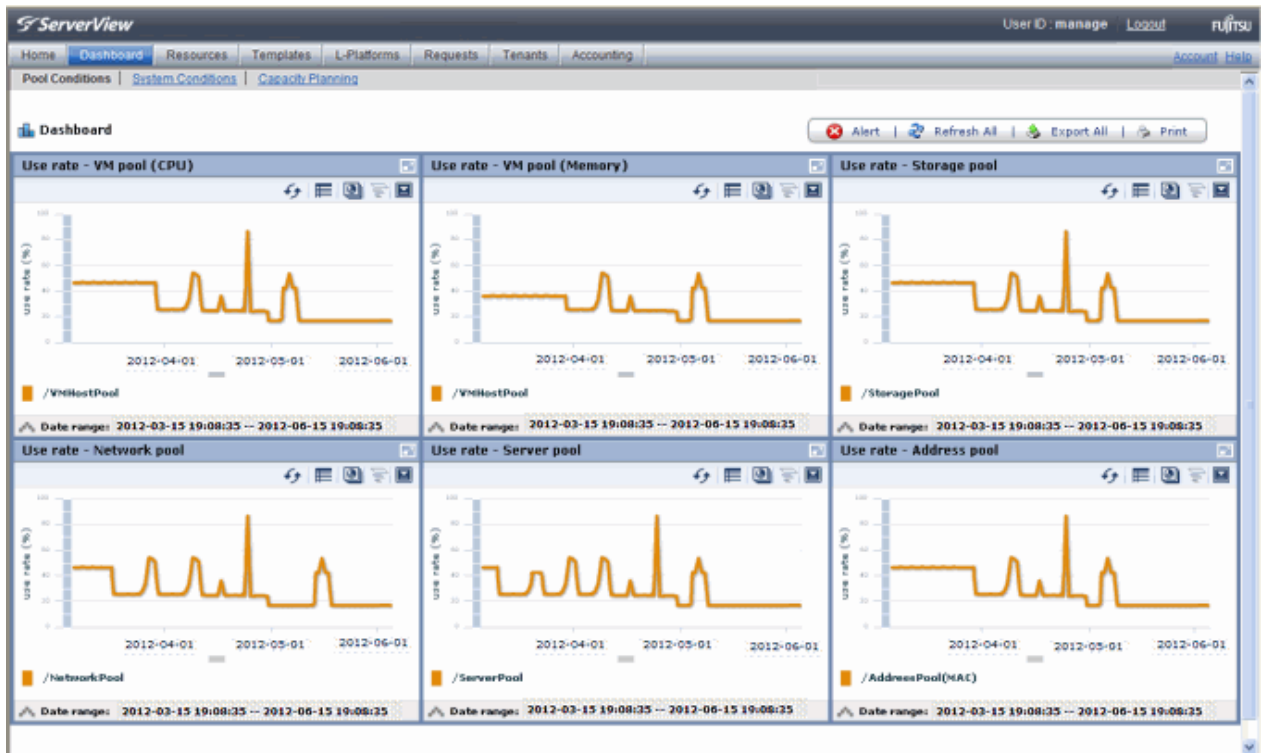   Displays the resource pool usage status.

Figure 2.4 Dashboard (Pool Condition)
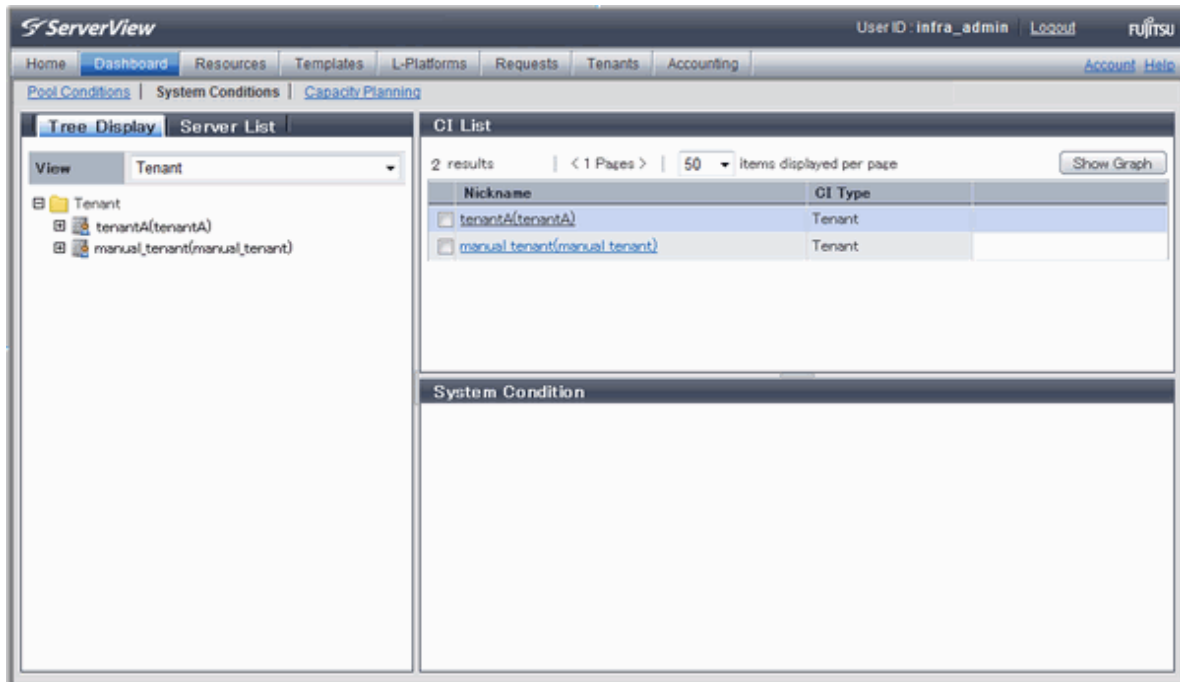
- Dashboard (System Condition)

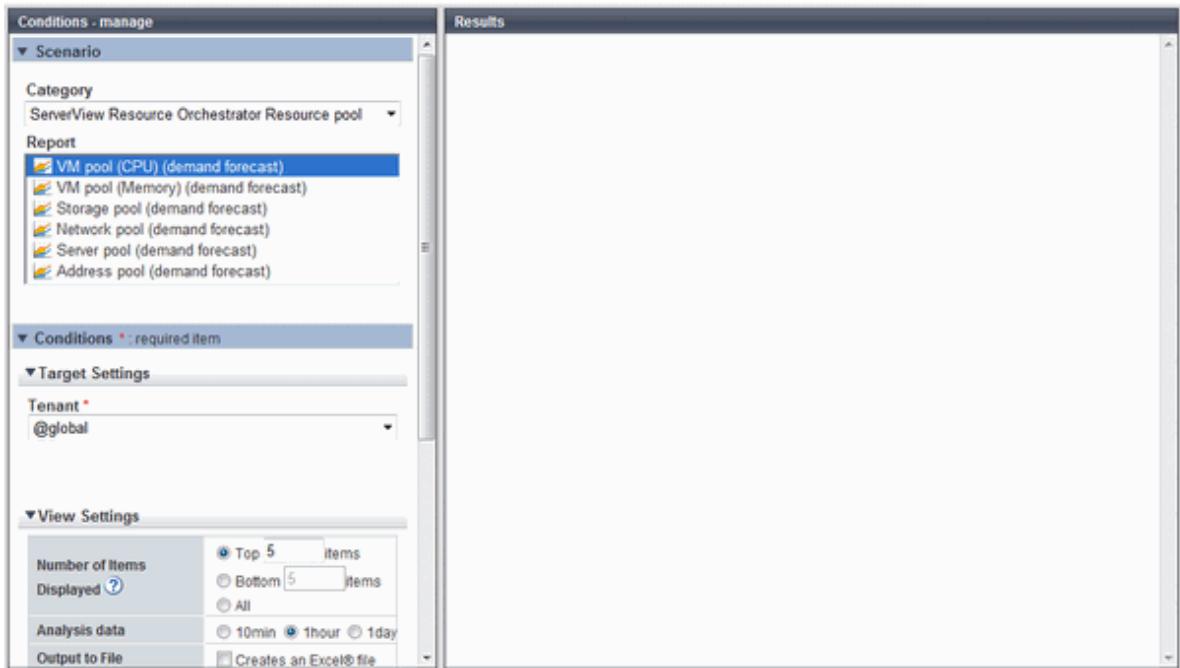   Displays L-Server performance information and configuration information.

Figure 2.5 Dashboard (System Condition)

- Dashboard (Capacity Planning)

  Anticipate the demand for resource pools and perform simulations of VM guest reallocations.
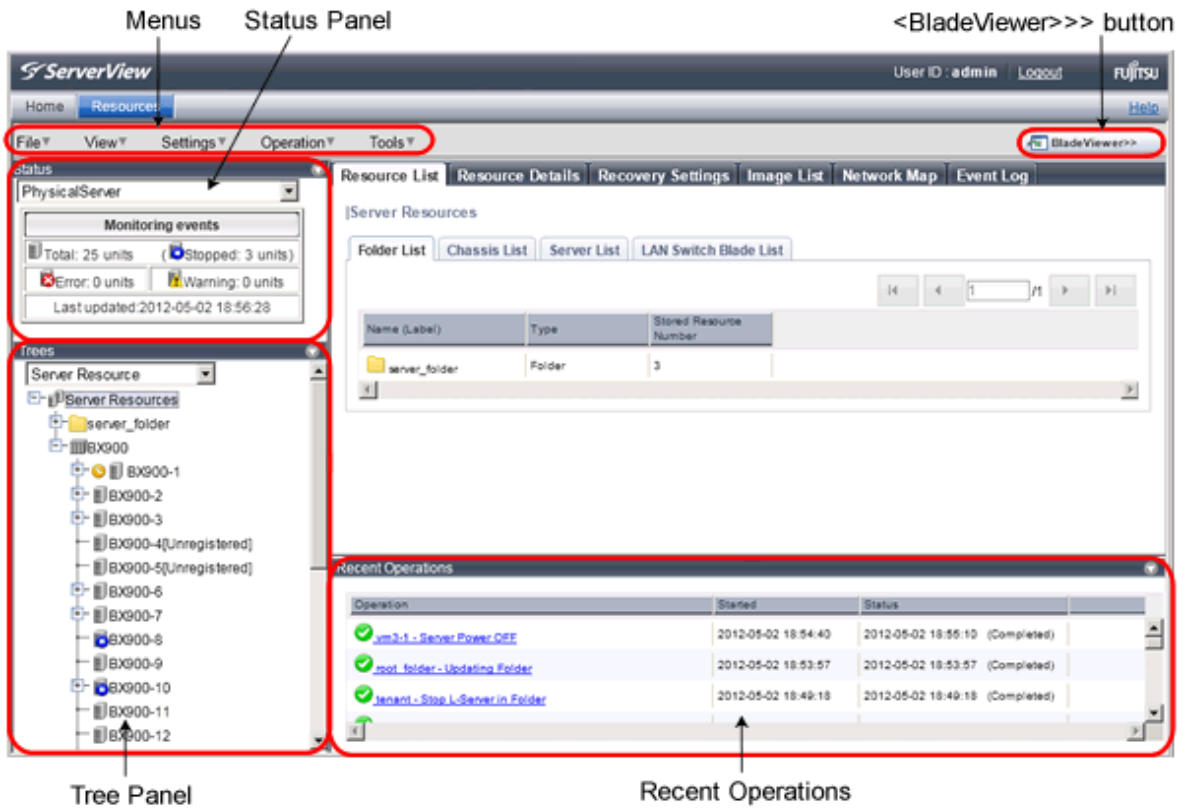
Figure 2.6 Dashboard (Capacity Planning)

- Resource

  A window for managing the resource pool and the relationship of resources to L-Server.

Figure 2.7 Resource
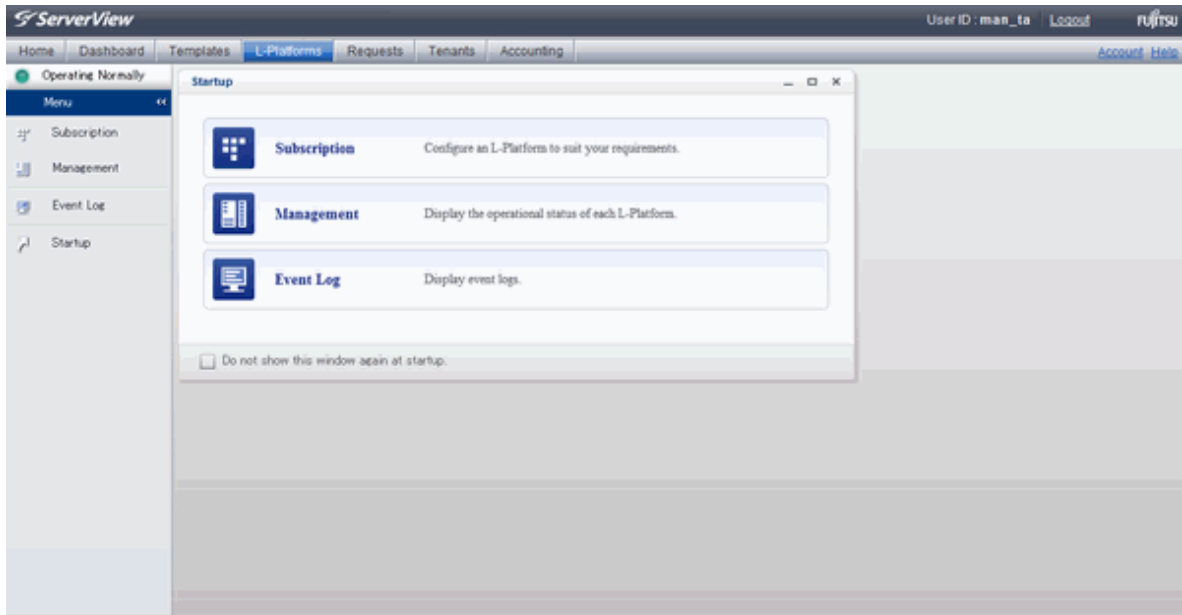
- Template

  A window for managing L-Platform Templates.

Figure 2.8 Template
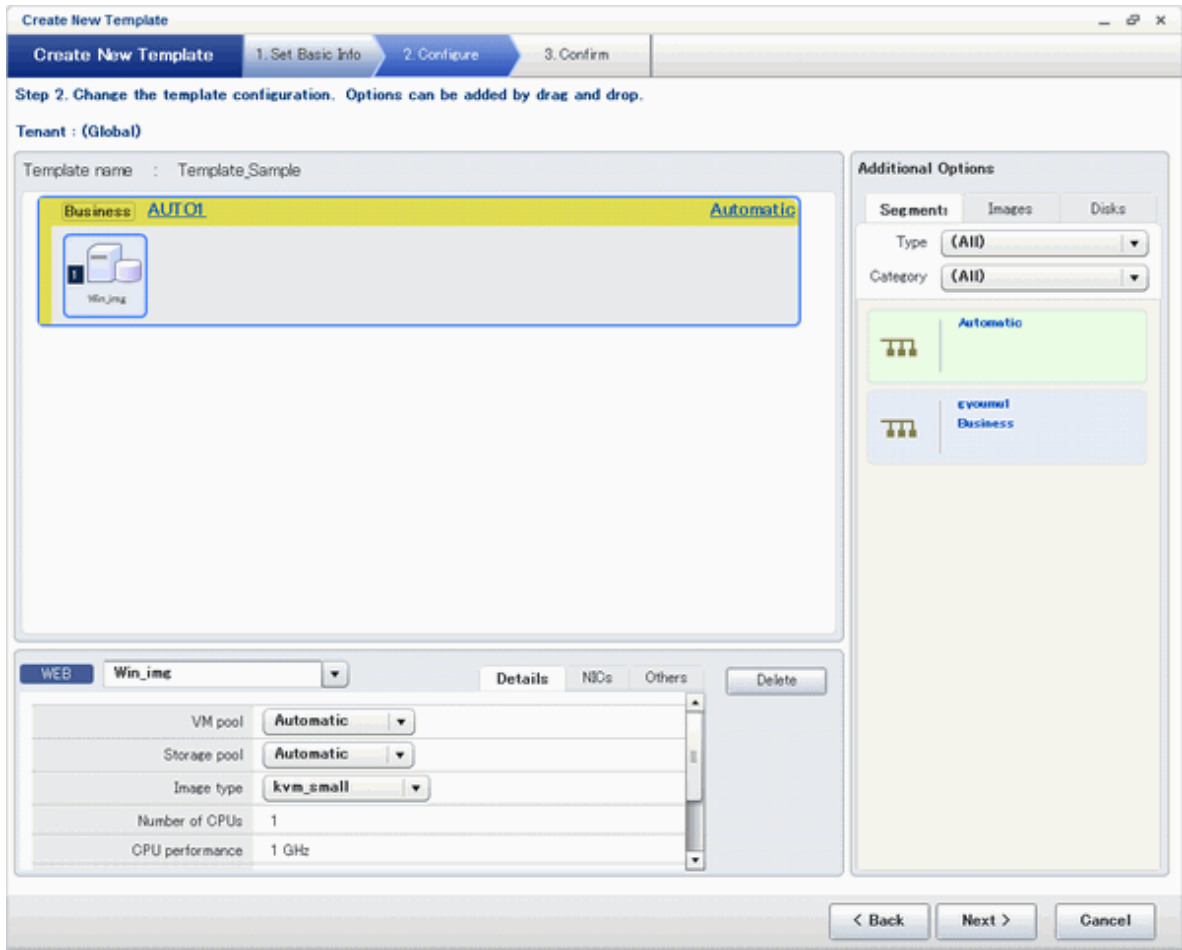
- L-Platform
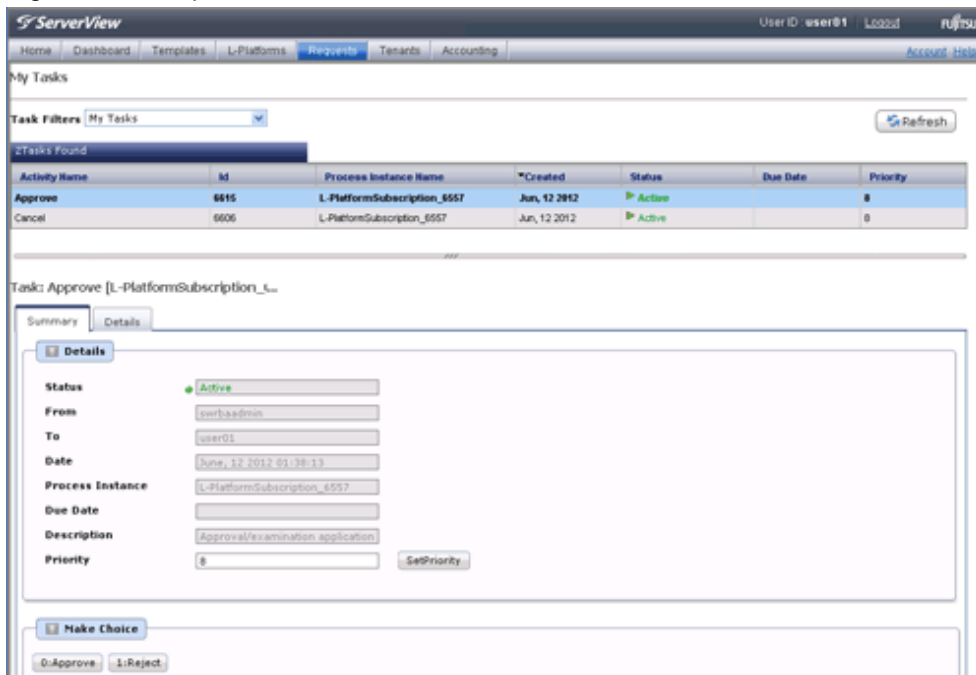
  A window for managing L-Platform.

Figure 2.9 L-Platform

- Request

  A window for assessing and approving L-Platform usage applications and other applications from tenant users.

Figure 2.10 Request

- Accounting

  Past information about usage charge is displayed.

Figure 2.11 Accounting

- Tenant

  A window for managing tenants and users belonging to tenants.

Figure 2.12 Tenant

- Account

  A window for changing a logged in user's information and password.

Figure 2.13 Account

- Help

Displays this product's manual.

Figure 2.14 Help

The relation between the function that the ROR console offers and the user who can use it is as follows.

Table 2.2 Function list provided by ROR Console

Function	infrastructure Administrator	Tenant Administrator	Tenant users
Home	Yes	Yes	Yes
Dashboard (Pool Condition)	Yes	Yes	No
Dashboard (System Condition)	Yes	Yes	Yes
Dashboard (Capacity Planning)	Yes	Yes	No
Resource	Yes	No	No

Function	infrastructure Administrator	Tenant Administrator	Tenant users
Template	Yes	Yes	No
L-Platform	Yes	Yes	Yes
Request	Yes	Yes	Yes
Accounting	Yes	Yes	No
Tenant	Yes	Yes	No
Account	Yes	Yes	Yes
Help	Yes	Yes	Yes

Yes: Displayed (However, some functions may not be displayed according to the user's access rights.)
No: Not displayed

Chapter 3 Flow of Setup for Resource Orchestrator

This chapter explains the overall flow of setup when using Resource Orchestrator.

The flow of overall setup operations is as follows:

Table 3.1 Flow of Overall Setup Operations

Operator	Operation Overview	Details	Reference
System Administrators	Design	- Defining user accounts - Defining tenants and resource pools - Defining the server environment - Defining the network - Defining the storage environment - Deciding server virtualization software	Refer to "Chapter 4 Flow of Setup for System Administrators".
	Preparations	- Configuring the server environment - Configuring the network environment - Configuring the storage environment - Settings for server virtualization software - Installing and defining Single Sign-On - Deciding and configuring the power monitoring environment	
	Software installation on admin servers	- Installing an OS - Installing required software - Installing the manager	
	Login to the ROR Console		
	License setup		
	Configuration after manager installation	- Importing a certificate to a browser - Registering infrastructure administrators - Creating definition files	
Infrastructure Administrators	Resource configuration	- Registering resources with Resource Orchestrator - Settings for the HBA address rename setup service (*1) - Installing software and registering agents on VM hosts (*2) - Registering resource pools to the global pool - Creating L-Server templates - Collecting and registering cloning images	Refer to "Chapter 5 Flow of Setup for Infrastructure Administrators".
	Setting of L-Platform template and registration of the usage condition information	Creating and Publishing L-Platform Template, and registration of the Usage Condition (*3)	
	Tenant configuration	- Creating tenants, tenant administrators, or tenant users	
Tenant Administrators	Template configuration	- Editing L-Platform templates - Releasing and retracting L-Platform templates	Refer to "Chapter 6 Flow of Setup for Tenant Administrators".
	User registration	Tenant administrator/tenant user registration	

*1: When using HBA address rename
*2: When using Server Virtualization Software
*3: When using Usage Condition

Chapter 4 Flow of Setup for System Administrators

This Chapter explains flow of setup for system administrators.

Flow of setup for System Administrator is as follows.

Table 4.1 Overview of Setup for System Administrators

Operation Overview	Tabs Used on the ROR Console	Reference
Design	-	Refer to "4.1.1 Design for Resource Orchestrator Setup Define the following settings".
Preparations	-	Refer to "4.1.2 Configuring Resource Orchestrator Setup Settings Define the following settings"
Software installation on managed servers	-	Refer to "4.2 Installing Software on Admin Servers".
Login to the ROR Console	-	Refer to "4.3 Login to the ROR Console".
License Setup	[Resource]	Refer to "4.4 License Setup".
Configuration after manager installation	-	Refer to "4.5 Configuration after Manager Installation".

- : There is no tab used with the ROR console.

4.1 Preparations for Setup and Design of Resource Orchestrator

This section explains Preparations for Setup and Design of Resource Orchestrator.

4.1.1 Design for Resource Orchestrator Setup Define the following settings

To setup this product, the System Administrators execute the following.

- Defining System Configuration

  For details, refer to "Chapter 4 System Configuration Design" of the "Design Guide CE".

- Defining User Accounts

  For details, refer to "Chapter 5 Defining User Accounts" of the "Design Guide CE".

- Defining Tenants and Resource Pools

  For details, refer to "Chapter 6 Defining Tenants and Resource Pools" of the "Design Guide CE".

- Defining the Server Environment

  For details, refer to "8.1 Defining the Server Environment" of the "Design Guide CE".

- Defining the Network

  For details, refer to "Chapter 9 Defining and Configuring the Network Environment" of the "Design Guide CE".

- Defining the Storage Environment

  For details, refer to "10.1 Defining the Storage Environment" of the "Design Guide CE"

- Deciding Server Virtualization Software

  For details, refer to "11.1 Deciding Server Virtualization Software" of the "Design Guide CE".

- Deciding and Configuring the Power Monitoring Environment

  For details, refer to "13.1 Deciding the Power Monitoring Environment" of the "Design Guide CE".

4.1.2 Configuring Resource Orchestrator Setup Settings Define the following settings

To setup this product, the System Administrators execute the following.

- Configuring the Server Environment

  For details, refer to "8.2 Configuring the Server Environment" of the "Design Guide CE".

- Configuring the Network Environment

  For details, refer to "Chapter 9 Defining and Configuring the Network Environment" of the "Design Guide CE".

- Configuring the Storage Environment

  For details, refer to "10.2 Configuring the Storage Environment" of the "Design Guide CE".

- Settings for Server Virtualization Software

  For details, refer to "11.2 Settings for Server Virtualization Software" of the "Design Guide CE".

- Installing and Defining Single Sign-On

  For details, refer to "Chapter 12 Installing and Defining Single Sign-On" of the "Design Guide CE".

- Deciding and Configuring the Power Monitoring Environment

  For details, refer to "13.2 Configuring the Power Monitoring Environment".

4.2 Installing Software on Admin Servers

Software is installed in the admin server.

1. Install an OS

2. Install required software

3. Install the manager

   Install the manager of Resource Orchestrator.

   For details, refer to "2.1 Manager Installation" in the "Setup Guide CE".

4. Configure SSL Communications on the ROR Console

   Use SSL communications when accessing the ROR console from a browser.

   When changing the certificate used for SSL communication from the test certificate set up by default to another certificate, refer to "Chapter 3 SSL Communication Environment Settings for the ROR Console" of the "Setup Guide CE".

4.3 Login to the ROR Console

Log in to Resource Orchestrator.

For details, refer to "Chapter 4 Login to the ROR Console" of the "Setup Guide CE".

4.4 License Setup

Set up licenses.

For details, refer to "Chapter 5 License Setup and Confirmation" of the "Setup Guide CE".

4.5 Configuration after Manager Installation

After the manager is installed, it sets it.

1. Import a certificate to a browser

   In order to use a test site certificate, the certificate must be installed to the Web browser.

   For details, refer to "Chapter 6 Importing a Certificate to a Browser" of the "Setup Guide CE".

2. Register infrastructure administrators

   Resource Orchestrator can be configured by this user or another user registered with the infrastructure administrator role, in order to prevent the operation of an L-Platform from being stopped by erroneous operations.

   For details, refer to "3.1 Registering User Accounts" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

3. Create definition files

   Create the L-Servers or definition files required to manage (monitor and automatically configure, etc.) network devices using Resource Orchestrator.

   Refer to "Chapter 8 Creating Definition Files" in the "Setup Guide CE" and "9.4 Preparations for Resource Orchestrator Network Environments" in the "Design Guide CE".

Chapter 5 Flow of Setup for Infrastructure Administrators

This Chapter explains flow of setup for Infrastructure Administrators.

Flow of setup for Infrastructure Administrators is as follows.

Table 5.1 Overview of Setup for Infrastructure Administrators

Operation Overview	Tabs Used on the ROR Console	Reference
Resource configuration	[Resource]	Refer to "5.1 [Resource] Settings".
L-Platform template creation and release	[Template] [Usage conditions]	Refer to "5.2 Creating and Releasing L-Platform Templates and Registering Usage conditions infomation".
Create Tenants, Tenant Administrators, or Tenant Users	[Tenant]	Refer to "5.3 Creating Tenants, Tenant Administrators, or Tenant Users".

5.1 [Resource] Settings

Select the [Resource] tab of the ROR console and configure resource settings.

Procedures differ depending on the L-Server type or the server hardware being used.

5.1.1 When Creating Physical L-Servers

This section explains how to configure resources when creating physical L-Servers.

It is time when [Resource] setting when Physical L-Server is created using the blade server and Rack Mount or Tower Servers and the procedure is different.

The overview of [Resource] settings when Physical L-Server is created is as follows.

Table 5.2 Resource Settings when Creating Physical L-Servers

Settings	Details	When Using Blade Servers	When Using Rack Mount or Tower Servers
Resource Registration	Register VIOM	Yes	No
	Register storage management software	Yes	Yes
	Register chassis	Yes	No
	Register managed servers (within chassis)	Yes	No
	Register managed servers	No	Yes
	Register LAN switch blades	Yes	No
	Configure VLANs for LAN switch blades manually	Yes (*2)	No
	Register Network Device Resources	Yes (*1)	Yes (*1)
	Configure power monitoring devices	Yes (*1)	Yes (*1)
	Settings for the HBA address rename Setup Service	No	Yes
Resource Registration for Resource Pools	Register physical server resources to resource pools	Yes	Yes
	Register network resources to network pools	Yes	Yes
	Register network device resources to network pools	Yes (*1)	Yes (*1)

Settings	Details	When Using Blade Servers	When Using Rack Mount or Tower Servers
	Register virtual storage resources to storage pools	Yes	Yes
	Register disk resources to storage pools	Yes	Yes
	Register MAC addresses and WWNs to address pools	Yes	Yes
L-Server Template Creation	Create an L-Server template	Yes	Yes
Collection and Registration of Cloning Images	Create an L-Server for the Infrastructure Administrator	Yes	Yes
	Install OS's on physical L-Servers	Yes	Yes
	Install required software on physical L-Servers	Yes	Yes
	Install agents on physical L-Servers	Yes	Yes
	Install agents (dashboard function) on physical L-Servers	Yes	Yes
	Create and register cloning images	Yes	Yes

Yes: It is necessary

No: It is not necessary

*1: When using resources

*2: Necessary when not using automatic VLAN configuration for LAN switch blades.

5.1.1.1 When Using Blade Servers

The procedure when using blade server is as follows.

1. Resource Registration

   Register the required resources in Resource Orchestrator.

   For details, refer to "Chapter 9 Registering Resources with Resource Orchestrator" in the "Setup Guide CE".

2. Resource Registration for Resource Pools

   Register resources in a resource pool.

   For details, refer to "Chapter 12 Registering Resources to the Global Pool" in the "Setup Guide CE".

3. Create an L-Server Template

   Create an L-Server template.

   For details, refer to "Chapter 13 Creating L-Server Templates" in the "Setup Guide CE".

4. Create an L-Server for the Infrastructure Administrator

   Create an L-Server for the infrastructure administrator.

   For details, refer to "Chapter 14 Creating an L-Server for an Infrastructure Administrator" in the "Setup Guide CE".

5. Install software on physical L-Servers for infrastructure administrators, and register agents

   Install software on the physical L-Server for infrastructure administrators created in step 4. and register agents.

   a. Install OS's on physical L-Servers for infrastructure administrators

   b. Install required software on physical L-Servers for infrastructure administrators

   c. Install agents on physical L-Servers for infrastructure administrators

      Refer to "2.2 Agent Installation" in the "Setup Guide CE".

d. Install agents (Dashboard Function) on physical L-Servers for infrastructure administrators

   Refer to "2.3 Agent (Dashboard Function) Installation" in the "Setup Guide CE".

   e. Register the Agent

6. Create and register cloning images

   Create and register cloning images.

   For details, refer to "Chapter 15 Collecting and Registering Cloning Images" in the "Setup Guide CE".

5.1.1.2 When Using Rack Mount or Tower Servers

The procedure when using Rack Mount or Tower server is as follows.

1. Resource Registration

   Register the required resources in Resource Orchestrator.

   For details, refer to "Chapter 9 Registering Resources with Resource Orchestrator" in the "Setup Guide CE".

   Configure the HBA address rename service.

2. Resource Registration for Resource Pools

   Register resources in a resource pool.

   For details, refer to "Chapter 12 Registering Resources to the Global Pool" in the "Setup Guide CE".

3. Create an L-Server template

   Create an L-Server template.

   For details, refer to "Chapter 13 Creating L-Server Templates" in the "Setup Guide CE".

4. Create an L-Server for the Infrastructure Administrator

5. Create an L-Server for the infrastructure administrator.

6. For details, refer to "Chapter 14 Creating an L-Server for an Infrastructure Administrator" in the "Setup Guide CE".

7. Install software on physical L-Servers for infrastructure administrators, and register agents

   Install software on the physical L-Server for infrastructure administrators created in step 4. and register agents.

   a. Install OS's on physical L-Servers for infrastructure administrators

   b. Install required software on physical L-Servers for infrastructure administrators

   c. Install agents on physical L-Servers for infrastructure administrators

      Refer to "2.2 Agent Installation" in the "Setup Guide CE".

   d. Install agents (Dashboard Function) on physical L-Servers for infrastructure administrators

      Refer to "2.3 Agent (Dashboard Function) Installation" in the "Setup Guide CE".

   e. Register the Agent

8. Create and register cloning images

   Create and register cloning images.

   For details, refer to "Chapter 15 Collecting and Registering Cloning Images" in the "Setup Guide CE".

5.1.2 When Creating a Virtual L-Server

This section explains how to configure resources when creating virtual L-Servers.

[Resource] setting when virtual L-Server is created is different according to the server virtualization software used.

5.1.2.1 When Not Using Solaris Containers

5.1.2.1.1 Resource Registration

Register the required resources in Resource Orchestrator.

The registration of [Resource] when virtual L-Server is created is as follows.

For details, refer to "Chapter 9 Registering Resources with Resource Orchestrator".

Table 5.3 Resource Registration when Creating Virtual L-Servers

Settings	Details	When Using Blade Servers	When Using Rack Mount or Tower Servers
Resource Registration	Register VIOM	Yes (*1)	No
	Register VM management software	Yes (*2)	Yes (*2)
	Register storage management software	Yes (*3)	Yes (*3)
	Register chassis	Yes	No
	Register managed servers (within chassis)	Yes	No
	Register managed servers	No	Yes
	Register LAN switch blades	Yes	No
	Configure VLANs for LAN switch blades manually	Yes (*4)	No
	Register Network Device Resources	Yes (*1)	Yes (*1)
	Configure power monitoring devices	Yes (*1)	Yes (*1)
	HBA address rename Settings	No	Yes (*1)
	Settings for the HBA address rename Setup Service	No	Yes (*1)

Yes: It is necessary

No: It is not necessary

*1: It is necessary when using it.

*2: It is not necessary to register VM management software, when using RHEL5-Xen or KVM.

*3: It is necessary to register storage management software, when using RHEL5-Xen.

*4: Necessary when not using automatic VLAN configuration for LAN switch blades.

5.1.2.1.2 Installing Software and Registering Agents on VM Hosts

The installation of software and the agent are registered to VM host.

1. Install OS's on VM hosts

2. Install required software on VM hosts

3. Install agents and agents (Dashboard Function) on VM hosts

   Refer to "2.2 Agent Installation" in the "Setup Guide CE".

4. Register the Agent

5.1.2.1.3 Registering Resources to the Global Pool

Register resources to the global pool.

For details, refer to "Chapter 12 Registering Resources to the Global Pool".

Table 5.4 Resource Registration in Global Pools when Creating Virtual L-Servers

Settings	VMware	Hyper-V	Oracle VM	RHEL5-Xen	KVM
Register VM host resources to VM pools	Yes	Yes	Yes	Yes	Yes
Pre-configure network resources	No	No	Yes	Yes	Yes
Register network resources to network pools	Yes	Yes	Yes	Yes	Yes
Register network device resources to network pools	Yes (*1)	Yes (*1)	Yes (*1)	Yes (*1)	Yes (*1)
Register virtual storage resources to storage pools	Yes	Yes	Yes	Yes	No
Register disk resources to storage pools	No	No	No	No	Yes
Register MAC addresses to address pools	No	No	No	Yes	Yes

Yes: It is necessary

No: It is not necessary

*1: When using resources

5.1.2.1.4 Creating L-Server Templates

Create an L-Server template.

For details, refer to "Chapter 13 Creating L-Server Templates" in the "Setup Guide CE".

5.1.2.1.5 Creating and Registering Cloning Images

Create and registering cloning images.

1. Create an L-Server for the Infrastructure Administrator

   Create an L-Server for the infrastructure administrator.

   For details, refer to "Chapter14 Creating an L-Server for an Infrastructure Administrator" in the "Setup Guide CE".

2. Install software on virtual L-Servers for infrastructure administrators

   Install an OS on the virtual L-Server for the infrastructure administrator created in step 1.

3. Create and register cloning images

   Create and register cloning images.

   For details, refer to "Chapter 15 Collecting and Registering Cloning Images" in the "Setup Guide CE".

5.1.2.2 When Using Solaris Containers

The resource settings when using Solaris Containers are as follows:

1. Resource Registration

   Register the required resources. It is necessary to register chassis, when using SPARC Enterprise M4000 or later versions.

   For details, refer to "C.7.2 Registering Resources with Resource Orchestrator" in the "Setup Guide CE".

2. Install Software and Register Agents on VM Hosts

   a. Install OS's on VM hosts

   b. Install required software on VM hosts

   c. Install agents on VM hosts

      Refer to "2.2 Agent Installation" in the "Setup Guide CE".

   d. Register the Agent

3. Register Resources to the Global Pool

   Register resources to the global pool.

   For details, refer to "C.7.3 Registering Resources in Resource Pools" in the "Setup Guide CE".

5.2 Creating and Releasing L-Platform Templates and Registering Usage conditions infomation

1. Create L-Platform templates using the [Template] tab of the ROR console.

   For details, refer to "8.3.2 Creating New L-Platform Template" and "8.3.3 Copying L-Platform Template" in the "User's Guide for Infrastructure Administrators CE".

2. 課金を利用する場合は、商品マスタメンテナンスコマンドの登録機能を利用して課金情報を登録します。

   For details, refer to "15.3.1 課金情報の登録".

3. Release L-Platform templates using the [Template] tab of the ROR console.

   For details, refer to "8.3.6 Publishing and Hiding L-Platform Template" in the "User's Guide for Infrastructure Administrators CE".

5.3 Creating Tenants, Tenant Administrators, or Tenant Users

Create tenants, tenant administrators and tenant users.

1. Create tenants

   Create tenants.

   For details, refer to "11.3 Creating a Tenant" in the "User's Guide for Infrastructure Administrators CE".

2. Tenant administrator or tenant user creation

   Create tenant administrators and tenant users.

   For details, refer to "11.7 Registering a User" in the "User's Guide for Infrastructure Administrators CE".

Chapter 6 Flow of Setup for Tenant Administrators

Tenant administrators perform the following operations:

1. Edit L-Platform templates

   When L-Platform templates specific to tenants are necessary, edit the L-Platform template based on the L-Platform template currently being used.

   For details, refer to "7.3.3 Copying L-Platform Template" and "7.3.4 Editing L-Platform Template" in the "User's Guide for Tenant Administrators CE".

2. Publish L-Platform templates

   Publish L-Platform templates for tenant users.

   For details, refer to "7.3.6 Publishing and Hiding L-Platform Template" in the "User's Guide for Tenant Administrators CE".

3. Register tenant administrators or tenant users

   Register tenant administrators and tenant users.

   For details, refer to "11.3 Registering a User" in the "User's Guide for Tenant Administrators CE".